Lockheed Martin Corporation
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December 8, 2016 **VIA PRIVATE CARRIER**

Ms. Ruth Prince, PhD Toxicologist
U.S. Environmental Protection Agency, Region 3
Land and Chemicals Division
1650 Arch St.
Mail Code 3LC40
Philadelphia, Pennsylvania 19103

Subject: Transmittal of the Technical Memorandum: June 2016 Surface Water Sampling Results
Lockheed Martin Corporation; Middle River Complex
2323 Eastern Boulevard, Middle River, Baltimore County, Maryland

Dear Ms. Prince:

For your information please find enclosed two hard copies with a CD of the above-referenced document. This document summarizes the analytical results for surface water samples collected adjacent to the Lockheed Martin's Middle River Complex in Middle River, Maryland.

Please let me know if you have any questions. My office phone is (301) 548-2209.

Sincerely,

Thomas D. Blackman
Project Lead, Environmental Remediation

cc: (via email without enclosure)
Gary Schold, MDE
Mark Mank, MDE
James Carroll, MDE
Christine Kline, Lockheed Martin
Norman Varney, Lockheed Martin
Lynnette Drake, Lockheed Martin
Dave Brown, MRAS
John Morgan, LMCPI
Michael Martin, Tetra Tech
Cannon Silver, CDM Smith

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Jann Richardson, Lockheed Martin
Justin Tetlow, MRAS
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Doug Mettee, Lockheed Martin MST

Lockheed Martin Corporation
6801 Rockledge Drive MP: CCT-246
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December 7, 2016 **VIA PRIVATE CARRIER**

Mr. James R. Carroll
Program Administrator
Land Restoration Program
Land Management Administration
Maryland Department of the Environment
1800 Washington Boulevard, Suite 625
Baltimore, Maryland 21230

Subject: Transmittal of the Technical Memorandum: June 2016 Surface Water Sampling Results
Lockheed Martin Corporation; Middle River Complex
2323 Eastern Boulevard, Middle River, Baltimore County, Maryland

Dear Mr. Carroll:

For your review please find enclosed two hard copies with a CD of the above-referenced document. This document summarizes the analytical results for surface water samples collected adjacent to the Lockheed Martin's Middle River Complex in Middle River, Maryland. If possible, we respectfully request to receive MDE's comments by February 9, 2017.

Please let me know if you have any questions. My office phone is (301) 548-2227.

Sincerely,

Lynnette Drake
Remediation Analyst, Environmental Remediation

cc: (via email without enclosure)
Gary Schold, MDE
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Technical Memorandum: June 2016 Surface Water Sampling Results for Dark Head Cove and Cow Pen Creek Middle River Complex 2323 Eastern Boulevard Middle River, Maryland

Prepared for:

Lockheed Martin Corporation

Prepared by:

Tetra Tech, Inc.

December 2016

Michael Martin, P.G.
Regional Manager

Anthony Apanavage, P.G.
Project Manager

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ACRONYMS

AWQC	ambient water quality criteria
BTAG	(USEPA) Biological Technical Advisory Group
ºC	degrees Celsius
COC	chain of custody
COMAR	*Code of Maryland Regulations*
DO	dissolved oxygen
ESA	environmental site assessment
GIS	geographic information system
HHRA	human health risk assessment
IDW	investigation-derived waste
Lockheed Martin	Lockheed Martin Corporation
MDE	Maryland Department of the Environment
µg/L	microgram(s) per liter
mg/L	milligram(s) per liter
MRC	Middle River Complex
mS/cm	milliSiemen(s) per centimeter
mv	millivolt(s)
MW	monitoring well
NRWQC	national recommended water quality criteria
NTU	nephelometric turbidity unit(s)
ORP	oxidation-reduction potential
PCB	polychlorinated biphenyl
PDF	portable document format
pH	a measure of hydrogen-ion content indicating relative acidity or alkalinity
PM	project manager
REC	recognized environmental condition
SC	specific conductance
S.U.	standard unit(s)
SW	surface water
TCE	trichloroethene
Tetra Tech	Tetra Tech, Inc.
TSCA	Toxic Substances Control Act
USEPA	United States Environmental Protection Agency
VCP	Voluntary Cleanup Program
VOC	volatile organic compound

Section 1
Introduction

On behalf of Lockheed Martin Corporation (Lockheed Martin), Tetra Tech, Inc. (Tetra Tech) has prepared this technical memorandum presenting the analytical results for surface water samples collected adjacent to the Middle River Complex (MRC) in Middle River, Maryland on June 13, 2016 (see Figure 1-1). This technical memorandum presents results from surface water samples collected along five transects in Dark Head Cove (at Outfalls 005, 006, 007, 008, and 009) and at two locations in Cow Pen Creek near the southwestern trichloroethene (TCE) and 1,4-dioxane plumes.

Before 2016, surface water had been sampled annually. In 2016, sampling frequency increased to three times per year (March, June, and September) to provide further assurance during implementation of the groundwater remedy that volatile organic compounds are not reaching surface water. Future planned events include September 2016, March 2017, June 2017 and September 2017. Thereafter, sampling schedules will be evaluated and established, based on findings from sampling. This investigation obtained additional surface-water-quality data for Dark Head Cove and Cow Pen Creek to determine whether volatile organic compounds (VOCs) in groundwater at Middle River Complex are impacting the surface water of Dark Head Cove and Cow Pen Creek. Additional objectives were to determine possible concentrations of polychlorinated biphenyls in surface water subsequent to a sediment removal action completed by Lockheed Martin Corporation in early 2015, and to determine 1,4-dioxane concentrations in Cow Pen Creek surface water near the southwestern trichloroethene and 1,4-dioxane groundwater plumes.

Two of the Dark Head Cove transects (Outfalls 006 and 008) are downgradient of the southeastern trichloroethene groundwater plume. Volatile organic compounds in groundwater at the Middle River Complex may be introduced to surface water by groundwater seepage or by groundwater infiltration into drains and outfalls that discharge to surface water. Surface water quality can also

be affected by constituents in creek-bottom sediment. This technical memorandum is organized as follows:

Section 2—Site Background: Briefly describes the site and where detailed background information and reports of previous investigations can be found.

Section 3—Investigation Approach and Methodology: Presents the technical approach to surface water sampling and describes the field methodology employed.

Section 4—Results: Presents the field program's investigation results.

Section 5—Summary: Summarizes the investigation approach and findings.

Section 6—References: Cites references used to compile this memorandum.

Aerial photograph provided by ESRI's ArcGIS Online World Imagery map service (© 2013 ESRI and its data suppliers).

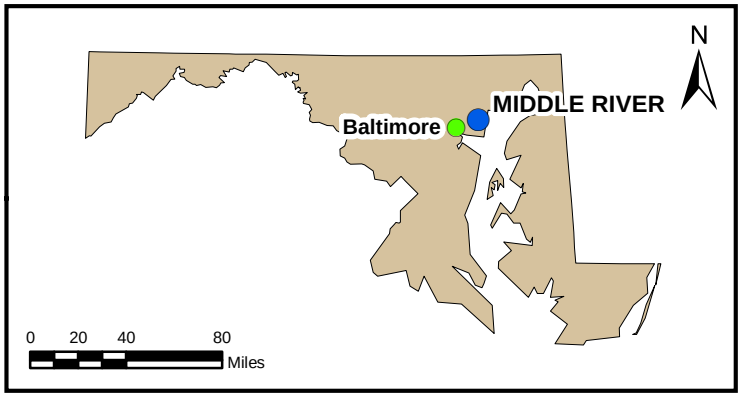

FIGURE 1-1

MIDDLE RIVER COMPLEX LOCATION MAP

Lockheed Martin Middle River Complex
Middle River, Maryland

DATE MODIFIED:	CREATED BY:
09/18/15	JEE

TETRA TECH

Map Document: (P:\GIS\Middle_River\MapDocs\MXD\mrc_sitemap_may2015.mxd)
09/18/15 -- JEE

Section 2
Site Background

The Middle River Complex (MRC) at 2323 Eastern Boulevard in Middle River, Maryland is part of the Chesapeake Industrial Park, approximately 11.5 miles northeast of Baltimore, Maryland. The MRC comprises approximately 161 acres and includes 12 main buildings, an active industrial area and yard, perimeter parking lots, an athletic field, a vacant concrete lot, trailer storage areas, and numerous grassy spaces along its perimeter. The MRC is bounded by Eastern Boulevard (Route 150) to the north, Martin State Airport to the east, Dark Head Cove to the south, and Cow Pen Creek to the west. Figure 2-1 shows the MRC layout.

Numerous environmental investigations have been conducted at the Lockheed Martin MRC. These include underground storage-tank closures and abandonments, soil excavations, Phase I environmental site assessments (ESAs), and Phase II ESAs. A 2003 facility-wide Phase I ESA at the Lockheed Martin MRC identified 13 recognized environmental conditions (RECs), associated primarily with then-current site conditions (Earth Tech, 2003). Subsequent review of historical site activities identified another 18 RECs (Tetra Tech, 2004). Many RECs are in the southern portion of the facility along the waterfront.

Soil and groundwater sampling have identified contamination in these environmental media underlying the facility. Studies of soil and groundwater are ongoing (Tetra Tech, 2012a). The MRC was previously entered into the Maryland Department of the Environment (MDE) Voluntary Cleanup Program (VCP). Withdrawal from the VCP began in September 2013. Remediation of the MRC is now conducted pursuant to an Administrative Consent Order signed December 2015, whereby work is performed under the MDE Controlled Hazardous Substances framework to allow both on- and off-site issues to be addressed under the same regulatory program.

Sampling of surface water and sediment adjacent to the MRC's southern and western property boundaries was first done in March 2005. Subsequent samples were collected in 2005, and each

year from 2010–2015, to characterize surface water and sediment, support the design development of the sediment remedy, and support storm-drain investigations.

The current annual sampling program seeks to determine the extent to which constituents in groundwater and surface soil at the MRC have been transported to surface water. Studies conducted at Cow Pen Creek and Dark Head Cove from 1997–2015, and details of the area's physical setting, land use, physiography, and surface/subsurface conditions (i.e., soils, hydrology, and geology), are summarized in the *2015 Surface Water Sampling Report* (Tetra Tech, 2015), and therefore are not repeated herein.

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

BLOCK 'A'
BLOCK 'A'
BLOCK 'B'
BLOCK 'D'
BLOCK 'D' PANHANDLE
BLOCK 'E'
BLOCK 'F'
BLOCK 'G'
BLOCK 'H'
BLOCK 'I'
PARKING LOT NO. 1
PARKING LOT NO. 2
PARKING LOT NO. 3
PARKING LOT NO. 4
PARKING LOT NO. 5
ATHLETIC FIELD
BUILDING A
BUILDING B
BUILDING C
BUILDING E
ENGINEERING RESEARCH BUILDING
PROGRAM BUILDING
VLS BUILDING
FORMER BUILDING D
MIDDLE RIVER POST OFFICE
ASHLEY FURNITURE
JOHNSON AND TOWERS
MARTIN STATE AIRPORT
TILLEY CHEMICAL COMPANY
TOTAL INDUSTRIAL GROUP
WATERFRONT LOT
DARKHEAD COVE
COW PEN CREEK
Eastern Blvd
Martin Blvd
Glenn Martin Lagoon Rd
Chesapeake Park Plz
Wilson Point Rd
Perch Rd
Duke St
Leland Ave
Magnolia Ave
Wampler Rd
Evergreen St
Baker Ave
Old Eastern Ave
Volz Ave
Hawthorne Rd
S Hawthorne Rd
Riverthorn Rd
Whitethorn Way
Kingston Rd
Midthorn Rd
Elmthorn Rd
Alder Dr
Esri, HER

FIGURE 2-1

SITE LAYOUT AND TAX BLOCKS
MIDDLE RIVER COMPLEX

LEGEND

TAX BLOCK

Lockheed Martin Middle River Complex
Middle River, Maryland

0 225 450 Feet

N

DATE MODIFIED: 10/04/16

CREATED BY: JEE

TETRA TECH

Map Document: (P:\GIS\Middle_River\MapDocs\MXD\mrc_tax_blocks_jul2016_aerial.mxd)
10/04/16 -- JEE

Section 3
Investigation Approach and Methodology

3.1 SURFACE WATER SAMPLING

The 2016 surface water sampling described herein seeks to provide additional and updated surface-water-quality data for Dark Head Cove and Cow Pen Creek. Specifically, the current goals are to determine whether:

- volatile organic compounds (VOCs) detected in groundwater and site soil are reaching Dark Head Cove and Cow Pen Creek through groundwater infiltration or transport via storm drains
- 1,4-dioxane detected in groundwater and soil is reaching Cow Pen Creek through groundwater infiltration or transport through storm drains
- polychlorinated biphenyls (PCBs) detected in Block E soil are reaching Dark Head Cove through the storm drain system, and/or whether PCBs in surface water are present due to contaminants in sediment

Concentrations of PCBs, VOCs, and 1,4-dioxane in surface water were determined through laboratory analyses of the environmental samples. These compounds are in groundwater and soil at the Middle River Complex (MRC), and might migrate into adjacent surface bodies via groundwater and overland surface water flow.

Thirteen surface water samples were collected from Dark Head Cove and Cow Pen Creek on June 13, 2016 (Figure 3-1). Eleven were collected in Dark Head Cove and two were collected in Cow Pen Creek. All samples were analyzed for VOCs (the primary contaminants of concern in MRC groundwater). Samples collected from Dark Head Cove were also analyzed for PCBs, while samples from Cow Pen Creek were analyzed for 1,4-dioxane. Sampling methods were consistent with the *2016–2017 Groundwater and Surface Water Monitoring Work Plan* (Tetra Tech, Inc.

[Tetra Tech], 2015) and amendments stipulated in the *Addendum to the 2016–2017 Groundwater and Surface Water Monitoring Work Plan* (Tetra Tech, 2016).

3.1.1 Surface Water Sampling and Analyses

Surface water samples were collected in Dark Head Cove along transects at Outfalls 005 through 009 (Figure 3-1). Two samples were collected along each transect near Outfalls 006–009: one sample per transect was collected 10-feet from shore ("A" sample) and a second was collected 50-feet from shore ("B" sample). At Outfall 005 (which has two outlets), one sample was collected at each outlet 10-feet from shore ("A1" and "A2" samples), and a single sample was collected 50-feet from shore, approximately midway between the two outlets ("B" sample). Surface water samples from Cow Pen Creek were collected near the western trichloroethene (TCE) plume. Samples were collected along the approximate centerline of the creek, upstream and downstream of the estimated boundaries of the western TCE plume. Table 3-1 summarizes (by surface water sampling location) the chemical analyses conducted for the 2016 monitoring program (Tetra Tech, 2015).

Surface water samples were collected as grab samples using direct-fill sampling techniques. All samples were collected approximately one foot below the water surface using a stainless-steel discrete-interval sampler. The sampler was lowered to approximately one foot below the water surface and the check valve was disengaged until full; the sampler was then brought to the surface and the water was removed through the valve to fill laboratory-supplied containers. Laboratory-cleaned, hydrochloric-acid-preserved, 40-milliliter (mL) sample vials were used for the VOC analysis; separate containers were used to collect samples for the 1,4-dioxane and PCB analyses. All equipment was cleaned after each sample had been collected. The discrete-interval sampler was cleaned after each use by rinsing with distilled water; no decontamination fluids other than distilled water were used, so collection and off-site disposal of rinse water generated during this sampling event was not necessary.

Samples collected on June 13, 2016 were analyzed at a fixed-base laboratory (Test America, North Canton, Ohio) for VOCs via United States Environmental Protection Agency (USEPA) Method 8260C, for 1,4-dioxane via Method 522, and for PCBs via Method 680. One duplicate VOC sample was collected, and trip blanks were provided in each cooler containing VOC samples to ensure quality assurance/quality control. Water-quality parameters, including temperature, pH

(a measure of hydrogen-ion content indicating relative acidity or alkalinity), specific conductance (SC), hardness, salinity, turbidity, dissolved oxygen (DO), color, and oxidation-reduction potential (ORP), were measured at all surface water sampling locations at the time of sampling. The water depth at each sampling location was also recorded.

Tidal stages were recorded on June 13, 2016 before sampling began and after it ended, using the MRC Cow Pen Creek direct-read staff gauge. The staff gauge read 3.44 feet at 11:45 a.m. and 3.94 feet at 1:31 p.m. Tide data for the North Point station (south of Middle River, Maryland) reported high tide at 2:26 a.m., low tide at 8:56 a.m., and high tide at 2:18 p.m. Surface water samples were collected between 11:51 a.m. and 1:22 p.m., at the rising limb of the tidal cycle (Maryland Department of Natural Resources, 2016). All information was documented on surface water sample forms (Appendix A) and in the master site logbook.

Surface-water sampling locations (horizontal locational coordinates) were surveyed using a handheld global positioning system receiver and recorded in the field logbook. Sampling locations were recorded in degrees, minutes, and seconds using geographical latitude and longitude coordinates, and have an accuracy of approximately 15 feet. Coordinates were converted to the Maryland State Plane North American Datum 1983 (feet) for use in the MRC geographical information system (GIS).

3.1.2 Documentation

A master site logbook was maintained as an overall record of field activities. Sample documentation includes completing a chain of custody (COC) form and matrix-specific sampling log sheets. A COC form is a standardized form to summarize and document pertinent sample information, such as sample identification and type, matrix, date and time of collection, preservation, requested analysis, and the times and dates of custody transfers. Sample custody procedures document sample acquisition and integrity. The COC form accompanies the data-validation report in Appendix B.

3.1.3 Sample Nomenclature and Handling

Surface water samples were identified with a unique sample-identification tag. Surface water samples were labeled with an “SW” prefix followed by the sample number, followed by an “A” (designating a sample collected 10 feet from the shoreline) or a “B” (designating a sample collected

50 feet from the shoreline), followed by a six-digit sampling date. For example, a surface water sample collected on June 13, 2016 from transect MRC-SW6 at the 10-foot ("A") location is labeled MRC-SW6A-061316. The trip blank is labeled with a "TB" prefix followed by the blank's six-digit submittal date (e.g., TB-061316).

Sample handling includes field-related considerations concerning the selection of sample containers, preservatives, allowable holding times, and analyses requested. Proper custody procedures were followed throughout all phases of sample collection and handling. COC protocols used throughout sample handling ensure the evidentiary integrity of sample containers.

Sample containers were released under signature from the laboratory and accepted under signature by the sampler(s) or individual responsible for maintaining custody until the sample containers were transferred to the sampler(s). Transport containers returned to the laboratory were sealed with strapping tape and a tamper-proof custody seal. The custody seal included the signature of the individual initially releasing the transport container, along with the date and time.

3.1.4 Equipment Decontamination

To minimize decontamination, both dedicated and disposable equipment (e.g., gloves, rope) were used for surface water sampling. The stainless-steel discrete-interval sampler (i.e., a "bacon bomb" sampler) was rinsed with distilled water before the first sample was collected and after each use.

3.1.5 Waste Management

No investigation-derived waste (IDW) was generated during this surface-water sampling event. General waste (i.e., gloves, rope, etc.) was disposed of in the proper waste disposal containers at the facility.

3.2 DATA MANAGEMENT

Laboratory data-handling procedures met the requirements of the laboratory subcontract. All analytical and field data are maintained in project files. These files include copies of the COC forms, sampling log forms, sampling location maps, and documentation of laboratory quality assurance.

3.2.1 Data Tracking and Control

A cradle-to-grave sample-tracking system was used from the beginning to the end of the sampling event. This system allows for early detection of errors made in the field so adjustments can be made while the field team is still mobilized. Before field mobilization, the field operations leader coordinated and initiated sample tracking. Sample jar labels were handwritten in the field and reviewed to ensure that they were accurate and adhered to work plan requirements.

The project manager (PM) coordinated with the analytical laboratory to ensure that they were aware of the number and types of samples and analyses being submitted. On the day that samples were collected in the field, the field operations leader forwarded the COC form to the PM (or designee) and the laboratory. The PM or designee confirmed that the COC forms provided the information required by the work plan. After all requested analyses had been completed, the laboratory submitted an electronic deliverable for every sample delivery group. When all electronic deliverables had been received from the laboratory, the PM or designee ensured that the laboratory had performed all requested analyses.

3.2.2 Sample Information

Data from field measurements were recorded using appropriate log sheets and summarized in tabular form. Raw instrument-data from the laboratory were also tabulated. The field operations leader verified field data daily; laboratory data were verified by the group supervisor and then by the laboratory's quality control/documentation department.

3.2.3 Project Data Compilation

The analytical laboratory generated a portable document format (PDF) file of the analytical data packages, as well as electronic database deliverables. The electronic data were checked against the PDF file from the laboratory, and updated as required by applying data-qualifier flags during data validation. All data, such as units of measure and chemical nomenclature, are consistent with the project database.

3.2.4 Geographical Information System

Data management systems consist of a relational database and GIS used to manage environmental information pertaining to the MRC. The relational database stores chemical, geological,

hydrogeological, and other environmental data collected during environmental investigations; the GIS is created from the relational database and contains subsets of the larger data pool. The GIS allows posting of environmental data onto base maps to represent the information graphically. Compiled sampling, chemical, and positional data were incorporated into the GIS.

3.3 DATA REVIEW

Data from the laboratory were entered into a sample database and evaluated against various screening criteria. Data validation (consisting of data completeness, holding time, calibrations, lab check standards, laboratory contamination, detection limits, surrogate recovery, and method blanks) was completed concurrent with the data evaluation. The review was based on USEPA Region 3's *Modifications to the National Functional Guidelines for Data Review* (USEPA, 1993 and 1994) and the specifics of the analytical method used. Data from this sampling event consist of chemical results from surface water samples. Appendix C contains tables of all 2016 MRC surface-water-sample analytical data, and includes validation qualifiers, non-detects, and analytical detection limits.

Validation of the MRC data concluded that they are acceptable for their intended uses (i.e., risk screening and risk assessment). The *J*-flag appears on the chemical-results tables in Section 4, and all flags appear in Appendices B and C. The data qualifiers (i.e., flags) applied to the chemical results during data validation are listed below:

J The analyte is considered present in the sample, but the value is estimated and may not meet highest accuracy or precision standards. In this program, samples were qualified with "*J*" because quantitation was above the method detection limit but below the laboratory reporting limit.

U Not detected; the analyte was not detected at the reported value.

UJ The analyte was not detected, but the quantitation or detection limit may be inaccurate or imprecise.

Table 3-1
Chemical Analyses of Surface Water Samples, June 2016
Cow Pen Creek and Dark Head Cove
Lockheed Martin Middle River Complex, Middle River, Maryland

Sampling location	Sample number	Distance from shore (feet)	Analytical parameters	Sampling month	Number of samples
Dark Head Cove					
Outfall 005	SW5A1 SW5A2 SW5B	10[(1)] 10[(1)] 50	Volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs) field parameters	June 2016	1 1 1
Outfall 006 and near the southeastern trichloroethene (TCE) plume	SW6A SW6B	10 50	VOCs, PCBs, field parameters	June 2016	1 1
Outfall 007	SW7A SW7B	10 50	VOCs, PCBs, field parameters	June 2016	1 1
Outfall 008 and near the eastern TCE plume	SW8A SW8B	10 50	VOCs, PCBs, field parameters	June 2016	1 1
Outfall 009	SW9A SW9B	10 50	VOCs, PCBs, field parameters	June 2016	1 1
Cow Pen Creek					
Near the southwestern TCE plume	SW1A SW2A	Upstream Downstream	VOCs, 1,4-dioxane, field parameters	June 2016	1 1

[(1)]Two near-shore samples (10-feet out) were collected at each outlet of Outfall 005. One near-shore sample was collected at all other Dark Head Cove outfalls (006–009).

Aerial photograph provided by ESRI's ArcGIS Online World Imagery map service (© 2013 ESRI and its data suppliers).

MIDDLE RIVER COMPLEX

SOUTHEASTERN TCE PLUME

SOUTHWESTERN TCE PLUME

OUTFALL 001

OUTFALL 002

OUTFALL 003

OUTFALL 004

BLOCK G SWALE OUTFALL

TOTAL INDUSTRIAL GROUP

OUTFALL 005

OUTFALL 006

OUTFALL 007

OUTFALL 008

OUTFALL 009

OUTFALL 00X

MRC-SW1A

MRC-SW2A

MRC-SW5A1

MRC-SW5A2

MRC-SW5B

MRC-SW6A

MRC-SW6B

MRC-SW7A

MRC-SW7B

MRC-SW8A

MRC-SW8B

MRC-SW9A

MRC-SW9B

MRC-STAFF01

MRC-STAFF02

DARK HEAD COVE

COW PEN CREEK

FIGURE 3-1

2016 SURFACE WATER SAMPLING LOCATIONS

LEGEND

- SURFACE WATER SAMPLE LOCATION
- STORMWATER OUTFALL LOCATION
- STAFF GAUGE
- EXTENT OF TCE IN GROUNDWATER GREATER THAN 5 UG/L (DASHED WHERE INFERRED)

TCE contours from Tetra Tech (2016).
TCE = trichloroethene
µg/L = micrograms per liter
2014 aerial photograph provided by U.S. Geological Survey.

Lockheed Martin Middle River Complex
Middle River, Maryland

0 150 300 Feet

N

DATE MODIFIED: 10/05/16

CREATED BY: JEE

TETRA TECH

Map Document: (P:\GIS\Middle_River\MapDocs\MXD\mrc_sw_locations_jun2016.mxd)
10/05/16 -- JEE

Section 4
Results

Validated surface-water chemical data of the chemical analytes detected in the June 2016 surface-water samples were used to generate a figure presenting the analytes detected (Figure 4-1), a statistical summary table (Table 4-1), and a table (Table 4-2) listing positive detections (only). (Note that because all sample names share the same leading prefix ["MRC"], that prefix has been dropped in the following discussion to improve readability. For example, MRC-SW1A is referred to simply as "SW1A" in this section.) Tables 4-1 and 4-2 are based on the full data listing provided in Appendix C (Table C-1). Table 4-2 compares surface-water sampling results to several applicable screening criteria, including:

- United States Environmental Protection Agency (USEPA) Region 3 Biological Technical Advisory Group (BTAG) freshwater screening-benchmarks (USEPA, 2006)
- USEPA Region 5 ecological screening level for 1,4-dioxane in water (USEPA, 2003)
- USEPA national recommended water quality criteria (NRWQC) for acute and chronic aquatic-organism exposures and NRWQC for human health aquatic-organism consumption (USEPA, 2009)
- State of Maryland ambient water quality criteria (AWQC) for acute and chronic aquatic-organism-exposures, and AWQC for human health aquatic-organism-consumption (*Code of Maryland Regulations*, 2016)
- Site-specific screening levels for swimming, developed by Lockheed Martin Corporation (Lockheed Martin) to assess volatile organic compounds (VOCs) at Frog Mortar Creek near Martin State Airport (Tetra Tech, Inc., [Tetra Tech], 2013a)

4.1 VOLATILE ORGANIC COMPOUNDS

As shown in Table 4-1 and Figure 4-1, three VOCs were detected in surface water: trichlorethene (TCE), acetone, and chloromethane. TCE, the primary VOC associated with Middle River Complex (MRC) groundwater, was detected in four sampling locations in Dark Head Cove (SW6A [0.26*J* micrograms per liter (µg/L)]), SW6B [0.49*J* µg/L], SW8A [0.48*J* µg/L], and SW8B [0.42*J* µg/L]) near Outfalls 006 and 008. These sampling locations are adjacent to the southeastern

TCE groundwater plume. *cis*-1,2-Dichloroethene (*cis*-1,2-DCE) and vinyl chloride, breakdown products of TCE, and other common VOCs in MRC groundwater plumes, were not detected in these samples. The other two VOCs detected in surface water (acetone and chloromethane) were both detected in sample SW7B (2.2*J* µg/L and 1.1 µg/L, respectively), 50 feet from Outfall 007.

As shown in Table 4-2, all detected VOC concentrations are low and less than their respective screening criteria. TCE detections are "*J*" qualified because the concentrations are above the method detection limit but below the laboratory practical quantitation-limit. TCE was not detected in the two samples collected from Cow Pen Creek.

During the 2015 sampling round, the sole TCE detection (0.42*J* µg/L at SW5A2) was from a sample collected near Outfall 005. TCE concentrations in 2014 ranged from 0.3*J* µg/L (SW5A2) to 0.54 µg/L (SW8A). Similar to the 2015 sampling result, the highest TCE concentrations (1.1-1.9 µg/L) in 2013 were from samples SW5A1, SW5A2, and SW5B collected near Outfall 005. In contrast, the highest TCE concentrations detected in 2012 (0.55*J*–0.82*J* µg/L), 2014 (0.52*J*–0.54*J* µg/L), and this 2016 event (0.26*J*–0.49*J* µg/L) were in samples collected from transects at Outfalls 006 and 008, near the southeastern TCE groundwater plume (see Table C-2 in Appendix C).

The maximum 2016 TCE concentration (0.49*J* µg/L) is similar to the maximum TCE concentrations in 2015 (0.42*J* µg/L) and in 2014 (0.54*J* µg/L at Outfall 008). These concentrations are approximately one-quarter that of the maximum TCE concentration detected in 2013 (1.9 µg/L at Outfall 005). Note that surface water sampling is dynamic in nature, and the distribution of the contaminants in Dark Head Cove and Cow Pen Creek can be affected by tidal fluxes.

USEPA and the State of Maryland have not established acute or chronic freshwater criteria for TCE or acetone. However, they have established a human health consumption-of-aquatic-organism criterion of 300 µg/L (when adjusted for the MDE risk level of 1×10^{-05} [i.e., a one in 100,000 risk probability]). The BTAG ecological screening levels for TCE and acetone are 21 µg/L and 1,500 µg/L, respectively.

The maximum TCE concentration (0.49*J* µg/L) detected in this investigation is more than 40 times below the lowest (i.e., most conservative) regulatory screening level (21 µg/L), and more than 20 times below its site-specific screening-criterion (10 µg/L) for evaluating exposure risks to

swimmers. All TCE, acetone, and chloromethane results are below ecological and human health screening criteria.

4.2 1,4-DIOXANE

As shown in Figure 4-1, 1,4-dioxane was detected at a concentration of 0.13*J* µg/L in the sample collected from SW1A, and 0.16*J* µg/L in the sample collected from SW2A. These concentrations are more than five orders of magnitude (nearly 100,000 times) lower than the USEPA ecological screening level (22,000 µg/L).

4.3 POLYCHLORINATED BIPHENYLS

Pentachlorobiphenyl is the only polychlorinated biphenyl (PCBs) homolog detected in the surface water samples collected in Dark Head Cove in June 2016. The only sample with a detected concentration was SW6B (0.036*J* µg/L), collected 50 feet from Outfall 006. This concentration exceeds the chronic NRWQC (0.014), the BTAG concentration (0.000074 µg/L), and the human health consumption-of-aquatic-organism criterion (0.00064 µg/L) for PCBs.

The NRWQC and BTAG levels are screening levels. Reported concentrations below these screening levels indicate that no ecological impacts are expected, however, exceeding these screening levels does not necessarily mean that human health risk or ecological risk is occurring. For example, the NRWQC human health consumption-of-aquatic-organism (0.00064 µg/L) screening criterion for PCBs was developed to be protective assuming that someone is exposed to surface water from two exposure pathways: (1) drinking surface water that is used as a drinking water source and (2) via consuming fish caught in the surface water. The value is particularly low to protect surface water as a drinking water source. Since people are not drinking water from Dark Head Cove, the NRWQC is overly protective (low) as a screening value. Fish consumption advisories for the entire region are in effect, because PCBs bioaccumulate and multiple sources contribute PCBs to the upper Chesapeake Bay. A human health risk assessment (HHRA) completed in 2014 to assess exposure to people swimming in Dark Head Cove (a more applicable exposure scenario) indicates that similar PCB concentrations detected in surface water would result in cancer and non-cancer risks less than MDE risk benchmarks.

The BTAG screening is very low to be protective of aquatic organisms, because PCBs bioaccumulate in the ecological food web. The objective of the upcoming sediment remediation in

Dark Head Cove will be to reduce sediment and surface water contaminant concentrations. No PCBs were detected in Dark Head Cove water samples collected in 2015 after completing the sediment removal action near Outfall 005.

4.4 WATER-QUALITY PARAMETERS

Water-quality parameters measured in the field in June 2016 for each surface water sample are in Table 4-3. Data were collected for color, pH, specific conductivity (SC), hardness, temperature, turbidity, dissolved oxygen (DO), salinity, and oxidation-reduction potential (ORP). The June 2016 pH values are consistent with natural surface water in this region. SC is closely associated with salinity, and samples with lower salinity had an expected lower SC, and vice versa. pH was slightly lower in Cow Pen Creek samples, which also had lower salinity and SC, as compared to samples from Dark Head Cove. These results may be due to runoff into the creek, or due to restricted water flow into or out of the creek.

Turbidity was consistent in most samples, with the highest turbidity found in Dark Head Cove sample SW9B. All DO levels are on the high side of typical values, indicating a healthy estuarine environment. ORP values are all positive, which is consistent with an oxygen-rich environment. All water-quality parameters are typical of a tidally controlled estuarine environment.

Table 4-1

Statistical Summary of Analytes Detected in Surface Water Samples-June 2016
Cow Pen Creek and Dark Head Cove
Lockheed Martin Middle River Complex, Middle River, Maryland

Chemical	Frequency of Detection		Minimum Non-Detect Concentration	Maximum Non-detect Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Location of Maximum Detected Sample	Mean of All Samples	Mean of Positive Detects	Standard Deviation
	Number	Percent								
Volatile organic compounds (µg/L)										
TRICHLOROETHENE	4/13	31	0.22 U	0.22 U	0.25 J	0.49 J	MRC-SW6B	0.203	0.41	0.155
ACETONE	1/13	8	0.94 U	0.94 U	2.2 J	2.2 J	MRC-SW7B	0.603	2.2	0.480
CHLOROMETHANE	1/13	8	0.44 UJ	0.44 UJ	1.1	1.1	MRC-SW7B	0.288	1.1	0.244
Semivolatile organic compounds (µg/L)										
1,4-DIOXANE	2/2	100	--	--	0.12 J	0.16 J	MRC-SW2A	0.135	0.135	0.007
Polychlorinated biphenyls (ug/L)										
PENTACHLOROBIPHENYLS	1/11	9	0.013 U	0.014 U	0.036 J	0.036 J	MRC-SW6B	0.009	0.036	0.009

For non-detects, 1/2 sample quantitation limit was used as a proxy concentration to caluclate statistics.
µg/L - micrograms per liter
MRC - Middle River Complex
SW - surface water
U - not detected
UJ - nondetect result is estimated
-- Value is not available because analyte
is detected in all samples.

Associated Samples:

MRC-SW1A-061316	MRC-SW5B-061316	MRC-SW7B-061316
MRC-SW2A-061316	MRC-SW6A-061316	MRC-SW8A-061316
MRC-SW2A-061316-D	MRC-SW6A-061316-D	MRC-SW8B-061316
MRC-SW5A1-061316	MRC-SW6B-061316	MRC-SW9A-061316
MRC-SW5A2-061316	MRC-SW7A-061316	MRC-SW9B-061316

Table 4-2

Detected Analytes and Screening Level Exceedances in Surface Water Samples-June 2016
Cow Pen Creek and Dark Head Cove
Lockheed Martin Middle River Complex, Middle River, Maryland

Location ID	National Recommended Water Quality Criteria[1]		Ecological Surface Water Screening Level[2]	Human Health Consumption of Organism Only[1][3]	Swimming Screening Levels[4]	MRC-SW1A	MRC-SW2A		
Sample ID	Freshwater					MRC-SW1A-061316	MRC-SW2A-061316	MRC-SW2A-061316-AVG	MRC-SW2A-061316-D
Sample Date	Acute	Chronic				20160613	20160613	20160613	20160613
Volatile organic compounds (µg/L)									
ACETONE	NA	NA	1500	NA	NA	--	--	--	NA
CHLOROMETHANE	NA	NA	NA	NA	NA	--	--	--	NA
TRICHLOROETHENE	NA	NA	21	300[3]	10	--	--	--	NA
Semivolatile organic compounds (µg/L)									
1,4-DIOXANE	NA	NA	22000	NA	NA	0.13 J	0.16 J	0.14	0.12 J
Polychlorinated biphenyls (µg/L)									
PENTACHLOROBIPHENYLS	NA	0.014	0.000074[5]	0.00064[3]	NA	NA	NA	NA	NA

1 - National Recommended Water Quality Criteria, http://water.epa.gov/scitech/swguidance/standards/current/index.cfm; and Maryland Numerical Criteria for Toxic Substances in Surface Waters, Code of Maryland Regulations (COMAR) 26.08.02.03, http://www.dsd.state.md.us./comar/comarhtml/26/26.08.02.03-2.htm

2 - United State Environmental Protection Agency (USEPA) Region 3 Biological Technical Advisory Group (BTAG) Freshwater Screening Benchmarks. Value for 1,4-dioxane is the USEPA Region 5 ecological screening value (USEPA, 2003)

3 - For carcinogens, criterion is for incremental cancer risk of $1x10^{-5}$

4 - Site-specific swimming screening levels were developed for *cis* -1,2-dichloroethene, trichloroethene, and vinyl chloride only

5 - Value is for total polychlorinated biphenyls.

Gray shading indicates a result that exceeds a screening criterion.

-- not detected
MRC - Middle River Complex
J - estimated result
NA - not analyzed or not available
µg/L - micrograms per liter
SW - surface water

Table 4-2

Detected Analytes and Screening Level Exceedances in Surface Water Samples-June 2016
Cow Pen Creek and Dark Head Cove
Lockheed Martin Middle River Complex, Middle River, Maryland
Page 2 of 4

Location ID	National Recommended Water Quality Criteria[1]		Ecological Surface Water Screening Level[2]	Human Health Consumption of Organism Only[1][3]	Swimming Screening Levels[4]	MRC-SW5A1	MRC-SW5A2	MRC-SW5B	MRC-SW6A
Sample ID	Freshwater					MRC-SW5A1-061316	MRC-SW5A2-061316	MRC-SW5B-061316	MRC-SW6A-061316
Sample Date	Acute	Chronic				20160613	20160613	20160613	20160613
Volatile organic compounds (µg/L)									
ACETONE	NA	NA	1500	NA	NA	--	--	--	--
CHLOROMETHANE	NA	NA	NA	NA	NA	--	--	--	--
TRICHLOROETHENE	NA	NA	21	300[3]	10	--	--	--	0.26 J
Semivolatile organic compounds (µg/L)									
1,4-DIOXANE	NA	NA	22000	NA	NA	NA	NA	NA	NA
Polychlorinated biphenyls (µg/L)									
PENTACHLOROBIPHENYLS	NA	0.014	0.000074[5]	0.00064[3]	NA	--	--	--	--

1 - National Recommended Water Quality Criteria, http://water.epa.gov/scitech/swguidance/standards/current/index.cfm; and Maryland Numerical Criteria for Toxic Substances in Surface Waters, Code of Maryland Regulations (COMAR) 26.08.02.03, http://www.dsd.state.md.us./comar/comarhtml/26/26.08.02.03-2.htm

2 - United State Environmental Protection Agency (USEPA) Region 3 Biological Technical Advisory Group (BTAG) Freshwater Screening Benchmarks. Value for 1,4-dioxane is the USEPA Region 5 ecological screening value (USEPA, 2003)

3 - For carcinogens, criterion is for incremental cancer risk of $1x10^{-5}$

4 - Site-specific swimming screening levels were developed for *cis* -1,2-dichloroethene, trichloroethene, and vinyl chloride only

5 - Value is for total polychlorinated biphenyls.

Gray shading indicates a result that exceeds a screening criterion.

-- not detected
MRC - Middle River Complex
J - estimated result
NA - not analyzed or not available
µg/L - micrograms per liter
SW - surface water

Table 4-2

Detected Analytes and Screening Level Exceedances in Surface Water Samples-June 2016
Cow Pen Creek and Dark Head Cove
Lockheed Martin Middle River Complex, Middle River, Maryland

Location ID	National Recommended Water Quality Criteria[1]		Ecological Surface Water Screening Level[2]	Human Health Consumption of Organism Only[1][3]	Swimming Screening Levels[4]	MRC-SW6A		MRC-SW6B	MRC-SW7A
Sample ID	Freshwater					MRC-SW6A-061316-AVG	MRC-SW6A-061316-D	MRC-SW6B-061316	MRC-SW7A-061316
Sample Date	Acute	Chronic				20160613	20160613	20160613	20160613
Volatile organic compounds (µg/L)									
ACETONE	NA	NA	1500	NA	NA	--	--	--	--
CHLOROMETHANE	NA	NA	NA	NA	NA	--	--	--	--
TRICHLOROETHENE	NA	NA	21	300[3]	10	0.255	0.25 J	0.49 J	--
Semivolatile organic compounds (µg/L)									
1,4-DIOXANE	NA	NA	22000	NA	NA	NA	NA	NA	NA
Polychlorinated biphenyls (µg/L)									
PENTACHLOROBIPHENYLS	NA	0.014	0.000074[5]	0.00064[3]	NA	--	--	0.036 J	--

1 - National Recommended Water Quality Criteria, http://water.epa.gov/scitech/swguidance/standards/current/index.cfm; and Maryland Numerical Criteria for Toxic Substances in Surface Waters, Code of Maryland Regulations (COMAR) 26.08.02.03, http://www.dsd.state.md.us./comar/comarhtml/26/26.08.02.03-2.htm

2 - United State Environmental Protection Agency (USEPA) Region 3 Biological Technical Advisory Group (BTAG) Freshwater Screening Benchmarks. Value for 1,4-dioxane is the USEPA Region 5 ecological screening value (USEPA, 2003)

3 - For carcinogens, criterion is for incremental cancer risk of $1x10^{-5}$

4 - Site-specific swimming screening levels were developed for *cis* -1,2-dichloroethene, trichloroethene, and vinyl chloride only

5 - Value is for total polychlorinated biphenyls.

Gray shading indicates a result that exceeds a screening criterion.

-- not detected
MRC - Middle River Complex
J - estimated result
NA - not analyzed or not available
µg/L - micrograms per liter
SW - surface water

Table 4-2

Detected Analytes and Screening Level Exceedances in Surface Water Samples-June 2016
Cow Pen Creek and Dark Head Cove
Lockheed Martin Middle River Complex, Middle River, Maryland

Location ID	National Recommended Water Quality Criteria[1]		Ecological Surface Water Screening Level[2]	Human Health Consumption of Organism Only[1][3]	Swimming Screening Levels[4]	MRC-SW7B	MRC-SW8A	MRC-SW8B	MRC-SW9A	MRC-SW9B
Sample ID	Freshwater					MRC-SW7B-061316	MRC-SW8A-061316	MRC-SW8B-061316	MRC-SW9A-061316	MRC-SW9B-061316
Sample Date	Acute	Chronic				20160613	20160613	20160613	20160613	20160613
Volatile organic compounds (µg/L)										
ACETONE	NA	NA	1500	NA	NA	2.2 J	--	--	--	--
CHLOROMETHANE	NA	NA	NA	NA	NA	1.1	--	--	--	--
TRICHLOROETHENE	NA	NA	21	300[3]	10	--	0.48 J	0.42 J	--	--
Semivolatile organic compounds (µg/L)										
1,4-DIOXANE	NA	NA	22000	NA	NA	NA	NA	NA	NA	NA
Polychlorinated biphenyls (µg/L)										
PENTACHLOROBIPHENYLS	NA	0.014	0.000074[5]	0.00064[3]	NA	--	--	--	--	--

1 - National Recommended Water Quality Criteria, http://water.epa.gov/scitech/swguidance/standards/current/index.cfm; and Maryland Numerical Criteria for Toxic Substances in Surface Waters, Code of Maryland Regulations (COMAR) 26.08.02.03, http://www.dsd.state.md.us./comar/comarhtml/26/26.08.02.03-2.htm

2 - United State Environmental Protection Agency (USEPA) Region 3 Biological Technical Advisory Group (BTAG) Freshwater Screening Benchmarks. Value for 1,4-dioxane is the USEPA Region 5 ecological screening value (USEPA, 2003)

3 - For carcinogens, criterion is for incremental cancer risk of $1x10^{-5}$

4 - Site-specific swimming screening levels were developed for *cis* -1,2-dichloroethene, trichloroethene, and vinyl chloride only

5 - Value is for total polychlorinated biphenyls.

Gray shading indicates a result that exceeds a screening criterion.

-- not detected
MRC - Middle River Complex
J - estimated result
NA - not analyzed or not available
µg/L - micrograms per liter
SW - surface water

Table 4-3

Field Measurements for Surface-Water Quality, June 2016
Cow Pen Creek and Dark Head Cove
Lockheed Martin Middle River Complex, Middle River, Maryland

Sample No.	Color	pH (S.U.)	SC (mS/cm)	Temperature (ºC)	Turbidity (NTU)	DO (mg/L)	Salinity (%)	ORP (mv)
SW1A	Clear	6.30	5.44	24.20	5.40	6.35	3.0	136
SW2A	Clear	6.70	6.02	24.54	6.22	5.47	3.3	149
SW5A1	Clear	7.25	6.34	24.25	6.44	4.69	3.5	60
SW5A2	Clear	7.26	6.38	24.34	7.36	4.07	3.5	110
SW5B	Clear	7.34	6.37	24.32	6.22	4.53	3.5	123
SW6A	Clear	7.24	6.32	24.60	4.30	4.15	3.4	140
SW6B	Clear	7.33	6.31	24.70	4.90	5.64	3.4	138
SW7A	Clear	6.90	6.24	24.50	2.41	5.90	3.4	135
SW7B	Clear	7.10	6.28	24.32	5.86	3.90	3.4	128
SW8A	Clear	7.40	6.32	24.71	4.77	5.47	3.4	143
SW8B	Clear	7.40	6.31	24.72	4.67	6.18	3.4	142
SW9A	Clear	7.10	6.33	24.52	4.88	4.40	3.4	136
SW9B	Clear	7.20	6.30	24.63	6.58	4.40	3.4	139
Average	**Clear**	**7.12**	**6.23**	**24.49**	**5.39**	**5.01**	**3.38**	**129.2**

ºC— degrees Celsius
DO— dissolved oxygen
Gr/Br— greenish brown
mg/L— milligram(s) per liter
mS/cm—milliSiemen(s) per centimeter
mv— millivolt(s)
NTU— nephelometric turbidity unit(s)
ORP— oxidation-reduction potential
pH— hydrogen ion content (a measure of acidity or alkalinity)
SC— specific conductance
S.U.— standard unit(s)

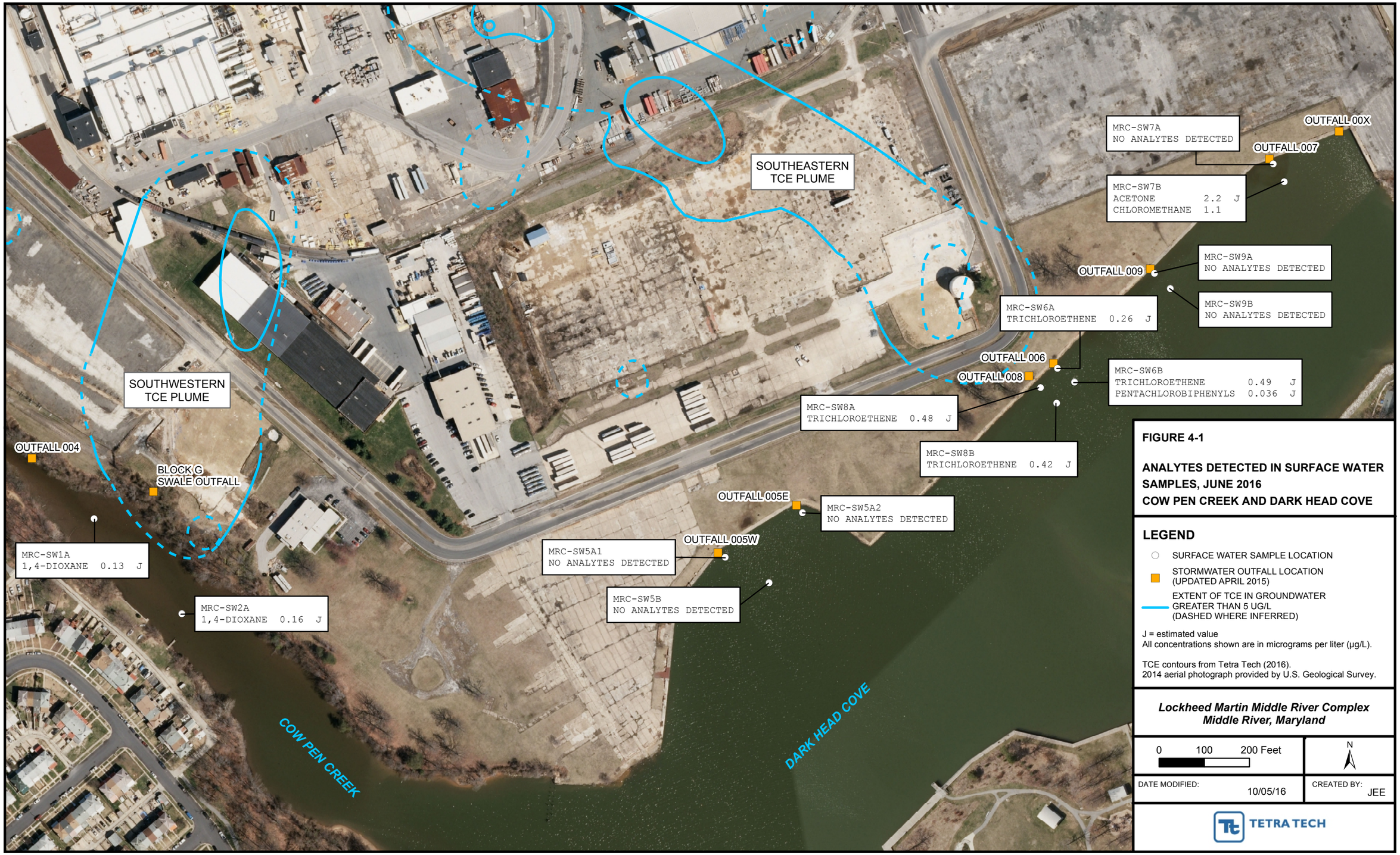

FIGURE 4-1

ANALYTES DETECTED IN SURFACE WATER SAMPLES, JUNE 2016
COW PEN CREEK AND DARK HEAD COVE

LEGEND

- SURFACE WATER SAMPLE LOCATION
- STORMWATER OUTFALL LOCATION (UPDATED APRIL 2015)
- EXTENT OF TCE IN GROUNDWATER GREATER THAN 5 UG/L (DASHED WHERE INFERRED)

J = estimated value
All concentrations shown are in micrograms per liter (µg/L).

TCE contours from Tetra Tech (2016).
2014 aerial photograph provided by U.S. Geological Survey.

Lockheed Martin Middle River Complex
Middle River, Maryland

0 100 200 Feet

N

DATE MODIFIED: 10/05/16

CREATED BY: JEE

TETRA TECH

Map Document: (P:\GIS\Middle_River\MapDocs\MXD\mrc_sw_tags_jun2016.mxd)
10/05/16 -- JEE

Section 5
Summary

Tetra Tech, Inc. (Tetra Tech) collected 13 water samples from Cow Pen Creek and Dark Head Cove on June 13, 2016 on behalf of Lockheed Martin Corporation (Lockheed Martin), The samples were chemically analyzed for volatile organic compounds (VOCs), 1,4-dioxane (for the two Cow Pen Creek samples only), and polychlorinated biphenyls (PCBs) (for the Dark Head Cove samples only). These analyses were performed to determine if these constituents are in surface water and if they originate from stormwater outfalls, sediments, or groundwater plumes at the Middle River Complex (MRC). The results were validated in accordance with United States Environmental Agency (USEPA) procedures, and were compared to ecological and human-health criteria including site-specific screening concentrations developed by Lockheed Martin Corporation for evaluating risks to recreational swimmers for three volatile organic compounds that are found at elevated concentrations in Middle River Complex groundwater plumes.

The volatile organic compound trichloroethene (TCE) was detected at low concentrations (ranging from 0.26*J* to 0.49*J* micrograms per liter [µg/L]) in four surface water samples collected in Dark Head Cove near Outfalls 006 and 008, adjacent to the southeastern trichloroethene plume (trichloroethene was not detected in the two Cow Pen Creek samples). These trichloroethene concentrations are below ecological and human-health screening criteria used for the investigation, and are similar to trichloroethene concentrations detected in 2015 and in 2014.

1,4-Dioxane was detected in Cow Pen Creek surface water at concentrations of 0.13*J* µg/L and 0.16*J* µg/L in two Cow Pen Creek samples. These concentrations are more than five orders of magnitude (nearly 100,000 times) lower than its United Stated Environmental Protection Agency ecological screening-level (22,000 µg/L). 1,4-Dioxane is likely being discharged to Cow Pen Creek from the southwestern trichloroethene and 1,4-dioxane groundwater plume.

The polychlorinated biphenyl (PCB) homolog pentachlorobiphenyl was detected in surface water sample SW6B, collected 50 feet from Outfall 006 in Dark Head Cove. The pentachlorobiphenyl concentration (0.036 J µg/L) exceeds the Biological Technical Advisory Group ecological criterion

and the human health consumption-of-aquatic-organism criterion. However, the single detection of a polychlorinated biphenyl homolog in one sample indicates reductions in the frequency and concentrations of polychlorinated biphenyls in Dark Head Cove water samples compared to previous samples collected in 2014. The reduction of polychlorinated biphenyl concentrations in 2016 (and 2015 samples) and associated risk around Outfall 005 and Dark Head Cove may be attributed to the removal of sediment with elevated levels of polychlorinated biphenyls that was conducted in the winter of 2014–2015; this removal dredged sediment in a portion of Dark Head Cove adjacent to Outfall 005.

Section 6
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APPENDIX A—SURFACE-WATER-SAMPLING LOG SHEETS

Tetra Tech

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Dark Head Cove, Middle River
Project No.: 112IC07776

[] Stream
[] Spring
[] Pond
[] Lake
[X] Other: Tidal creek - freshwater
[] QA Sample Type:

Sample ID No.: MRC-SW5A1 -061316
Sample Location: MRC-SW5A1
Sampled By: J. Mullis
C.O.C. No.:

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

SAMPLING DATA:

		Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date:	6/13/2016	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/L)	(ppt)	mV
Time:	1313	clear	7.25	6.34	24.25	6.44	4.7	3.5	60
Depth:	1 ft below water								
Method:	Grab								

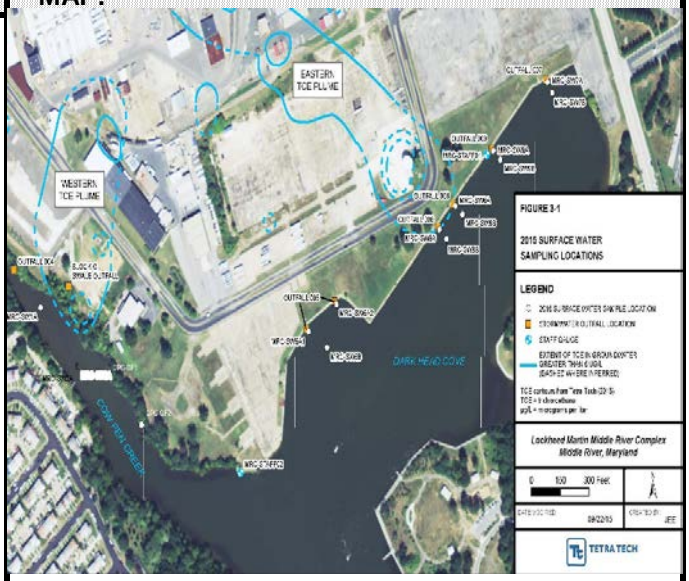
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCL pH<2	3 - 40 mL glass vials	Yes
PCBs (680)	None	2 - 1L ambers	Yes

OBSERVATIONS / NOTES:

Water depth >4 meters
Hardness 840 mg/L CaCO3

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Dark Head Cove, Middle River
Project No.: 112IC07776

[] Stream
[] Spring
[] Pond
[] Lake
[X] Other: Tidal creek - freshwater
[] QA Sample Type:

Sample ID No.: MRC-SW5A2 -061316
Sample Location: MRC-SW5A2
Sampled By: J. Mullis
C.O.C. No.:

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

SAMPLING DATA:

		Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date:	6/13/2016	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/L)	(%)	mV
Time:	1318	clear	7.26	6.38	24.34	7.36	4.07	3.5	110
Depth:	1 ft below water								
Method:	Grab								

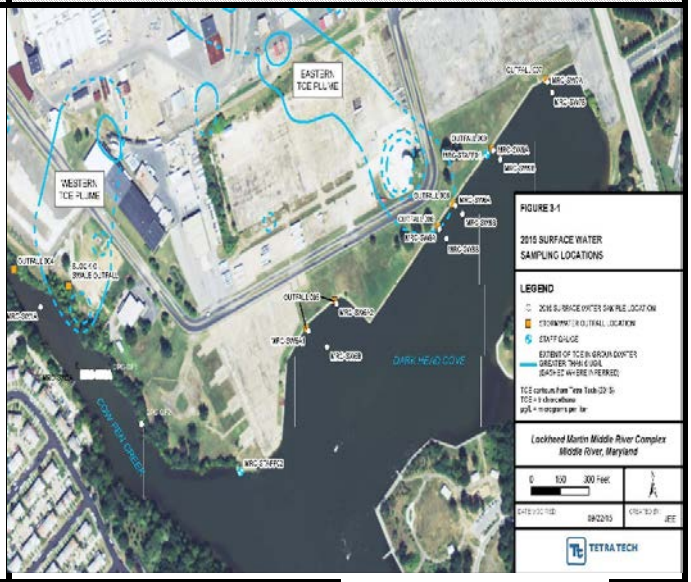
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCL pH<2	3 - 40 mL glass vials	Yes
PCBs (680)	None	2 - 1L ambers	Yes

OBSERVATIONS / NOTES:

Water depth 3.2 meters
Hardness 860 mg/L CaCO3

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Dark Head Cove, Middle River
Project No.: 112IC07776

[] Stream
[] Spring
[] Pond
[] Lake
[X] Other: Tidal creek - freshwater
[] QA Sample Type:

Sample ID No.: MRC-SW5B -061316
Sample Location: MRC-SW5B
Sampled By: J. Mullis
C.O.C. No.:

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

SAMPLING DATA:

		Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date:	6/13/2016	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/L)	(%)	mV
Time:	1322	clear	7.34	6.37	24.32	6.22	4.53	3.5	123
Depth:	1 ft below water								
Method:	Grab								

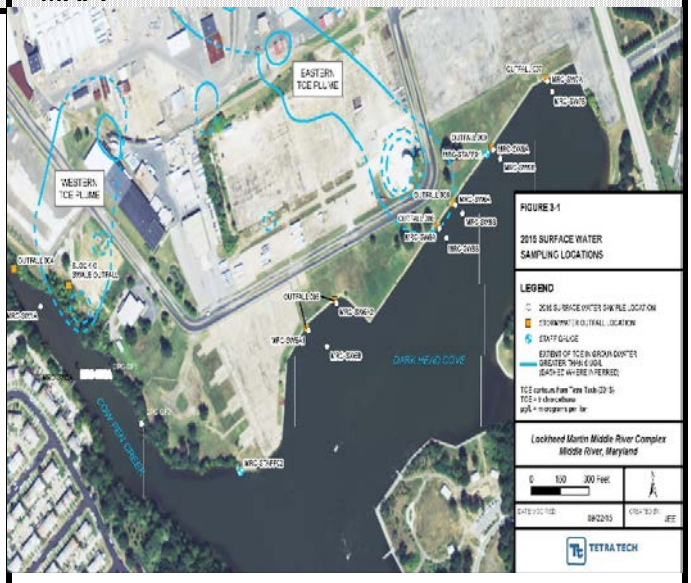
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCL pH<2	3 - 40 mL glass vials	Yes
PCBS (680)	None	2 - 1L ambers	yes

OBSERVATIONS / NOTES:

Water depth >4 meters
Hardness 720 mg/L CaCO3

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Dark Head Cove, Middle River
Project No.: 112IC07776

[] Stream
[] Spring
[] Pond
[] Lake
[X] Other: Tidal creek - freshwater
[] QA Sample Type:

Sample ID No.: MRC-SW6A -061316
Sample Location: MRC-SW6A
Sampled By: J. Mullis
C.O.C. No.:

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

SAMPLING DATA:

		Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date:	6/13/2016	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/L)	(%)	mV
Time:	1241	clear	7.24	6.32	24.6	4.3	4.15	3.4	140
Depth:	1 ft below water								
Method:	Grab								

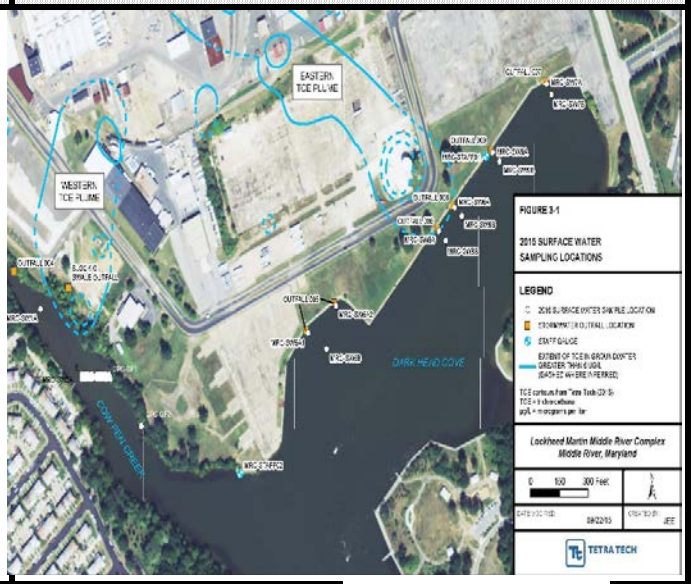
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCL pH<2	3 - 40 mL glass vials	Yes
PCBS (680)	None	2 - 1L ambers	yes

OBSERVATIONS / NOTES:

Water depth 2.3 meters
Hardness 840 mg/L CaCO3

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
	MRC-SWDUP2-061316 FOR PCBS AND VOCS

Signature(s):

Tetra Tech

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Dark Head Cove, Middle River
Project No.: 112IC07776

[] Stream
[] Spring
[] Pond
[] Lake
[X] Other: Tidal creek - freshwater
[] QA Sample Type:

Sample ID No.: MRC-SW6B -061316
Sample Location: MRC-SW6B
Sampled By: J. Mullis
C.O.C. No.:

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

SAMPLING DATA:

		Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/L)	Salinity (%)	ORP mV
Date:	6/13/2016								
Time:	1252								
Depth:	1 ft below water	**clear**	**7.33**	**6.31**	**24.7**	**4.9**	**5.64**	**3.4**	**138**
Method:	Grab								

SAMPLE COLLECTION INFORMATION:

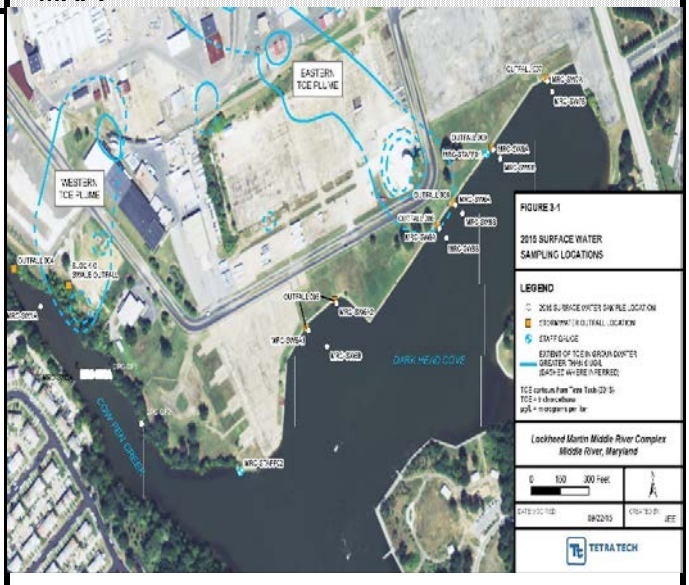
Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCL pH<2	3 - 40 mL glass vials	Yes
PCBS (680)	None	2 - 1L ambers	Yes

OBSERVATIONS / NOTES:

Water depth 3 meters

Hardness 860 mg/L CaCO3

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Dark Head Cove, Middle River
Project No.: 112IC07776

[] Stream
[] Spring
[] Pond
[] Lake
[X] Other: Tidal creek - freshwater
[] QA Sample Type:

Sample ID No.: MRC-SW7A -061316
Sample Location: MRC-SW7A
Sampled By: J. Mullis
C.O.C. No.:

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

SAMPLING DATA:

		Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date:	6/13/2016	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/L)	(%)	mV
Time:	1218								
Depth:	1 ft below water	**clear**	**6.9**	**6.24**	**24.5**	**2.41**	**5.9**	**3.4**	**135**
Method:	Grab								

SAMPLE COLLECTION INFORMATION:

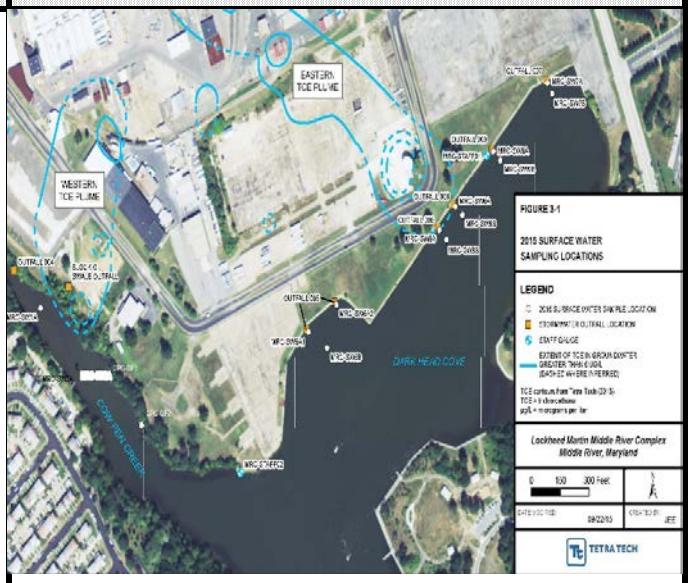
Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCL pH<2	3 - 40 mL glass vials	Yes
PCBS (680)	None	2 - 1L ambers	Yes

OBSERVATIONS / NOTES:

Water depth 1.3 meters

Hardness 820 mg/L CaCO3

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Dark Head Cove, Middle River
Project No.: 112IC07776

[] Stream
[] Spring
[] Pond
[] Lake
[X] Other: Tidal creek - freshwater
[] QA Sample Type:

Sample ID No.: MRC-SW7B -061316
Sample Location: MRC-SW7B
Sampled By: J. Mullis
C.O.C. No.:

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

SAMPLING DATA:

		Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date:	6/13/2016	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/L)	(%)	mV
Time:	1224								
Depth:	1 ft below water	**clear**	**7.1**	**6.28**	**24.32**	**5.86**	**3.9**	**3.4**	**128**
Method:	Grab								

SAMPLE COLLECTION INFORMATION:

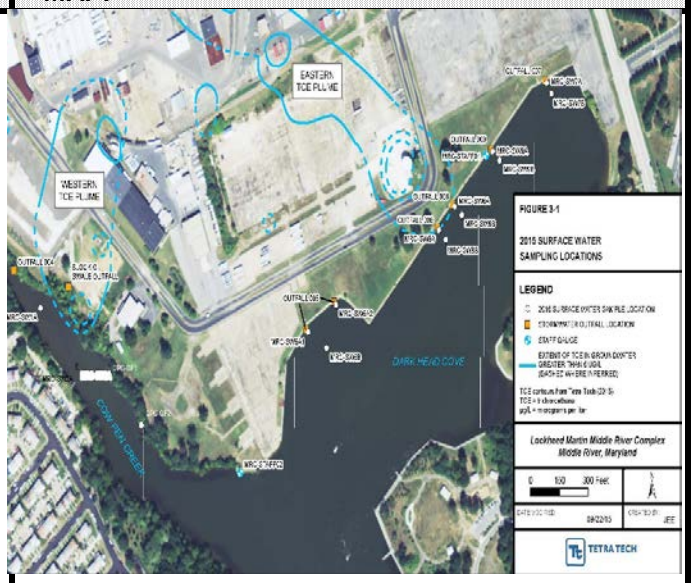
Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCL pH<2	3 - 40 mL glass vials	Yes
PCBS (680)	None	2 - 1L ambers	Yes

OBSERVATIONS / NOTES:

Water depth 2.2 meters

Hardness 840 mg/L CaCO3

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Dark Head Cove, Middle River
Project No.: 112IC07489

[] Stream
[] Spring
[] Pond
[] Lake
[X] Other: Tidal creek - freshwater
[] QA Sample Type:

Sample ID No.: MRC-SW8A -061316
Sample Location: MRC-SW8A
Sampled By: J. Mullis
C.O.C. No.:

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

SAMPLING DATA:

		Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date:	6/13/2016	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/L)	(%)	mV
Time:	1257	clear	7.4	6.32	24.71	4.77	5.47	3.4	143
Depth:	1 ft below water								
Method:	Grab								

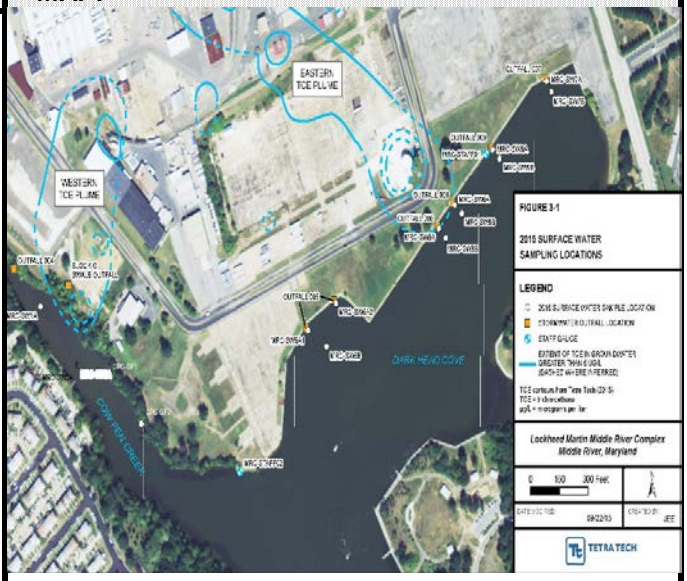
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCL pH<2	3 - 40 mL glass vials	Yes
PCBs (680)	None	2 - 1L ambers	Yes

OBSERVATIONS / NOTES:

Water depth 2.2 meters
Hardness 860 mg/L CaCO3

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
	MRC-SWDUP-11242015

Signature(s):

Tetra Tech

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Dark Head Cove, Middle River
Project No.: 112IC07776

[] Stream
[] Spring
[] Pond
[] Lake
[X] Other: Tidal creek - freshwater
[] QA Sample Type:

Sample ID No.: MRC-SW8B -061316
Sample Location: MRC-SW8B
Sampled By: J. Mullis
C.O.C. No.:

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

SAMPLING DATA:

		Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date:	6/13/2016	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/L)	(%)	mV
Time:	1304	clear	7.40	6.31	24.72	4.67	6.18	3.4	142
Depth:	1 ft below water								
Method:	Grab								

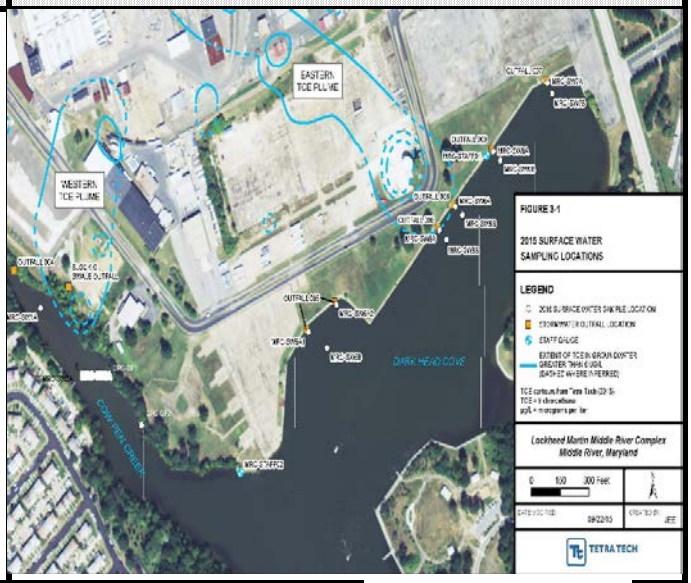
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCL pH<2	3 - 40 mL glass vials	Yes
PCBs (680)	None	2 - 1L ambers	Yes

OBSERVATIONS / NOTES:

Water depth 2.9 meters
Hardness 800 mg/L CaCO3

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Dark Head Cove, Middle River
Project No.: 112IC07776

[] Stream
[] Spring
[] Pond
[] Lake
[X] Other: Tidal creek - freshwater
[] QA Sample Type:

Sample ID No.: MRC-SW9A -061316
Sample Location: MRC-SW9A
Sampled By: J. Mullis
C.O.C. No.:

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

SAMPLING DATA:

		Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/L)	Salinity (%)	ORP mV
Date:	6/13/2016								
Time:	1229								
Depth:	1 ft below water	**clear**	**7.10**	**6.33**	**24.52**	**4.88**	**4.4**	**3.4**	**136**
Method:	Grab								

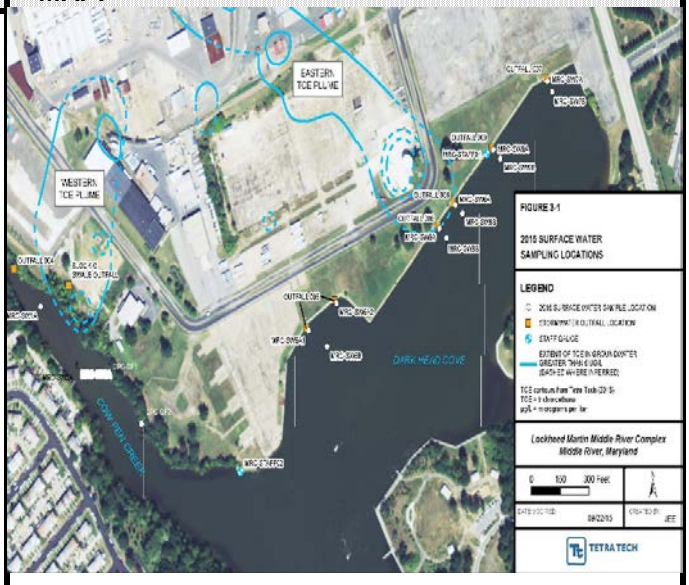
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCL pH<2	3 - 40 mL glass vials	Yes
PCBs (680)	None	2 - 1L ambers	Yes

OBSERVATIONS / NOTES:

Water depth 1.7 meters
Hardness 860 mg/L CaCO3

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Dark Head Cove, Middle River
Project No.: 112IC07776

[] Stream
[] Spring
[] Pond
[] Lake
[X] Other: Tidal creek - freshwater
[] QA Sample Type:

Sample ID No.: MRC-SW9B -061316
Sample Location: MRC-SW9B
Sampled By: J. Mullis
C.O.C. No.:

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

SAMPLING DATA:

		Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date:	6/13/2016	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/L)	(%)	mV
Time:	1234								
Depth:	1 ft below water	clear	7.20	6.3	24.63	6.58	4.4	3.4	139
Method:	Grab								

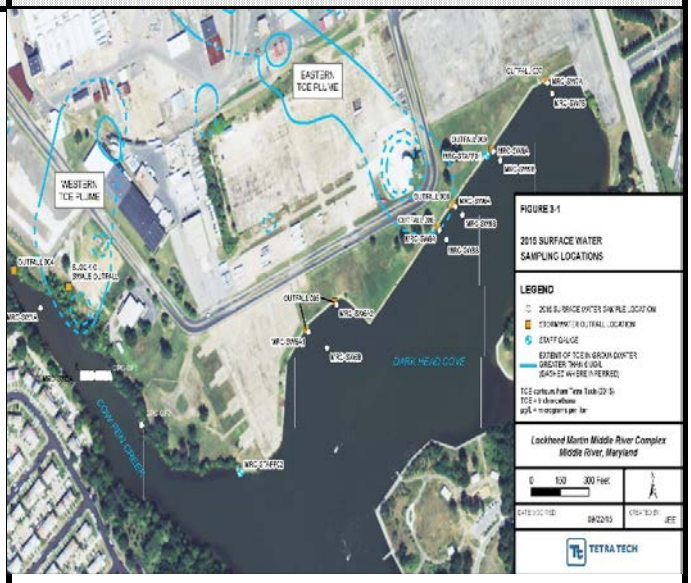
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCL pH<2	3 - 40 mL glass vials	Yes
PCBs (680)	None	2 - 1L ambers	Yes

OBSERVATIONS / NOTES:

Water depth 2.4 meters
Hardness 800 mg/L CaCO3

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Dark Head Cove, Middle River
Project No.: 112IC07776

[] Stream
[] Spring
[] Pond
[] Lake
[X] Other: Tidal creek - freshwater
[] QA Sample Type:

Sample ID No.: MRC-SW1A -061316
Sample Location: MRC-SW1A
Sampled By: J. Mullis
C.O.C. No.:

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

SAMPLING DATA:

		Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date:	6/13/2016	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/L)	(%)	mV
Time:	1151	clear	6.30	5.44	24.2	5.40	6.35	3	136
Depth:	1 ft below water								
Method:	Grab								

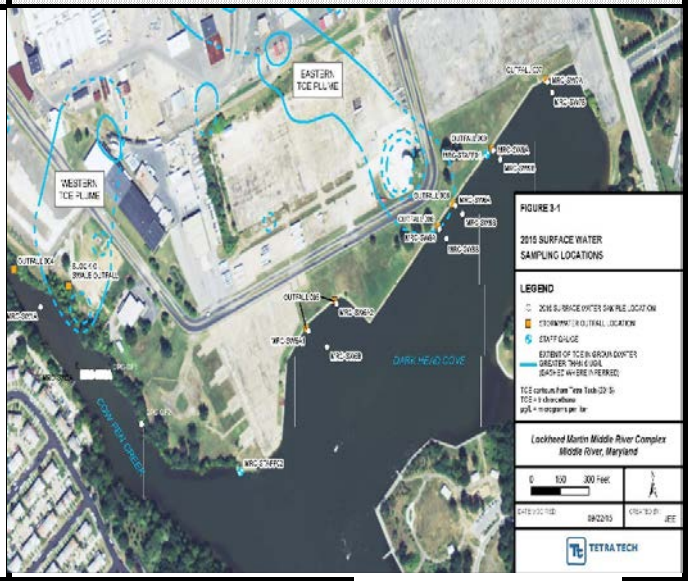
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCL pH<2	3 - 40 mL glass vials	Yes
1,4 Dioxane (522)	HCL pH<2	2 - 250 mL ambers	Yes

OBSERVATIONS / NOTES:

Water depth 0.4 meters
Hardness 700 mg/L CaCO3

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Dark Head Cove, Middle River
Project No.: 112IC07776

[] Stream
[] Spring
[] Pond
[] Lake
[X] Other: Tidal creek - freshwater
[] QA Sample Type:

Sample ID No.: MRC-SW2A -061316
Sample Location: MRC-SW2A
Sampled By: J. Mullis
C.O.C. No.:

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

SAMPLING DATA:

		Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date:	6/13/2016	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/L)	(%)	mV
Time:	1158	clear	6.7	6.02	24.54	6.22	5.47	3.3	149
Depth:	1 ft below water								
Method:	Grab								

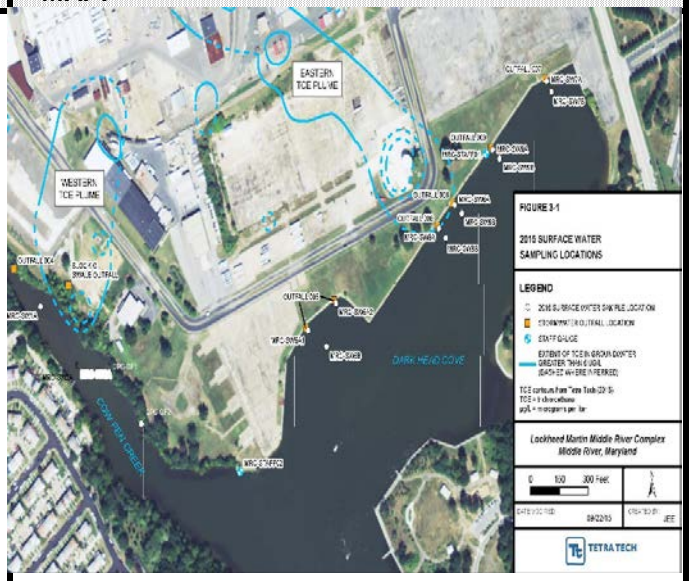
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCL pH<2	3 - 40 mL glass vials	Yes
1,4 Dioxane	HCL pH<2	2 - 250 mL ambers	Yes

OBSERVATIONS / NOTES:

Water depth 0.45 meters
Hardness 720 mg/L CaCO3

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
	MRC-SWDUP1-061316 FOR 1,4-DIOXANE ONLY

Signature(s):

APPENDIX B—DATA-VALIDATION REPORT (ON CD)

TETRA TECH

INTERNAL CORRESPONDENCE

TO: **M. MARTIN** **DATE:** **JULY 25, 2016**

FROM: **L. GANSER** **COPIES:** **DV FILE**

SUBJECT: **DATA VALIDATION – VOC, 1,4-DIOXANE, AND PCB HOMOLOGS**
LOCKHEED MARTIN CORPORATION (LMC) – MIDDLE RIVER COMPLEX (MRC)
SDG 240-65994-1

SAMPLES: 17/Aqueous/

MRC-SW1A-061316	MRC-SW2A-061316	MRC-SW5A1-061316
MRC-SW5A2-061316	MRC-SW5B-061316	MRC-SW6A-061316
MRC-SW6B-061316	MRC-SW7A-061316	MRC-SW7B-061316
MRC-SW8A-061316	MRC-SW8B-061316	MRC-SW9A-061316
MRC-SW9B-061316	MRC-SWDUP1-061316	MRC-SWDUP2-061316
MRC-SWFB-061316	TB-061316	

Overview

The sample set for LMC-MRC, SDG 240-65994-1 consisted of fifteen (15) aqueous environmental samples, one (1) field blank, and one (1) trip blank. All samples, except MRC-SWDUP1-061316 were analyzed for volatile organic compounds (VOC). Samples MRC-SW1A-061316, MRC-SW2A-061316, and MRC-SWDUP1-061316 were analyzed for 1,4-dioxane. Polychlorinated biphenyl (PCB) homologs were analyzed in all samples, except MRC-SW1A-061316, MRC-SW2A-061316, and MRC-SWDUP1-061316. The trip blank (TB-061316) was only analyzed for VOC. The field blank (MRC-SWFB-061316) was analyzed for VOC, 1,4-dioxane, and PCB homologs. Two field duplicate sample pairs were included in this SDG: MRC-SWDUP1-061316 / MRC-SW2A-061316 and MRC-SWDUP2-061316 / MRC-SW6A-061316.

The samples were collected by Tetra Tech, Inc. on June 13, 2016 and analyzed by TestAmerica, Inc. All analyses were conducted in accordance with SW-846 Methods 8260C for VOC and EPA methods 522 for 1,4-dioxane and 680 for PCB homologs analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, laboratory method/preparation blanks, surrogate spike recoveries, laboratory control sample/laboratory control sample duplicate results, chromatographic resolution, field duplicate precision, analyte identification, analyte quantitation, detection limits, and field duplicate precision. Areas of concern are listed below.

Major

No major issues were noted.

Minor

- Continuing calibration percent difference (%D) greater than 20 percent was noted for dichlorodifluoromethane, chloromethane, bromomethane, trichlorofluoromethane, and 1,2-dibromo-3-chloropropane on 6/20/2016 at 9:34 on instrument A3UX11 affecting all samples except MRC-SW1A-061316, MRC-SW2A-061316, MRC-SWDUP2-061316, the trip blank, and the field blank. The chloromethane result in sample MRC-SW7B-061316 was not affected as this parameter was reanalyzed. The nondetected results for these parameters in the affected samples were qualified as estimated (UJ).

- Continuing calibration %D greater than 20 percent was noted for dichlorodifluoromethane,

chloromethane, dichlorofluoromethane, trichlorofluoromethane, and 1,2-dibromo-3-chloropropane on 6/20/2016 at 12:47 on instrument A3UX16 affecting samples MRC-SW1A-061316, MRC-SW2A-061316, MRC-SWDUP2-061316, the trip blank, and the field blank. The nondetected results for these parameters in the affected samples were qualified as estimated (UJ).

- Detected results reported below the Reporting Limit (RL) limit but above the Method Detection Limit (MDL) were qualified as estimated, (J).

Notes

VOC LCS %R was greater than QC limits for methylene chloride affecting samples in analysis batch 235154. No action was taken as methylene chloride results was in any sample.

The laboratory noted that there was insufficient sample volume to perform a VOC matrix spike/matrix spike duplicate associated with sample MRC-SW7B-061316.

Non-detected results were reported to the MDL.

Executive Summary

Laboratory Performance: Calibration noncompliance was noted for select VOCs.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Review" (August 2014). The text of this report has been formulated to address only those areas affecting data quality.

Tetra Tech, Inc.
Leanne Ganser
Environmental Scientist/~~Data~~ Validator

Tetra Tech, Inc.
Joseph A. Samchuck
Data Validation Manager

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Appendix A

Qualified Analytical Results

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate
Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC

PROJ_NO: 07776	NSAMPLE	MRC-SW1A-061316			MRC-SW2A-061316			MRC-SW5A1-061316			MRC-SW5A2-061316		
SDG: 240-65994-1	LAB_ID	240-65996-2			240-65996-3			240-65994-1			240-65994-2		
FRACTION: OV	SAMP_DATE	6/13/2016			6/13/2016			6/13/2016			6/13/2016		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.44	U		0.44	U		0.44	U		0.44	U	
1,1,2,2-TETRACHLOROETHANE		0.22	U		0.22	U		0.22	U		0.22	U	
1,1,2-TRICHLOROETHANE		0.24	U		0.24	U		0.24	U		0.24	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.45	U		0.45	U		0.45	U		0.45	U	
1,1-DICHLOROETHANE		0.3	U		0.3	U		0.3	U		0.3	U	
1,1-DICHLOROETHENE		0.45	U		0.45	U		0.45	U		0.45	U	
1,2,4-TRICHLOROBENZENE		0.32	U		0.32	U		0.32	U		0.32	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.82	UJ	C	0.82	UJ	C	0.82	UJ	C	0.82	UJ	C
1,2-DIBROMOETHANE		0.32	U		0.32	U		0.32	U		0.32	U	
1,2-DICHLOROBENZENE		0.25	U		0.25	U		0.25	U		0.25	U	
1,2-DICHLOROETHANE		0.23	U		0.23	U		0.23	U		0.23	U	
1,2-DICHLOROPROPANE		0.25	U		0.25	U		0.25	U		0.25	U	
1,3-DICHLOROBENZENE		0.19	U		0.19	U		0.19	U		0.19	U	
1,4-DICHLOROBENZENE		0.27	U		0.27	U		0.27	U		0.27	U	
2-BUTANONE		0.53	U		0.53	U		0.53	U		0.53	U	
2-HEXANONE		0.48	U		0.48	U		0.48	U		0.48	U	
4-METHYL-2-PENTANONE		0.99	U		0.99	U		0.99	U		0.99	U	
ACETONE		0.94	U		0.94	U		0.94	U		0.94	U	
BENZENE		0.35	U		0.35	U		0.35	U		0.35	U	
BROMODICHLOROMETHANE		0.29	U		0.29	U		0.29	U		0.29	U	
BROMOFORM		0.56	U		0.56	U		0.56	U		0.56	U	
BROMOMETHANE		0.44	U		0.44	U		0.44	UJ	C	0.44	UJ	C
CARBON DISULFIDE		0.38	U		0.38	U		0.38	U		0.38	U	
CARBON TETRACHLORIDE		0.43	U		0.43	U		0.43	U		0.43	U	
CHLOROBENZENE		0.25	U		0.25	U		0.25	U		0.25	U	
CHLORODIBROMOMETHANE		0.43	U		0.43	U		0.43	U		0.43	U	
CHLOROETHANE		0.32	U		0.32	U		0.32	U		0.32	U	
CHLOROFORM		0.25	U		0.25	U		0.25	U		0.25	U	
CHLOROMETHANE		0.44	UJ	C	0.44	UJ	C	0.44	UJ	C	0.44	UJ	C
CIS-1,2-DICHLOROETHENE		0.26	U		0.26	U		0.26	U		0.26	U	
CIS-1,3-DICHLOROPROPENE		0.46	U		0.46	U		0.46	U		0.46	U	
CYCLOHEXANE		0.45	U		0.45	U		0.45	U		0.45	U	
DICHLORODIFLUOROMETHANE		0.32	UJ	C	0.32	UJ	C	0.32	UJ	C	0.32	UJ	C
ETHYLBENZENE		0.25	U		0.25	U		0.25	U		0.25	U	
ISOPROPYLBENZENE		0.35	U		0.35	U		0.35	U		0.35	U	

PROJ_NO: 07776	NSAMPLE	MRC-SW5B-061316			MRC-SW6A-061316			MRC-SW6B-061316			MRC-SW7A-061316		
SDG: 240-65994-1	LAB_ID	240-65994-3			240-65994-4			240-65994-5			240-65994-6		
FRACTION: OV	SAMP_DATE	6/13/2016			6/13/2016			6/13/2016			6/13/2016		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.44	U		0.44	U		0.44	U		0.44	U	
1,1,2,2-TETRACHLOROETHANE		0.22	U		0.22	U		0.22	U		0.22	U	
1,1,2-TRICHLOROETHANE		0.24	U		0.24	U		0.24	U		0.24	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.45	U		0.45	U		0.45	U		0.45	U	
1,1-DICHLOROETHANE		0.3	U		0.3	U		0.3	U		0.3	U	
1,1-DICHLOROETHENE		0.45	U		0.45	U		0.45	U		0.45	U	
1,2,4-TRICHLOROBENZENE		0.32	U		0.32	U		0.32	U		0.32	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.82	UJ	C	0.82	UJ	C	0.82	UJ	C	0.82	UJ	C
1,2-DIBROMOETHANE		0.32	U		0.32	U		0.32	U		0.32	U	
1,2-DICHLOROBENZENE		0.25	U		0.25	U		0.25	U		0.25	U	
1,2-DICHLOROETHANE		0.23	U		0.23	U		0.23	U		0.23	U	
1,2-DICHLOROPROPANE		0.25	U		0.25	U		0.25	U		0.25	U	
1,3-DICHLOROBENZENE		0.19	U		0.19	U		0.19	U		0.19	U	
1,4-DICHLOROBENZENE		0.27	U		0.27	U		0.27	U		0.27	U	
2-BUTANONE		0.53	U		0.53	U		0.53	U		0.53	U	
2-HEXANONE		0.48	U		0.48	U		0.48	U		0.48	U	
4-METHYL-2-PENTANONE		0.99	U		0.99	U		0.99	U		0.99	U	
ACETONE		0.94	U		0.94	U		0.94	U		0.94	U	
BENZENE		0.35	U		0.35	U		0.35	U		0.35	U	
BROMODICHLOROMETHANE		0.29	U		0.29	U		0.29	U		0.29	U	
BROMOFORM		0.56	U		0.56	U		0.56	U		0.56	U	
BROMOMETHANE		0.44	UJ	C	0.44	UJ	C	0.44	UJ	C	0.44	UJ	C
CARBON DISULFIDE		0.38	U		0.38	U		0.38	U		0.38	U	
CARBON TETRACHLORIDE		0.43	U		0.43	U		0.43	U		0.43	U	
CHLOROBENZENE		0.25	U		0.25	U		0.25	U		0.25	U	
CHLORODIBROMOMETHANE		0.43	U		0.43	U		0.43	U		0.43	U	
CHLOROETHANE		0.32	U		0.32	U		0.32	U		0.32	U	
CHLOROFORM		0.25	U		0.25	U		0.25	U		0.25	U	
CHLOROMETHANE		0.44	UJ	C	0.44	UJ	C	0.44	UJ	C	0.44	UJ	C
CIS-1,2-DICHLOROETHENE		0.26	U		0.26	U		0.26	U		0.26	U	
CIS-1,3-DICHLOROPROPENE		0.46	U		0.46	U		0.46	U		0.46	U	
CYCLOHEXANE		0.45	U		0.45	U		0.45	U		0.45	U	
DICHLORODIFLUOROMETHANE		0.32	UJ	C	0.32	UJ	C	0.32	UJ	C	0.32	UJ	C
ETHYLBENZENE		0.25	U		0.25	U		0.25	U		0.25	U	
ISOPROPYLBENZENE		0.35	U		0.35	U		0.35	U		0.35	U	

PROJ_NO: 07776	NSAMPLE	MRC-SW7B-061316			MRC-SW8A-061316			MRC-SW8B-061316			MRC-SW9A-061316		
SDG: 240-65994-1	LAB_ID	240-65994-7			240-65994-8			240-65994-9			240-65994-10		
FRACTION: OV	SAMP_DATE	6/13/2016			6/13/2016			6/13/2016			6/13/2016		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.44	U		0.44	U		0.44	U		0.44	U	
1,1,2,2-TETRACHLOROETHANE		0.22	U		0.22	U		0.22	U		0.22	U	
1,1,2-TRICHLOROETHANE		0.24	U		0.24	U		0.24	U		0.24	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.45	U		0.45	U		0.45	U		0.45	U	
1,1-DICHLOROETHANE		0.3	U		0.3	U		0.3	U		0.3	U	
1,1-DICHLOROETHENE		0.45	U		0.45	U		0.45	U		0.45	U	
1,2,4-TRICHLOROBENZENE		0.32	U		0.32	U		0.32	U		0.32	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.82	UJ	C	0.82	UJ	C	0.82	UJ	C	0.82	UJ	C
1,2-DIBROMOETHANE		0.32	U		0.32	U		0.32	U		0.32	U	
1,2-DICHLOROBENZENE		0.25	U		0.25	U		0.25	U		0.25	U	
1,2-DICHLOROETHANE		0.23	U		0.23	U		0.23	U		0.23	U	
1,2-DICHLOROPROPANE		0.25	U		0.25	U		0.25	U		0.25	U	
1,3-DICHLOROBENZENE		0.19	U		0.19	U		0.19	U		0.19	U	
1,4-DICHLOROBENZENE		0.27	U		0.27	U		0.27	U		0.27	U	
2-BUTANONE		0.53	U		0.53	U		0.53	U		0.53	U	
2-HEXANONE		0.48	U		0.48	U		0.48	U		0.48	U	
4-METHYL-2-PENTANONE		0.99	U		0.99	U		0.99	U		0.99	U	
ACETONE		2.2	J	P	0.94	U		0.94	U		0.94	U	
BENZENE		0.35	U		0.35	U		0.35	U		0.35	U	
BROMODICHLOROMETHANE		0.29	U		0.29	U		0.29	U		0.29	U	
BROMOFORM		0.56	U		0.56	U		0.56	U		0.56	U	
BROMOMETHANE		0.44	UJ	C	0.44	UJ	C	0.44	UJ	C	0.44	UJ	C
CARBON DISULFIDE		0.38	U		0.38	U		0.38	U		0.38	U	
CARBON TETRACHLORIDE		0.43	U		0.43	U		0.43	U		0.43	U	
CHLOROBENZENE		0.25	U		0.25	U		0.25	U		0.25	U	
CHLORODIBROMOMETHANE		0.43	U		0.43	U		0.43	U		0.43	U	
CHLOROETHANE		0.32	U		0.32	U		0.32	U		0.32	U	
CHLOROFORM		0.25	U		0.25	U		0.25	U		0.25	U	
CHLOROMETHANE		1.1			0.44	UJ	C	0.44	UJ	C	0.44	UJ	C
CIS-1,2-DICHLOROETHENE		0.26	U		0.26	U		0.26	U		0.26	U	
CIS-1,3-DICHLOROPROPENE		0.46	U		0.46	U		0.46	U		0.46	U	
CYCLOHEXANE		0.45	U		0.45	U		0.45	U		0.45	U	
DICHLORODIFLUOROMETHANE		0.32	UJ	C	0.32	UJ	C	0.32	UJ	C	0.32	UJ	C
ETHYLBENZENE		0.25	U		0.25	U		0.25	U		0.25	U	
ISOPROPYLBENZENE		0.35	U		0.35	U		0.35	U		0.35	U	

PROJ_NO: 07776	NSAMPLE	MRC-SW9B-061316			MRC-SWDUP2-061316			MRC-SWFB-061316			TB-061316		
SDG: 240-65994-1	LAB_ID	240-65994-11			240-65996-5			240-65996-1			240-65996-4		
FRACTION: OV	SAMP_DATE	6/13/2016			6/13/2016			6/13/2016			6/13/2016		
MEDIA: WATER	QC_TYPE	NM			FD			NM			TB		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF				MRC-SW6A-061316								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.44	U		0.44	U		0.44	U		0.44	U	
1,1,2,2-TETRACHLOROETHANE		0.22	U		0.22	U		0.22	U		0.22	U	
1,1,2-TRICHLOROETHANE		0.24	U		0.24	U		0.24	U		0.24	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.45	U		0.45	U		0.45	U		0.45	U	
1,1-DICHLOROETHANE		0.3	U		0.3	U		0.3	U		0.3	U	
1,1-DICHLOROETHENE		0.45	U		0.45	U		0.45	U		0.45	U	
1,2,4-TRICHLOROBENZENE		0.32	U		0.32	U		0.32	U		0.32	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.82	UJ	C	0.82	UJ	C	0.82	UJ	C	0.82	UJ	C
1,2-DIBROMOETHANE		0.32	U		0.32	U		0.32	U		0.32	U	
1,2-DICHLOROBENZENE		0.25	U		0.25	U		0.25	U		0.25	U	
1,2-DICHLOROETHANE		0.23	U		0.23	U		0.23	U		0.23	U	
1,2-DICHLOROPROPANE		0.25	U		0.25	U		0.25	U		0.25	U	
1,3-DICHLOROBENZENE		0.19	U		0.19	U		0.19	U		0.19	U	
1,4-DICHLOROBENZENE		0.27	U		0.27	U		0.27	U		0.27	U	
2-BUTANONE		0.53	U		0.53	U		0.53	U		0.53	U	
2-HEXANONE		0.48	U		0.48	U		0.48	U		0.48	U	
4-METHYL-2-PENTANONE		0.99	U		0.99	U		0.99	U		0.99	U	
ACETONE		0.94	U		0.94	U		1.2	J	P	1.6	J	P
BENZENE		0.35	U		0.35	U		0.35	U		0.35	U	
BROMODICHLOROMETHANE		0.29	U		0.29	U		0.46	J	P	0.46	J	P
BROMOFORM		0.56	U		0.56	U		0.56	U		0.56	U	
BROMOMETHANE		0.44	UJ	C	0.44	U		0.44	U		0.44	U	
CARBON DISULFIDE		0.38	U		0.38	U		0.38	U		0.38	U	
CARBON TETRACHLORIDE		0.43	U		0.43	U		0.43	U		0.43	U	
CHLOROBENZENE		0.25	U		0.25	U		0.25	U		0.25	U	
CHLORODIBROMOMETHANE		0.43	U		0.43	U		0.43	U		0.43	U	
CHLOROETHANE		0.32	U		0.32	U		0.32	U		0.32	U	
CHLOROFORM		0.25	U		0.25	U		3.9			3.7		
CHLOROMETHANE		0.44	UJ	C	0.44	UJ	C	0.44	UJ	C	0.44	UJ	C
CIS-1,2-DICHLOROETHENE		0.26	U		0.26	U		0.26	U		0.26	U	
CIS-1,3-DICHLOROPROPENE		0.46	U		0.46	U		0.46	U		0.46	U	
CYCLOHEXANE		0.45	U		0.45	U		0.45	U		0.45	U	
DICHLORODIFLUOROMETHANE		0.32	UJ	C	0.32	UJ	C	0.32	UJ	C	0.32	UJ	C
ETHYLBENZENE		0.25	U		0.25	U		0.25	U		0.25	U	
ISOPROPYLBENZENE		0.35	U		0.35	U		0.35	U		0.35	U	

PROJ_NO: 07776	NSAMPLE	MRC-SW1A-061316			MRC-SW2A-061316			MRC-SW5A1-061316			MRC-SW5A2-061316		
SDG: 240-65994-1	LAB_ID	240-65996-2			240-65996-3			240-65994-1			240-65994-2		
FRACTION: OV	SAMP_DATE	6/13/2016			6/13/2016			6/13/2016			6/13/2016		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
METHYL ACETATE		2.3	U		2.3	U		2.3	U		2.3	U	
METHYL CYCLOHEXANE		0.43	U		0.43	U		0.43	U		0.43	U	
METHYL TERT-BUTYL ETHER		0.2	U		0.2	U		0.2	U		0.2	U	
METHYLENE CHLORIDE		0.33	U		0.33	U		0.33	U		0.33	U	
STYRENE		0.45	U		0.45	U		0.45	U		0.45	U	
TETRACHLOROETHENE		0.31	U		0.31	U		0.31	U		0.31	U	
TOLUENE		0.23	U		0.23	U		0.23	U		0.23	U	
TOTAL XYLENES		0.52	U		0.52	U		0.52	U		0.52	U	
TRANS-1,2-DICHLOROETHENE		0.3	U		0.3	U		0.3	U		0.3	U	
TRANS-1,3-DICHLOROPROPENE		0.56	U		0.56	U		0.56	U		0.56	U	
TRICHLOROETHENE		0.22	U		0.22	U		0.22	U		0.22	U	
TRICHLOROFLUOROMETHANE		0.49	UJ	C	0.49	UJ	C	0.49	UJ	C	0.49	UJ	C
VINYL CHLORIDE		0.29	U		0.29	U		0.29	U		0.29	U	

PROJ_NO: 07776	NSAMPLE	MRC-SW5B-061316			MRC-SW6A-061316			MRC-SW6B-061316			MRC-SW7A-061316		
SDG: 240-65994-1	LAB_ID	240-65994-3			240-65994-4			240-65994-5			240-65994-6		
FRACTION: OV	SAMP_DATE	6/13/2016			6/13/2016			6/13/2016			6/13/2016		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
METHYL ACETATE		2.3	U		2.3	U		2.3	U		2.3	U	
METHYL CYCLOHEXANE		0.43	U		0.43	U		0.43	U		0.43	U	
METHYL TERT-BUTYL ETHER		0.2	U		0.2	U		0.2	U		0.2	U	
METHYLENE CHLORIDE		0.33	U		0.33	U		0.33	U		0.33	U	
STYRENE		0.45	U		0.45	U		0.45	U		0.45	U	
TETRACHLOROETHENE		0.31	U		0.31	U		0.31	U		0.31	U	
TOLUENE		0.23	U		0.23	U		0.23	U		0.23	U	
TOTAL XYLENES		0.52	U		0.52	U		0.52	U		0.52	U	
TRANS-1,2-DICHLOROETHENE		0.3	U		0.3	U		0.3	U		0.3	U	
TRANS-1,3-DICHLOROPROPENE		0.56	U		0.56	U		0.56	U		0.56	U	
TRICHLOROETHENE		0.22	U		0.26	J	P	0.49	J	P	0.22	U	
TRICHLOROFLUOROMETHANE		0.49	UJ	C	0.49	UJ	C	0.49	UJ	C	0.49	UJ	C
VINYL CHLORIDE		0.29	U		0.29	U		0.29	U		0.29	U	

PROJ_NO: 07776	NSAMPLE	MRC-SW7B-061316			MRC-SW8A-061316			MRC-SW8B-061316			MRC-SW9A-061316		
SDG: 240-65994-1	LAB_ID	240-65994-7			240-65994-8			240-65994-9			240-65994-10		
FRACTION: OV	SAMP_DATE	6/13/2016			6/13/2016			6/13/2016			6/13/2016		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
METHYL ACETATE		2.3	U		2.3	U		2.3	U		2.3	U	
METHYL CYCLOHEXANE		0.43	U		0.43	U		0.43	U		0.43	U	
METHYL TERT-BUTYL ETHER		0.2	U		0.2	U		0.2	U		0.2	U	
METHYLENE CHLORIDE		0.33	U		0.33	U		0.33	U		0.33	U	
STYRENE		0.45	U		0.45	U		0.45	U		0.45	U	
TETRACHLOROETHENE		0.31	U		0.31	U		0.31	U		0.31	U	
TOLUENE		0.23	U		0.23	U		0.23	U		0.23	U	
TOTAL XYLENES		0.52	U		0.52	U		0.52	U		0.52	U	
TRANS-1,2-DICHLOROETHENE		0.3	U		0.3	U		0.3	U		0.3	U	
TRANS-1,3-DICHLOROPROPENE		0.56	U		0.56	U		0.56	U		0.56	U	
TRICHLOROETHENE		0.22	U		0.48	J	P	0.42	J	P	0.22	U	
TRICHLOROFLUOROMETHANE		0.49	UJ	C	0.49	UJ	C	0.49	UJ	C	0.49	UJ	C
VINYL CHLORIDE		0.29	U		0.29	U		0.29	U		0.29	U	

PROJ_NO: 07776	NSAMPLE	MRC-SW9B-061316			MRC-SWDUP2-061316			MRC-SWFB-061316			TB-061316		
SDG: 240-65994-1	LAB_ID	240-65994-11			240-65996-5			240-65996-1			240-65996-4		
FRACTION: OV	SAMP_DATE	6/13/2016			6/13/2016			6/13/2016			6/13/2016		
MEDIA: WATER	QC_TYPE	NM			FD			NM			TB		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF				MRC-SW6A-061316								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
METHYL ACETATE		2.3	U		2.3	U		2.3	U		2.3	U	
METHYL CYCLOHEXANE		0.43	U		0.43	U		0.43	U		0.43	U	
METHYL TERT-BUTYL ETHER		0.2	U		0.2	U		0.2	U		0.2	U	
METHYLENE CHLORIDE		0.33	U		0.33	U		0.33	U		0.33	U	
STYRENE		0.45	U		0.45	U		0.45	U		0.45	U	
TETRACHLOROETHENE		0.31	U		0.31	U		0.31	U		0.31	U	
TOLUENE		0.23	U		0.23	U		1.8			1.6		
TOTAL XYLENES		0.52	U		0.52	U		1.1	J	P	0.78	J	P
TRANS-1,2-DICHLOROETHENE		0.3	U		0.3	U		0.3	U		0.3	U	
TRANS-1,3-DICHLOROPROPENE		0.56	U		0.56	U		0.56	U		0.56	U	
TRICHLOROETHENE		0.22	U		0.25	J	P	0.22	U		0.22	U	
TRICHLOROFLUOROMETHANE		0.49	UJ	C	0.49	UJ	C	0.49	UJ	C	0.49	UJ	C
VINYL CHLORIDE		0.29	U		0.29	U		0.29	U		0.29	U	

PROJ_NO: 07776	NSAMPLE	MRC-SW1A-061316			MRC-SW2A-061316			MRC-SWDUP1-061316			MRC-SWFB-061316		
SDG: 240-65994-1	LAB_ID	240-65996-2			240-65996-3			240-65994-12			240-65996-1		
FRACTION: OS	SAMP_DATE	6/13/2016			6/13/2016			6/13/2016			6/13/2016		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF							MRC-SW2A-061316					
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		0.13	J	P	0.16	J	P	0.12	J	P	0.057	U	

PROJ_NO: 07776	NSAMPLE	MRC-SW5A1-061316			MRC-SW5A2-061316			MRC-SW5B-061316			MRC-SW6A-061316		
SDG: 240-65994-1	LAB_ID	240-65994-1			240-65994-2			240-65994-3			240-65994-4		
FRACTION: PCB	SAMP_DATE	6/13/2016			6/13/2016			6/13/2016			6/13/2016		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DECACHLOROBIPHENYL		0.069	U		0.069	U		0.067	U		0.067	U	
DICHLOROBIPHENYLS		0.0054	U		0.0053	U		0.0052	U		0.0052	U	
HEPTACHLOROBIPHENYLS		0.03	U		0.029	U		0.029	U		0.029	U	
HEXACHLOROBIPHENYLS		0.015	U		0.015	U		0.014	U		0.014	U	
MONOCHLOROBIPHENYLS		0.0056	U		0.0055	U		0.0054	U		0.0054	U	
NONACHLOROBIPHENYLS		0.049	U		0.048	U		0.047	U		0.047	U	
OCTACHLOROBIPHENYLS		0.038	U		0.037	U		0.037	U		0.037	U	
PENTACHLOROBIPHENYLS		0.014	U		0.014	U		0.013	U		0.013	U	
TETRACHLOROBIPHENYLS		0.013	U		0.013	U		0.013	U		0.013	U	
TRICHLOROBIPHENYLS		0.0064	U		0.0064	U		0.0063	U		0.0063	U	

PROJ_NO: 07776	NSAMPLE	MRC-SW6B-061316			MRC-SW7A-061316			MRC-SW7B-061316			MRC-SW8A-061316		
SDG: 240-65994-1	LAB_ID	240-65994-5			240-65994-6			240-65994-7			240-65994-8		
FRACTION: PCB	SAMP_DATE	6/13/2016			6/13/2016			6/13/2016			6/13/2016		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DECACHLOROBIPHENYL		0.067	U		0.07	U		0.069	U		0.067	U	
DICHLOROBIPHENYLS		0.0052	U		0.0054	U		0.0053	U		0.0052	U	
HEPTACHLOROBIPHENYLS		0.029	U		0.03	U		0.03	U		0.029	U	
HEXACHLOROBIPHENYLS		0.014	U		0.015	U		0.015	U		0.014	U	
MONOCHLOROBIPHENYLS		0.0054	U		0.0056	U		0.0055	U		0.0054	U	
NONACHLOROBIPHENYLS		0.047	U		0.049	U		0.048	U		0.047	U	
OCTACHLOROBIPHENYLS		0.036	U		0.038	U		0.038	U		0.037	U	
PENTACHLOROBIPHENYLS		0.036	J	P	0.014	U		0.014	U		0.013	U	
TETRACHLOROBIPHENYLS		0.012	U		0.013	U		0.013	U		0.013	U	
TRICHLOROBIPHENYLS		0.0062	U		0.0065	U		0.0064	U		0.0063	U	

PROJ_NO: 07776	NSAMPLE	MRC-SW8B-061316			MRC-SW9A-061316			MRC-SW9B-061316			MRC-SWDUP2-061316		
SDG: 240-65994-1	LAB_ID	240-65994-9			240-65994-10			240-65994-11			240-65996-5		
FRACTION: PCB	SAMP_DATE	6/13/2016			6/13/2016			6/13/2016			6/13/2016		
MEDIA: WATER	QC_TYPE	NM			NM			NM			FD		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF										MRC-SW6A-061316		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DECACHLOROBIPHENYL		0.069	U		0.067	U		0.067	U		0.068	U	
DICHLOROBIPHENYLS		0.0054	U		0.0052	U		0.0052	U		0.0052	U	
HEPTACHLOROBIPHENYLS		0.03	U		0.029	U		0.029	U		0.029	U	
HEXACHLOROBIPHENYLS		0.015	U		0.014	U		0.014	U		0.014	U	
MONOCHLOROBIPHENYLS		0.0056	U		0.0054	U		0.0054	U		0.0054	U	
NONACHLOROBIPHENYLS		0.049	U		0.047	U		0.047	U		0.047	U	
OCTACHLOROBIPHENYLS		0.038	U		0.037	U		0.037	U		0.037	U	
PENTACHLOROBIPHENYLS		0.014	U		0.013	U		0.013	U		0.014	U	
TETRACHLOROBIPHENYLS		0.013	U		0.013	U		0.013	U		0.013	U	
TRICHLOROBIPHENYLS		0.0064	U		0.0063	U		0.0063	U		0.0063	U	

PROJ_NO: 07776	NSAMPLE	MRC-SWFB-061316		
SDG: 240-65994-1	LAB_ID	240-65996-1		
FRACTION: PCB	SAMP_DATE	6/13/2016		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
DECACHLOROBIPHENYL		0.069	U	
DICHLOROBIPHENYLS		0.0053	U	
HEPTACHLOROBIPHENYLS		0.03	U	
HEXACHLOROBIPHENYLS		0.015	U	
MONOCHLOROBIPHENYLS		0.0055	U	
NONACHLOROBIPHENYLS		0.048	U	
OCTACHLOROBIPHENYLS		0.038	U	
PENTACHLOROBIPHENYLS		0.014	U	
TETRACHLOROBIPHENYLS		0.013	U	
TRICHLOROBIPHENYLS		0.0064	U	

Appendix B

Results as Reported by the Laboratory

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW5A1-061316 | Lab Sample ID: 240-65994-1

Matrix: Water | Lab File ID: UXJ5610.D

Analysis Method: 8260C | Date Collected: 06/13/2016 13:13

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 13:13

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235154 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.44
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.24
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.30
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.45
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.32
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.82
106-93-4	Ethylene Dibromide	1.0	U	1.0	0.32
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.25
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.23
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.25
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.19
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.27
78-93-3	2-Butanone (MEK)	10	U	10	0.53
591-78-6	2-Hexanone	10	U	10	0.48
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	0.99
67-64-1	Acetone	10	U	10	0.94
71-43-2	Benzene	1.0	U	1.0	0.35
75-27-4	Dichlorobromomethane	1.0	U	1.0	0.29
75-25-2	Bromoform	1.0	U	1.0	0.56
74-83-9	Bromomethane	1.0	U	1.0	0.44
75-15-0	Carbon disulfide	1.0	U	1.0	0.38
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.43
108-90-7	Chlorobenzene	1.0	U	1.0	0.25
75-00-3	Chloroethane	1.0	U	1.0	0.32
67-66-3	Chloroform	1.0	U	1.0	0.25
74-87-3	Chloromethane	1.0	U	1.0	0.44
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.26
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.46
110-82-7	Cyclohexane	1.0	U	1.0	0.45
124-48-1	Chlorodibromomethane	1.0	U	1.0	0.43
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.32
100-41-4	Ethylbenzene	1.0	U	1.0	0.25
98-82-8	Isopropylbenzene	1.0	U	1.0	0.35

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW5A1-061316 | Lab Sample ID: 240-65994-1

Matrix: Water | Lab File ID: UXJ5610.D

Analysis Method: 8260C | Date Collected: 06/13/2016 13:13

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 13:13

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235154 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	10	U	10	2.3
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.20
108-87-2	Methylcyclohexane	1.0	U	1.0	0.43
75-09-2	Methylene Chloride	1.0	U *	1.0	0.33
100-42-5	Styrene	1.0	U	1.0	0.45
127-18-4	Tetrachloroethene	1.0	U	1.0	0.31
108-88-3	Toluene	1.0	U	1.0	0.23
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.30
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.56
79-01-6	Trichloroethene	1.0	U	1.0	0.22
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.49
75-01-4	Vinyl chloride	1.0	U	1.0	0.29
1330-20-7	Xylenes, Total	2.0	U	2.0	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	90		80-120
1868-53-7	Dibromofluoromethane (Surr)	92		79-120
460-00-4	4-Bromofluorobenzene (Surr)	86		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		78-125

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW5A2-061316 | Lab Sample ID: 240-65994-2

Matrix: Water | Lab File ID: UXJ5611.D

Analysis Method: 8260C | Date Collected: 06/13/2016 13:18

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 13:35

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235154 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.44
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.24
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.30
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.45
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.32
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.82
106-93-4	Ethylene Dibromide	1.0	U	1.0	0.32
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.25
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.23
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.25
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.19
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.27
78-93-3	2-Butanone (MEK)	10	U	10	0.53
591-78-6	2-Hexanone	10	U	10	0.48
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	0.99
67-64-1	Acetone	10	U	10	0.94
71-43-2	Benzene	1.0	U	1.0	0.35
75-27-4	Dichlorobromomethane	1.0	U	1.0	0.29
75-25-2	Bromoform	1.0	U	1.0	0.56
74-83-9	Bromomethane	1.0	U	1.0	0.44
75-15-0	Carbon disulfide	1.0	U	1.0	0.38
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.43
108-90-7	Chlorobenzene	1.0	U	1.0	0.25
75-00-3	Chloroethane	1.0	U	1.0	0.32
67-66-3	Chloroform	1.0	U	1.0	0.25
74-87-3	Chloromethane	1.0	U	1.0	0.44
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.26
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.46
110-82-7	Cyclohexane	1.0	U	1.0	0.45
124-48-1	Chlorodibromomethane	1.0	U	1.0	0.43
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.32
100-41-4	Ethylbenzene	1.0	U	1.0	0.25
98-82-8	Isopropylbenzene	1.0	U	1.0	0.35

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW5A2-061316 | Lab Sample ID: 240-65994-2

Matrix: Water | Lab File ID: UXJ5611.D

Analysis Method: 8260C | Date Collected: 06/13/2016 13:18

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 13:35

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235154 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	10	U	10	2.3
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.20
108-87-2	Methylcyclohexane	1.0	U	1.0	0.43
75-09-2	Methylene Chloride	1.0	U *	1.0	0.33
100-42-5	Styrene	1.0	U	1.0	0.45
127-18-4	Tetrachloroethene	1.0	U	1.0	0.31
108-88-3	Toluene	1.0	U	1.0	0.23
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.30
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.56
79-01-6	Trichloroethene	1.0	U	1.0	0.22
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.49
75-01-4	Vinyl chloride	1.0	U	1.0	0.29
1330-20-7	Xylenes, Total	2.0	U	2.0	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	94		80-120
1868-53-7	Dibromofluoromethane (Surr)	93		79-120
460-00-4	4-Bromofluorobenzene (Surr)	89		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		78-125

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW5B-061316 | Lab Sample ID: 240-65994-3

Matrix: Water | Lab File ID: UXJ5612.D

Analysis Method: 8260C | Date Collected: 06/13/2016 13:22

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 13:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235154 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.44
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.24
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.30
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.45
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.32
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.82
106-93-4	Ethylene Dibromide	1.0	U	1.0	0.32
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.25
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.23
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.25
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.19
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.27
78-93-3	2-Butanone (MEK)	10	U	10	0.53
591-78-6	2-Hexanone	10	U	10	0.48
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	0.99
67-64-1	Acetone	10	U	10	0.94
71-43-2	Benzene	1.0	U	1.0	0.35
75-27-4	Dichlorobromomethane	1.0	U	1.0	0.29
75-25-2	Bromoform	1.0	U	1.0	0.56
74-83-9	Bromomethane	1.0	U	1.0	0.44
75-15-0	Carbon disulfide	1.0	U	1.0	0.38
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.43
108-90-7	Chlorobenzene	1.0	U	1.0	0.25
75-00-3	Chloroethane	1.0	U	1.0	0.32
67-66-3	Chloroform	1.0	U	1.0	0.25
74-87-3	Chloromethane	1.0	U	1.0	0.44
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.26
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.46
110-82-7	Cyclohexane	1.0	U	1.0	0.45
124-48-1	Chlorodibromomethane	1.0	U	1.0	0.43
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.32
100-41-4	Ethylbenzene	1.0	U	1.0	0.25
98-82-8	Isopropylbenzene	1.0	U	1.0	0.35

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW5B-061316 | Lab Sample ID: 240-65994-3

Matrix: Water | Lab File ID: UXJ5612.D

Analysis Method: 8260C | Date Collected: 06/13/2016 13:22

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 13:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235154 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	10	U	10	2.3
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.20
108-87-2	Methylcyclohexane	1.0	U	1.0	0.43
75-09-2	Methylene Chloride	1.0	U *	1.0	0.33
100-42-5	Styrene	1.0	U	1.0	0.45
127-18-4	Tetrachloroethene	1.0	U	1.0	0.31
108-88-3	Toluene	1.0	U	1.0	0.23
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.30
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.56
79-01-6	Trichloroethene	1.0	U	1.0	0.22
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.49
75-01-4	Vinyl chloride	1.0	U	1.0	0.29
1330-20-7	Xylenes, Total	2.0	U	2.0	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	90		80-120
1868-53-7	Dibromofluoromethane (Surr)	93		79-120
460-00-4	4-Bromofluorobenzene (Surr)	85		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		78-125

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW6A-061316 | Lab Sample ID: 240-65994-4

Matrix: Water | Lab File ID: UXJ5613.D

Analysis Method: 8260C | Date Collected: 06/13/2016 12:41

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 14:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235154 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.44
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.24
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.30
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.45
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.32
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.82
106-93-4	Ethylene Dibromide	1.0	U	1.0	0.32
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.25
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.23
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.25
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.19
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.27
78-93-3	2-Butanone (MEK)	10	U	10	0.53
591-78-6	2-Hexanone	10	U	10	0.48
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	0.99
67-64-1	Acetone	10	U	10	0.94
71-43-2	Benzene	1.0	U	1.0	0.35
75-27-4	Dichlorobromomethane	1.0	U	1.0	0.29
75-25-2	Bromoform	1.0	U	1.0	0.56
74-83-9	Bromomethane	1.0	U	1.0	0.44
75-15-0	Carbon disulfide	1.0	U	1.0	0.38
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.43
108-90-7	Chlorobenzene	1.0	U	1.0	0.25
75-00-3	Chloroethane	1.0	U	1.0	0.32
67-66-3	Chloroform	1.0	U	1.0	0.25
74-87-3	Chloromethane	1.0	U	1.0	0.44
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.26
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.46
110-82-7	Cyclohexane	1.0	U	1.0	0.45
124-48-1	Chlorodibromomethane	1.0	U	1.0	0.43
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.32
100-41-4	Ethylbenzene	1.0	U	1.0	0.25
98-82-8	Isopropylbenzene	1.0	U	1.0	0.35

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW6A-061316 | Lab Sample ID: 240-65994-4

Matrix: Water | Lab File ID: UXJ5613.D

Analysis Method: 8260C | Date Collected: 06/13/2016 12:41

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 14:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235154 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	10	U	10	2.3
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.20
108-87-2	Methylcyclohexane	1.0	U	1.0	0.43
75-09-2	Methylene Chloride	1.0	U *	1.0	0.33
100-42-5	Styrene	1.0	U	1.0	0.45
127-18-4	Tetrachloroethene	1.0	U	1.0	0.31
108-88-3	Toluene	1.0	U	1.0	0.23
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.30
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.56
79-01-6	Trichloroethene	0.26	J	1.0	0.22
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.49
75-01-4	Vinyl chloride	1.0	U	1.0	0.29
1330-20-7	Xylenes, Total	2.0	U	2.0	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	91		80-120
1868-53-7	Dibromofluoromethane (Surr)	93		79-120
460-00-4	4-Bromofluorobenzene (Surr)	86		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		78-125

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW6B-061316 | Lab Sample ID: 240-65994-5

Matrix: Water | Lab File ID: UXJ5614.D

Analysis Method: 8260C | Date Collected: 06/13/2016 12:52

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 14:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235154 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.44
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.24
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.30
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.45
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.32
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.82
106-93-4	Ethylene Dibromide	1.0	U	1.0	0.32
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.25
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.23
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.25
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.19
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.27
78-93-3	2-Butanone (MEK)	10	U	10	0.53
591-78-6	2-Hexanone	10	U	10	0.48
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	0.99
67-64-1	Acetone	10	U	10	0.94
71-43-2	Benzene	1.0	U	1.0	0.35
75-27-4	Dichlorobromomethane	1.0	U	1.0	0.29
75-25-2	Bromoform	1.0	U	1.0	0.56
74-83-9	Bromomethane	1.0	U	1.0	0.44
75-15-0	Carbon disulfide	1.0	U	1.0	0.38
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.43
108-90-7	Chlorobenzene	1.0	U	1.0	0.25
75-00-3	Chloroethane	1.0	U	1.0	0.32
67-66-3	Chloroform	1.0	U	1.0	0.25
74-87-3	Chloromethane	1.0	U	1.0	0.44
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.26
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.46
110-82-7	Cyclohexane	1.0	U	1.0	0.45
124-48-1	Chlorodibromomethane	1.0	U	1.0	0.43
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.32
100-41-4	Ethylbenzene	1.0	U	1.0	0.25
98-82-8	Isopropylbenzene	1.0	U	1.0	0.35

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW6B-061316 | Lab Sample ID: 240-65994-5

Matrix: Water | Lab File ID: UXJ5614.D

Analysis Method: 8260C | Date Collected: 06/13/2016 12:52

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 14:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235154 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	10	U	10	2.3
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.20
108-87-2	Methylcyclohexane	1.0	U	1.0	0.43
75-09-2	Methylene Chloride	1.0	U *	1.0	0.33
100-42-5	Styrene	1.0	U	1.0	0.45
127-18-4	Tetrachloroethene	1.0	U	1.0	0.31
108-88-3	Toluene	1.0	U	1.0	0.23
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.30
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.56
79-01-6	Trichloroethene	0.49	J	1.0	0.22
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.49
75-01-4	Vinyl chloride	1.0	U	1.0	0.29
1330-20-7	Xylenes, Total	2.0	U	2.0	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	110		80-120
1868-53-7	Dibromofluoromethane (Surr)	113		79-120
460-00-4	4-Bromofluorobenzene (Surr)	104		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	115		78-125

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW7A-061316 | Lab Sample ID: 240-65994-6

Matrix: Water | Lab File ID: UXJ5615.D

Analysis Method: 8260C | Date Collected: 06/13/2016 12:18

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 15:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235154 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.44
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.24
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.30
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.45
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.32
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.82
106-93-4	Ethylene Dibromide	1.0	U	1.0	0.32
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.25
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.23
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.25
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.19
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.27
78-93-3	2-Butanone (MEK)	10	U	10	0.53
591-78-6	2-Hexanone	10	U	10	0.48
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	0.99
67-64-1	Acetone	10	U	10	0.94
71-43-2	Benzene	1.0	U	1.0	0.35
75-27-4	Dichlorobromomethane	1.0	U	1.0	0.29
75-25-2	Bromoform	1.0	U	1.0	0.56
74-83-9	Bromomethane	1.0	U	1.0	0.44
75-15-0	Carbon disulfide	1.0	U	1.0	0.38
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.43
108-90-7	Chlorobenzene	1.0	U	1.0	0.25
75-00-3	Chloroethane	1.0	U	1.0	0.32
67-66-3	Chloroform	1.0	U	1.0	0.25
74-87-3	Chloromethane	1.0	U	1.0	0.44
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.26
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.46
110-82-7	Cyclohexane	1.0	U	1.0	0.45
124-48-1	Chlorodibromomethane	1.0	U	1.0	0.43
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.32
100-41-4	Ethylbenzene	1.0	U	1.0	0.25
98-82-8	Isopropylbenzene	1.0	U	1.0	0.35

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW7A-061316 | Lab Sample ID: 240-65994-6

Matrix: Water | Lab File ID: UXJ5615.D

Analysis Method: 8260C | Date Collected: 06/13/2016 12:18

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 15:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235154 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	10	U	10	2.3
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.20
108-87-2	Methylcyclohexane	1.0	U	1.0	0.43
75-09-2	Methylene Chloride	1.0	U *	1.0	0.33
100-42-5	Styrene	1.0	U	1.0	0.45
127-18-4	Tetrachloroethene	1.0	U	1.0	0.31
108-88-3	Toluene	1.0	U	1.0	0.23
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.30
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.56
79-01-6	Trichloroethene	1.0	U	1.0	0.22
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.49
75-01-4	Vinyl chloride	1.0	U	1.0	0.29
1330-20-7	Xylenes, Total	2.0	U	2.0	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	89		80-120
1868-53-7	Dibromofluoromethane (Surr)	91		79-120
460-00-4	4-Bromofluorobenzene (Surr)	83		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		78-125

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW7B-061316 | Lab Sample ID: 240-65994-7

Matrix: Water | Lab File ID: UXJ5616.D

Analysis Method: 8260C | Date Collected: 06/13/2016 12:24

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 15:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235154 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.44
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.24
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.30
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.45
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.32
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.82
106-93-4	Ethylene Dibromide	1.0	U	1.0	0.32
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.25
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.23
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.25
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.19
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.27
78-93-3	2-Butanone (MEK)	10	U	10	0.53
591-78-6	2-Hexanone	10	U	10	0.48
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	0.99
67-64-1	Acetone	2.2	J	10	0.94
71-43-2	Benzene	1.0	U	1.0	0.35
75-27-4	Dichlorobromomethane	1.0	U	1.0	0.29
75-25-2	Bromoform	1.0	U	1.0	0.56
74-83-9	Bromomethane	1.0	U	1.0	0.44
75-15-0	Carbon disulfide	1.0	U	1.0	0.38
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.43
108-90-7	Chlorobenzene	1.0	U	1.0	0.25
75-00-3	Chloroethane	1.0	U	1.0	0.32
67-66-3	Chloroform	1.0	U	1.0	0.25
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.26
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.46
110-82-7	Cyclohexane	1.0	U	1.0	0.45
124-48-1	Chlorodibromomethane	1.0	U	1.0	0.43
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.32
100-41-4	Ethylbenzene	1.0	U	1.0	0.25
98-82-8	Isopropylbenzene	1.0	U	1.0	0.35
79-20-9	Methyl acetate	10	U	10	2.3

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW7B-061316 | Lab Sample ID: 240-65994-7

Matrix: Water | Lab File ID: UXJ5616.D

Analysis Method: 8260C | Date Collected: 06/13/2016 12:24

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 15:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235154 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.20
108-87-2	Methylcyclohexane	1.0	U	1.0	0.43
75-09-2	Methylene Chloride	1.0	U *	1.0	0.33
100-42-5	Styrene	1.0	U	1.0	0.45
127-18-4	Tetrachloroethene	1.0	U	1.0	0.31
108-88-3	Toluene	1.0	U	1.0	0.23
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.30
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.56
79-01-6	Trichloroethene	1.0	U	1.0	0.22
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.49
75-01-4	Vinyl chloride	1.0	U	1.0	0.29
1330-20-7	Xylenes, Total	2.0	U	2.0	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	89		80-120
1868-53-7	Dibromofluoromethane (Surr)	91		79-120
460-00-4	4-Bromofluorobenzene (Surr)	84		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		78-125

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW7B-061316 | Lab Sample ID: 240-65994-7

Matrix: Water | Lab File ID: UXJ5670.D

Analysis Method: 8260C | Date Collected: 06/13/2016 12:24

Sample wt/vol: 5(mL) | Date Analyzed: 06/21/2016 13:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235310 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.1		1.0	0.44

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	95		80-120
1868-53-7	Dibromofluoromethane (Surr)	97		79-120
460-00-4	4-Bromofluorobenzene (Surr)	89		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		78-125

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW8A-061316 | Lab Sample ID: 240-65994-8

Matrix: Water | Lab File ID: UXJ5617.D

Analysis Method: 8260C | Date Collected: 06/13/2016 12:57

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 15:49

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235154 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.44
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.24
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.30
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.45
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.32
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.82
106-93-4	Ethylene Dibromide	1.0	U	1.0	0.32
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.25
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.23
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.25
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.19
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.27
78-93-3	2-Butanone (MEK)	10	U	10	0.53
591-78-6	2-Hexanone	10	U	10	0.48
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	0.99
67-64-1	Acetone	10	U	10	0.94
71-43-2	Benzene	1.0	U	1.0	0.35
75-27-4	Dichlorobromomethane	1.0	U	1.0	0.29
75-25-2	Bromoform	1.0	U	1.0	0.56
74-83-9	Bromomethane	1.0	U	1.0	0.44
75-15-0	Carbon disulfide	1.0	U	1.0	0.38
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.43
108-90-7	Chlorobenzene	1.0	U	1.0	0.25
75-00-3	Chloroethane	1.0	U	1.0	0.32
67-66-3	Chloroform	1.0	U	1.0	0.25
74-87-3	Chloromethane	1.0	U	1.0	0.44
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.26
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.46
110-82-7	Cyclohexane	1.0	U	1.0	0.45
124-48-1	Chlorodibromomethane	1.0	U	1.0	0.43
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.32
100-41-4	Ethylbenzene	1.0	U	1.0	0.25
98-82-8	Isopropylbenzene	1.0	U	1.0	0.35

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW8A-061316 | Lab Sample ID: 240-65994-8

Matrix: Water | Lab File ID: UXJ5617.D

Analysis Method: 8260C | Date Collected: 06/13/2016 12:57

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 15:49

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235154 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	10	U	10	2.3
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.20
108-87-2	Methylcyclohexane	1.0	U	1.0	0.43
75-09-2	Methylene Chloride	1.0	U *	1.0	0.33
100-42-5	Styrene	1.0	U	1.0	0.45
127-18-4	Tetrachloroethene	1.0	U	1.0	0.31
108-88-3	Toluene	1.0	U	1.0	0.23
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.30
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.56
79-01-6	Trichloroethene	0.48	J	1.0	0.22
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.49
75-01-4	Vinyl chloride	1.0	U	1.0	0.29
1330-20-7	Xylenes, Total	2.0	U	2.0	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	94		80-120
1868-53-7	Dibromofluoromethane (Surr)	96		79-120
460-00-4	4-Bromofluorobenzene (Surr)	89		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		78-125

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW8B-061316 | Lab Sample ID: 240-65994-9

Matrix: Water | Lab File ID: UXJ5618.D

Analysis Method: 8260C | Date Collected: 06/13/2016 13:04

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 16:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235154 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.44
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.24
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.30
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.45
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.32
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.82
106-93-4	Ethylene Dibromide	1.0	U	1.0	0.32
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.25
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.23
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.25
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.19
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.27
78-93-3	2-Butanone (MEK)	10	U	10	0.53
591-78-6	2-Hexanone	10	U	10	0.48
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	0.99
67-64-1	Acetone	10	U	10	0.94
71-43-2	Benzene	1.0	U	1.0	0.35
75-27-4	Dichlorobromomethane	1.0	U	1.0	0.29
75-25-2	Bromoform	1.0	U	1.0	0.56
74-83-9	Bromomethane	1.0	U	1.0	0.44
75-15-0	Carbon disulfide	1.0	U	1.0	0.38
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.43
108-90-7	Chlorobenzene	1.0	U	1.0	0.25
75-00-3	Chloroethane	1.0	U	1.0	0.32
67-66-3	Chloroform	1.0	U	1.0	0.25
74-87-3	Chloromethane	1.0	U	1.0	0.44
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.26
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.46
110-82-7	Cyclohexane	1.0	U	1.0	0.45
124-48-1	Chlorodibromomethane	1.0	U	1.0	0.43
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.32
100-41-4	Ethylbenzene	1.0	U	1.0	0.25
98-82-8	Isopropylbenzene	1.0	U	1.0	0.35

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW8B-061316 | Lab Sample ID: 240-65994-9

Matrix: Water | Lab File ID: UXJ5618.D

Analysis Method: 8260C | Date Collected: 06/13/2016 13:04

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 16:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235154 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	10	U	10	2.3
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.20
108-87-2	Methylcyclohexane	1.0	U	1.0	0.43
75-09-2	Methylene Chloride	1.0	U *	1.0	0.33
100-42-5	Styrene	1.0	U	1.0	0.45
127-18-4	Tetrachloroethene	1.0	U	1.0	0.31
108-88-3	Toluene	1.0	U	1.0	0.23
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.30
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.56
79-01-6	Trichloroethene	0.42	J	1.0	0.22
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.49
75-01-4	Vinyl chloride	1.0	U	1.0	0.29
1330-20-7	Xylenes, Total	2.0	U	2.0	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	91		80-120
1868-53-7	Dibromofluoromethane (Surr)	91		79-120
460-00-4	4-Bromofluorobenzene (Surr)	84		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		78-125

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW9A-061316 | Lab Sample ID: 240-65994-10

Matrix: Water | Lab File ID: UXJ5619.D

Analysis Method: 8260C | Date Collected: 06/13/2016 12:29

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 16:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235154 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.44
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.24
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.30
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.45
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.32
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.82
106-93-4	Ethylene Dibromide	1.0	U	1.0	0.32
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.25
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.23
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.25
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.19
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.27
78-93-3	2-Butanone (MEK)	10	U	10	0.53
591-78-6	2-Hexanone	10	U	10	0.48
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	0.99
67-64-1	Acetone	10	U	10	0.94
71-43-2	Benzene	1.0	U	1.0	0.35
75-27-4	Dichlorobromomethane	1.0	U	1.0	0.29
75-25-2	Bromoform	1.0	U	1.0	0.56
74-83-9	Bromomethane	1.0	U	1.0	0.44
75-15-0	Carbon disulfide	1.0	U	1.0	0.38
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.43
108-90-7	Chlorobenzene	1.0	U	1.0	0.25
75-00-3	Chloroethane	1.0	U	1.0	0.32
67-66-3	Chloroform	1.0	U	1.0	0.25
74-87-3	Chloromethane	1.0	U	1.0	0.44
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.26
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.46
110-82-7	Cyclohexane	1.0	U	1.0	0.45
124-48-1	Chlorodibromomethane	1.0	U	1.0	0.43
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.32
100-41-4	Ethylbenzene	1.0	U	1.0	0.25
98-82-8	Isopropylbenzene	1.0	U	1.0	0.35

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW9A-061316 | Lab Sample ID: 240-65994-10

Matrix: Water | Lab File ID: UXJ5619.D

Analysis Method: 8260C | Date Collected: 06/13/2016 12:29

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 16:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235154 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	10	U	10	2.3
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.20
108-87-2	Methylcyclohexane	1.0	U	1.0	0.43
75-09-2	Methylene Chloride	1.0	U *	1.0	0.33
100-42-5	Styrene	1.0	U	1.0	0.45
127-18-4	Tetrachloroethene	1.0	U	1.0	0.31
108-88-3	Toluene	1.0	U	1.0	0.23
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.30
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.56
79-01-6	Trichloroethene	1.0	U	1.0	0.22
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.49
75-01-4	Vinyl chloride	1.0	U	1.0	0.29
1330-20-7	Xylenes, Total	2.0	U	2.0	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	94		80-120
1868-53-7	Dibromofluoromethane (Surr)	94		79-120
460-00-4	4-Bromofluorobenzene (Surr)	87		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		78-125

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW9B-061316 | Lab Sample ID: 240-65994-11

Matrix: Water | Lab File ID: UXJ5620.D

Analysis Method: 8260C | Date Collected: 06/13/2016 12:34

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 16:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235154 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.44
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.24
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.30
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.45
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.32
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.82
106-93-4	Ethylene Dibromide	1.0	U	1.0	0.32
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.25
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.23
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.25
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.19
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.27
78-93-3	2-Butanone (MEK)	10	U	10	0.53
591-78-6	2-Hexanone	10	U	10	0.48
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	0.99
67-64-1	Acetone	10	U	10	0.94
71-43-2	Benzene	1.0	U	1.0	0.35
75-27-4	Dichlorobromomethane	1.0	U	1.0	0.29
75-25-2	Bromoform	1.0	U	1.0	0.56
74-83-9	Bromomethane	1.0	U	1.0	0.44
75-15-0	Carbon disulfide	1.0	U	1.0	0.38
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.43
108-90-7	Chlorobenzene	1.0	U	1.0	0.25
75-00-3	Chloroethane	1.0	U	1.0	0.32
67-66-3	Chloroform	1.0	U	1.0	0.25
74-87-3	Chloromethane	1.0	U	1.0	0.44
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.26
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.46
110-82-7	Cyclohexane	1.0	U	1.0	0.45
124-48-1	Chlorodibromomethane	1.0	U	1.0	0.43
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.32
100-41-4	Ethylbenzene	1.0	U	1.0	0.25
98-82-8	Isopropylbenzene	1.0	U	1.0	0.35

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW9B-061316 | Lab Sample ID: 240-65994-11

Matrix: Water | Lab File ID: UXJ5620.D

Analysis Method: 8260C | Date Collected: 06/13/2016 12:34

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 16:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235154 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	10	U	10	2.3
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.20
108-87-2	Methylcyclohexane	1.0	U	1.0	0.43
75-09-2	Methylene Chloride	1.0	U *	1.0	0.33
100-42-5	Styrene	1.0	U	1.0	0.45
127-18-4	Tetrachloroethene	1.0	U	1.0	0.31
108-88-3	Toluene	1.0	U	1.0	0.23
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.30
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.56
79-01-6	Trichloroethene	1.0	U	1.0	0.22
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.49
75-01-4	Vinyl chloride	1.0	U	1.0	0.29
1330-20-7	Xylenes, Total	2.0	U	2.0	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	91		80-120
1868-53-7	Dibromofluoromethane (Surr)	93		79-120
460-00-4	4-Bromofluorobenzene (Surr)	86		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		78-125

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SWFB-061316 | Lab Sample ID: 240-65996-1

Matrix: Water | Lab File ID: UXM6074.D

Analysis Method: 8260C | Date Collected: 06/13/2016 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 18:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235221 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.44
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.24
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.30
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.45
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.32
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.82
106-93-4	Ethylene Dibromide	1.0	U	1.0	0.32
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.25
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.23
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.25
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.19
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.27
78-93-3	2-Butanone (MEK)	10	U	10	0.53
591-78-6	2-Hexanone	10	U	10	0.48
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	0.99
67-64-1	Acetone	1.2	J	10	0.94
71-43-2	Benzene	1.0	U	1.0	0.35
75-27-4	Dichlorobromomethane	0.46	J	1.0	0.29
75-25-2	Bromoform	1.0	U	1.0	0.56
74-83-9	Bromomethane	1.0	U	1.0	0.44
75-15-0	Carbon disulfide	1.0	U	1.0	0.38
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.43
108-90-7	Chlorobenzene	1.0	U	1.0	0.25
75-00-3	Chloroethane	1.0	U	1.0	0.32
67-66-3	Chloroform	3.9		1.0	0.25
74-87-3	Chloromethane	1.0	U	1.0	0.44
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.26
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.46
110-82-7	Cyclohexane	1.0	U	1.0	0.45
124-48-1	Chlorodibromomethane	1.0	U	1.0	0.43
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.32
100-41-4	Ethylbenzene	1.0	U	1.0	0.25
98-82-8	Isopropylbenzene	1.0	U	1.0	0.35

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SWFB-061316 | Lab Sample ID: 240-65996-1

Matrix: Water | Lab File ID: UXM6074.D

Analysis Method: 8260C | Date Collected: 06/13/2016 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 18:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235221 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	10	U	10	2.3
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.20
108-87-2	Methylcyclohexane	1.0	U	1.0	0.43
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
100-42-5	Styrene	1.0	U	1.0	0.45
127-18-4	Tetrachloroethene	1.0	U	1.0	0.31
108-88-3	Toluene	1.8		1.0	0.23
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.30
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.56
79-01-6	Trichloroethene	1.0	U	1.0	0.22
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.49
75-01-4	Vinyl chloride	1.0	U	1.0	0.29
1330-20-7	Xylenes, Total	1.1	J	2.0	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	104		80-120
1868-53-7	Dibromofluoromethane (Surr)	99		79-120
460-00-4	4-Bromofluorobenzene (Surr)	99		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		78-125

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW1A-061316 | Lab Sample ID: 240-65996-2

Matrix: Water | Lab File ID: UXM6075.D

Analysis Method: 8260C | Date Collected: 06/13/2016 11:51

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 18:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235221 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.44
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.24
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.30
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.45
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.32
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.82
106-93-4	Ethylene Dibromide	1.0	U	1.0	0.32
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.25
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.23
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.25
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.19
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.27
78-93-3	2-Butanone (MEK)	10	U	10	0.53
591-78-6	2-Hexanone	10	U	10	0.48
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	0.99
67-64-1	Acetone	10	U	10	0.94
71-43-2	Benzene	1.0	U	1.0	0.35
75-27-4	Dichlorobromomethane	1.0	U	1.0	0.29
75-25-2	Bromoform	1.0	U	1.0	0.56
74-83-9	Bromomethane	1.0	U	1.0	0.44
75-15-0	Carbon disulfide	1.0	U	1.0	0.38
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.43
108-90-7	Chlorobenzene	1.0	U	1.0	0.25
75-00-3	Chloroethane	1.0	U	1.0	0.32
67-66-3	Chloroform	1.0	U	1.0	0.25
74-87-3	Chloromethane	1.0	U	1.0	0.44
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.26
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.46
110-82-7	Cyclohexane	1.0	U	1.0	0.45
124-48-1	Chlorodibromomethane	1.0	U	1.0	0.43
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.32
100-41-4	Ethylbenzene	1.0	U	1.0	0.25
98-82-8	Isopropylbenzene	1.0	U	1.0	0.35

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW1A-061316 | Lab Sample ID: 240-65996-2

Matrix: Water | Lab File ID: UXM6075.D

Analysis Method: 8260C | Date Collected: 06/13/2016 11:51

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 18:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235221 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	10	U	10	2.3
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.20
108-87-2	Methylcyclohexane	1.0	U	1.0	0.43
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
100-42-5	Styrene	1.0	U	1.0	0.45
127-18-4	Tetrachloroethene	1.0	U	1.0	0.31
108-88-3	Toluene	1.0	U	1.0	0.23
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.30
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.56
79-01-6	Trichloroethene	1.0	U	1.0	0.22
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.49
75-01-4	Vinyl chloride	1.0	U	1.0	0.29
1330-20-7	Xylenes, Total	2.0	U	2.0	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	104		80-120
1868-53-7	Dibromofluoromethane (Surr)	94		79-120
460-00-4	4-Bromofluorobenzene (Surr)	99		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		78-125

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW2A-061316 | Lab Sample ID: 240-65996-3

Matrix: Water | Lab File ID: UXM6076.D

Analysis Method: 8260C | Date Collected: 06/13/2016 11:58

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 18:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235221 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.44
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.24
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.30
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.45
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.32
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.82
106-93-4	Ethylene Dibromide	1.0	U	1.0	0.32
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.25
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.23
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.25
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.19
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.27
78-93-3	2-Butanone (MEK)	10	U	10	0.53
591-78-6	2-Hexanone	10	U	10	0.48
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	0.99
67-64-1	Acetone	10	U	10	0.94
71-43-2	Benzene	1.0	U	1.0	0.35
75-27-4	Dichlorobromomethane	1.0	U	1.0	0.29
75-25-2	Bromoform	1.0	U	1.0	0.56
74-83-9	Bromomethane	1.0	U	1.0	0.44
75-15-0	Carbon disulfide	1.0	U	1.0	0.38
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.43
108-90-7	Chlorobenzene	1.0	U	1.0	0.25
75-00-3	Chloroethane	1.0	U	1.0	0.32
67-66-3	Chloroform	1.0	U	1.0	0.25
74-87-3	Chloromethane	1.0	U	1.0	0.44
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.26
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.46
110-82-7	Cyclohexane	1.0	U	1.0	0.45
124-48-1	Chlorodibromomethane	1.0	U	1.0	0.43
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.32
100-41-4	Ethylbenzene	1.0	U	1.0	0.25
98-82-8	Isopropylbenzene	1.0	U	1.0	0.35

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW2A-061316 | Lab Sample ID: 240-65996-3

Matrix: Water | Lab File ID: UXM6076.D

Analysis Method: 8260C | Date Collected: 06/13/2016 11:58

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 18:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235221 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	10	U	10	2.3
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.20
108-87-2	Methylcyclohexane	1.0	U	1.0	0.43
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
100-42-5	Styrene	1.0	U	1.0	0.45
127-18-4	Tetrachloroethene	1.0	U	1.0	0.31
108-88-3	Toluene	1.0	U	1.0	0.23
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.30
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.56
79-01-6	Trichloroethene	1.0	U	1.0	0.22
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.49
75-01-4	Vinyl chloride	1.0	U	1.0	0.29
1330-20-7	Xylenes, Total	2.0	U	2.0	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	102		80-120
1868-53-7	Dibromofluoromethane (Surr)	91		79-120
460-00-4	4-Bromofluorobenzene (Surr)	97		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		78-125

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: TB-061316 | Lab Sample ID: 240-65996-4

Matrix: Water | Lab File ID: UXM6077.D

Analysis Method: 8260C | Date Collected: 06/13/2016 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 19:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235221 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.44
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.24
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.30
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.45
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.32
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.82
106-93-4	Ethylene Dibromide	1.0	U	1.0	0.32
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.25
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.23
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.25
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.19
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.27
78-93-3	2-Butanone (MEK)	10	U	10	0.53
591-78-6	2-Hexanone	10	U	10	0.48
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	0.99
67-64-1	Acetone	1.6	J	10	0.94
71-43-2	Benzene	1.0	U	1.0	0.35
75-27-4	Dichlorobromomethane	0.46	J	1.0	0.29
75-25-2	Bromoform	1.0	U	1.0	0.56
74-83-9	Bromomethane	1.0	U	1.0	0.44
75-15-0	Carbon disulfide	1.0	U	1.0	0.38
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.43
108-90-7	Chlorobenzene	1.0	U	1.0	0.25
75-00-3	Chloroethane	1.0	U	1.0	0.32
67-66-3	Chloroform	3.7		1.0	0.25
74-87-3	Chloromethane	1.0	U	1.0	0.44
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.26
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.46
110-82-7	Cyclohexane	1.0	U	1.0	0.45
124-48-1	Chlorodibromomethane	1.0	U	1.0	0.43
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.32
100-41-4	Ethylbenzene	1.0	U	1.0	0.25
98-82-8	Isopropylbenzene	1.0	U	1.0	0.35

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: TB-061316 | Lab Sample ID: 240-65996-4

Matrix: Water | Lab File ID: UXM6077.D

Analysis Method: 8260C | Date Collected: 06/13/2016 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 19:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235221 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	10	U	10	2.3
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.20
108-87-2	Methylcyclohexane	1.0	U	1.0	0.43
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
100-42-5	Styrene	1.0	U	1.0	0.45
127-18-4	Tetrachloroethene	1.0	U	1.0	0.31
108-88-3	Toluene	1.6		1.0	0.23
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.30
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.56
79-01-6	Trichloroethene	1.0	U	1.0	0.22
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.49
75-01-4	Vinyl chloride	1.0	U	1.0	0.29
1330-20-7	Xylenes, Total	0.78	J	2.0	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	104		80-120
1868-53-7	Dibromofluoromethane (Surr)	97		79-120
460-00-4	4-Bromofluorobenzene (Surr)	100		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		78-125

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SWDUP2-061316 | Lab Sample ID: 240-65996-5

Matrix: Water | Lab File ID: UXM6078.D

Analysis Method: 8260C | Date Collected: 06/13/2016 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 19:35

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235221 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.44
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.24
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.30
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.45
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.32
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.82
106-93-4	Ethylene Dibromide	1.0	U	1.0	0.32
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.25
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.23
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.25
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.19
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.27
78-93-3	2-Butanone (MEK)	10	U	10	0.53
591-78-6	2-Hexanone	10	U	10	0.48
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	0.99
67-64-1	Acetone	10	U	10	0.94
71-43-2	Benzene	1.0	U	1.0	0.35
75-27-4	Dichlorobromomethane	1.0	U	1.0	0.29
75-25-2	Bromoform	1.0	U	1.0	0.56
74-83-9	Bromomethane	1.0	U	1.0	0.44
75-15-0	Carbon disulfide	1.0	U	1.0	0.38
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.43
108-90-7	Chlorobenzene	1.0	U	1.0	0.25
75-00-3	Chloroethane	1.0	U	1.0	0.32
67-66-3	Chloroform	1.0	U	1.0	0.25
74-87-3	Chloromethane	1.0	U	1.0	0.44
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.26
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.46
110-82-7	Cyclohexane	1.0	U	1.0	0.45
124-48-1	Chlorodibromomethane	1.0	U	1.0	0.43
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.32
100-41-4	Ethylbenzene	1.0	U	1.0	0.25
98-82-8	Isopropylbenzene	1.0	U	1.0	0.35

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SWDUP2-061316 | Lab Sample ID: 240-65996-5

Matrix: Water | Lab File ID: UXM6078.D

Analysis Method: 8260C | Date Collected: 06/13/2016 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 19:35

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235221 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	10	U	10	2.3
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.20
108-87-2	Methylcyclohexane	1.0	U	1.0	0.43
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
100-42-5	Styrene	1.0	U	1.0	0.45
127-18-4	Tetrachloroethene	1.0	U	1.0	0.31
108-88-3	Toluene	1.0	U	1.0	0.23
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.30
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.56
79-01-6	Trichloroethene	0.25	J	1.0	0.22
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.49
75-01-4	Vinyl chloride	1.0	U	1.0	0.29
1330-20-7	Xylenes, Total	2.0	U	2.0	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	100		80-120
1868-53-7	Dibromofluoromethane (Surr)	92		79-120
460-00-4	4-Bromofluorobenzene (Surr)	98		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		78-125

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SWDUP1-061316 | Lab Sample ID: 240-65994-12

Matrix: Water | Lab File ID: 20474_27.D

Analysis Method: 522 MOD | Date Collected: 06/13/2016 00:00

Extract. Method: 3535A | Date Extracted: 06/16/2016 18:26

Sample wt/vol: 100(mL) | Date Analyzed: 06/17/2016 16:32

Con. Extract Vol.: 2000(uL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 105857 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.12	J	0.20	0.057

CAS NO.	SURROGATE	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8 (Surr)	105		70-130

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SWFB-061316 | Lab Sample ID: 240-65996-1

Matrix: Water | Lab File ID: 20593_15.D

Analysis Method: 522 MOD | Date Collected: 06/13/2016 00:00

Extract. Method: 3535A | Date Extracted: 06/22/2016 18:02

Sample wt/vol: 100(mL) | Date Analyzed: 06/24/2016 23:32

Con. Extract Vol.: 2000(uL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 106221 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.20	U	0.20	0.057

CAS NO.	SURROGATE	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8 (Surr)	95		70-130

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW1A-061316 | Lab Sample ID: 240-65996-2

Matrix: Water | Lab File ID: 20593_16.D

Analysis Method: 522 MOD | Date Collected: 06/13/2016 11:51

Extract. Method: 3535A | Date Extracted: 06/22/2016 18:02

Sample wt/vol: 100(mL) | Date Analyzed: 06/24/2016 23:45

Con. Extract Vol.: 2000(uL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 106221 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.13	J	0.20	0.057

CAS NO.	SURROGATE	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8 (Surr)	92		70-130

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW2A-061316 | Lab Sample ID: 240-65996-3

Matrix: Water | Lab File ID: 20593_17.D

Analysis Method: 522 MOD | Date Collected: 06/13/2016 11:58

Extract. Method: 3535A | Date Extracted: 06/22/2016 18:02

Sample wt/vol: 100(mL) | Date Analyzed: 06/24/2016 23:59

Con. Extract Vol.: 2000(uL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 106221 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.16	J	0.20	0.057

CAS NO.	SURROGATE	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8 (Surr)	97		70-130

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW5A1-061316 | Lab Sample ID: 240-65994-1

Matrix: Water | Lab File ID: Xf2018.D

Analysis Method: 680 | Date Collected: 06/13/2016 13:13

Extract. Method: 680 | Date Extracted: 06/16/2016 13:29

Sample wt/vol: 504.4(mL) | Date Analyzed: 06/20/2016 16:30

Con. Extract Vol.: .5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438006 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.30	U *	0.30	0.030
26601-64-9	Hexachlorobiphenyl	0.20	U *	0.20	0.015
53742-07-7	Nonachlorobiphenyl	0.50	U *	0.50	0.049
55722-26-4	Octachlorobiphenyl	0.30	U *	0.30	0.038
27323-18-8	Monochlorobiphenyl	0.099	U *	0.099	0.0056
2051-24-3	DCB Decachlorobiphenyl	0.50	U *	0.50	0.069
25512-42-9	Dichlorobiphenyl	0.099	U *	0.099	0.0054
25429-29-2	Pentachlorobiphenyl	0.20	U *	0.20	0.014
26914-33-0	Tetrachlorobiphenyl	0.20	U *	0.20	0.013
25323-68-6	Trichlorobiphenyl	0.099	U *	0.099	0.0064

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	48	*	25-113

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW5A2-061316 | Lab Sample ID: 240-65994-2

Matrix: Water | Lab File ID: Xf2112.D

Analysis Method: 680 | Date Collected: 06/13/2016 13:18

Extract. Method: 680 | Date Extracted: 06/16/2016 13:29

Sample wt/vol: 509.9(mL) | Date Analyzed: 06/22/2016 01:01

Con. Extract Vol.: .5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438264 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.29	U	0.29	0.029
26601-64-9	Hexachlorobiphenyl	0.20	U	0.20	0.015
53742-07-7	Nonachlorobiphenyl	0.49	U	0.49	0.048
55722-26-4	Octachlorobiphenyl	0.29	U	0.29	0.037
27323-18-8	Monochlorobiphenyl	0.098	U	0.098	0.0055
2051-24-3	DCB Decachlorobiphenyl	0.49	U	0.49	0.069
25512-42-9	Dichlorobiphenyl	0.098	U	0.098	0.0053
25429-29-2	Pentachlorobiphenyl	0.20	U	0.20	0.014
26914-33-0	Tetrachlorobiphenyl	0.20	U	0.20	0.013
25323-68-6	Trichlorobiphenyl	0.098	U	0.098	0.0064

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	83		25-113

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW5B-061316 | Lab Sample ID: 240-65994-3

Matrix: Water | Lab File ID: Xf2113.D

Analysis Method: 680 | Date Collected: 06/13/2016 13:22

Extract. Method: 680 | Date Extracted: 06/16/2016 13:29

Sample wt/vol: 1037.6(mL) | Date Analyzed: 06/22/2016 01:30

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438264 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.29	U	0.29	0.029
26601-64-9	Hexachlorobiphenyl	0.19	U	0.19	0.014
53742-07-7	Nonachlorobiphenyl	0.48	U	0.48	0.047
55722-26-4	Octachlorobiphenyl	0.29	U	0.29	0.037
27323-18-8	Monochlorobiphenyl	0.096	U	0.096	0.0054
2051-24-3	DCB Decachlorobiphenyl	0.48	U	0.48	0.067
25512-42-9	Dichlorobiphenyl	0.096	U	0.096	0.0052
25429-29-2	Pentachlorobiphenyl	0.19	U	0.19	0.013
26914-33-0	Tetrachlorobiphenyl	0.19	U	0.19	0.013
25323-68-6	Trichlorobiphenyl	0.096	U	0.096	0.0063

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	71		25-113

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW6A-061316 | Lab Sample ID: 240-65994-4

Matrix: Water | Lab File ID: Xf2114.D

Analysis Method: 680 | Date Collected: 06/13/2016 12:41

Extract. Method: 680 | Date Extracted: 06/16/2016 13:29

Sample wt/vol: 1037.6(mL) | Date Analyzed: 06/22/2016 01:59

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438264 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.29	U *	0.29	0.029
26601-64-9	Hexachlorobiphenyl	0.19	U *	0.19	0.014
53742-07-7	Nonachlorobiphenyl	0.48	U *	0.48	0.047
55722-26-4	Octachlorobiphenyl	0.29	U *	0.29	0.037
27323-18-8	Monochlorobiphenyl	0.096	U *	0.096	0.0054
2051-24-3	DCB Decachlorobiphenyl	0.48	U *	0.48	0.067
25512-42-9	Dichlorobiphenyl	0.096	U *	0.096	0.0052
25429-29-2	Pentachlorobiphenyl	0.19	U *	0.19	0.013
26914-33-0	Tetrachlorobiphenyl	0.19	U *	0.19	0.013
25323-68-6	Trichlorobiphenyl	0.096	U *	0.096	0.0063

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	74	*	25-113

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW6B-061316 | Lab Sample ID: 240-65994-5

Matrix: Water | Lab File ID: Xf2115.D

Analysis Method: 680 | Date Collected: 06/13/2016 12:52

Extract. Method: 680 | Date Extracted: 06/16/2016 13:29

Sample wt/vol: 1042.4(mL) | Date Analyzed: 06/22/2016 02:27

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438264 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.29	U *	0.29	0.029
26601-64-9	Hexachlorobiphenyl	0.19	U *	0.19	0.014
53742-07-7	Nonachlorobiphenyl	0.48	U *	0.48	0.047
55722-26-4	Octachlorobiphenyl	0.29	U *	0.29	0.036
27323-18-8	Monochlorobiphenyl	0.096	U *	0.096	0.0054
2051-24-3	DCB Decachlorobiphenyl	0.48	U *	0.48	0.067
25512-42-9	Dichlorobiphenyl	0.096	U *	0.096	0.0052
25429-29-2	Pentachlorobiphenyl	0.036	J *	0.19	0.013
26914-33-0	Tetrachlorobiphenyl	0.19	U *	0.19	0.012
25323-68-6	Trichlorobiphenyl	0.096	U *	0.096	0.0062

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	71	*	25-113

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW7A-061316 | Lab Sample ID: 240-65994-6

Matrix: Water | Lab File ID: Xf2116.D

Analysis Method: 680 | Date Collected: 06/13/2016 12:18

Extract. Method: 680 | Date Extracted: 06/16/2016 13:29

Sample wt/vol: 501.9(mL) | Date Analyzed: 06/22/2016 02:56

Con. Extract Vol.: .5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438264 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.30	U	0.30	0.030
26601-64-9	Hexachlorobiphenyl	0.20	U	0.20	0.015
53742-07-7	Nonachlorobiphenyl	0.50	U	0.50	0.049
55722-26-4	Octachlorobiphenyl	0.30	U	0.30	0.038
27323-18-8	Monochlorobiphenyl	0.10	U	0.10	0.0056
2051-24-3	DCB Decachlorobiphenyl	0.50	U	0.50	0.070
25512-42-9	Dichlorobiphenyl	0.10	U	0.10	0.0054
25429-29-2	Pentachlorobiphenyl	0.20	U	0.20	0.014
26914-33-0	Tetrachlorobiphenyl	0.20	U	0.20	0.013
25323-68-6	Trichlorobiphenyl	0.10	U	0.10	0.0065

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	68		25-113

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW7B-061316 | Lab Sample ID: 240-65994-7

Matrix: Water | Lab File ID: Xf2117.D

Analysis Method: 680 | Date Collected: 06/13/2016 12:24

Extract. Method: 680 | Date Extracted: 06/16/2016 13:29

Sample wt/vol: 1012.9(mL) | Date Analyzed: 06/22/2016 03:25

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438264 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.30	U *	0.30	0.030
26601-64-9	Hexachlorobiphenyl	0.20	U *	0.20	0.015
53742-07-7	Nonachlorobiphenyl	0.49	U *	0.49	0.048
55722-26-4	Octachlorobiphenyl	0.30	U *	0.30	0.038
27323-18-8	Monochlorobiphenyl	0.099	U *	0.099	0.0055
2051-24-3	DCB Decachlorobiphenyl	0.49	U *	0.49	0.069
25512-42-9	Dichlorobiphenyl	0.099	U *	0.099	0.0053
25429-29-2	Pentachlorobiphenyl	0.20	U *	0.20	0.014
26914-33-0	Tetrachlorobiphenyl	0.20	U *	0.20	0.013
25323-68-6	Trichlorobiphenyl	0.099	U *	0.099	0.0064

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	78	*	25-113

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW8A-061316 | Lab Sample ID: 240-65994-8

Matrix: Water | Lab File ID: Xf2118.D

Analysis Method: 680 | Date Collected: 06/13/2016 12:57

Extract. Method: 680 | Date Extracted: 06/16/2016 13:29

Sample wt/vol: 1039.4(mL) | Date Analyzed: 06/22/2016 03:54

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438264 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.29	U *	0.29	0.029
26601-64-9	Hexachlorobiphenyl	0.19	U *	0.19	0.014
53742-07-7	Nonachlorobiphenyl	0.48	U *	0.48	0.047
55722-26-4	Octachlorobiphenyl	0.29	U *	0.29	0.037
27323-18-8	Monochlorobiphenyl	0.096	U *	0.096	0.0054
2051-24-3	DCB Decachlorobiphenyl	0.48	U *	0.48	0.067
25512-42-9	Dichlorobiphenyl	0.096	U *	0.096	0.0052
25429-29-2	Pentachlorobiphenyl	0.19	U *	0.19	0.013
26914-33-0	Tetrachlorobiphenyl	0.19	U *	0.19	0.013
25323-68-6	Trichlorobiphenyl	0.096	U *	0.096	0.0063

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	72	*	25-113

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW8B-061316 | Lab Sample ID: 240-65994-9

Matrix: Water | Lab File ID: Xf2119.D

Analysis Method: 680 | Date Collected: 06/13/2016 13:04

Extract. Method: 680 | Date Extracted: 06/16/2016 13:29

Sample wt/vol: 1008.3(mL) | Date Analyzed: 06/22/2016 04:22

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438264 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.30	U *	0.30	0.030
26601-64-9	Hexachlorobiphenyl	0.20	U *	0.20	0.015
53742-07-7	Nonachlorobiphenyl	0.50	U *	0.50	0.049
55722-26-4	Octachlorobiphenyl	0.30	U *	0.30	0.038
27323-18-8	Monochlorobiphenyl	0.099	U *	0.099	0.0056
2051-24-3	DCB Decachlorobiphenyl	0.50	U *	0.50	0.069
25512-42-9	Dichlorobiphenyl	0.099	U *	0.099	0.0054
25429-29-2	Pentachlorobiphenyl	0.20	U *	0.20	0.014
26914-33-0	Tetrachlorobiphenyl	0.20	U *	0.20	0.013
25323-68-6	Trichlorobiphenyl	0.099	U *	0.099	0.0064

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	67	*	25-113

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW9A-061316 | Lab Sample ID: 240-65994-10

Matrix: Water | Lab File ID: Xf2120.D

Analysis Method: 680 | Date Collected: 06/13/2016 12:29

Extract. Method: 680 | Date Extracted: 06/16/2016 13:29

Sample wt/vol: 1039.6(mL) | Date Analyzed: 06/22/2016 04:51

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438264 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.29	U	0.29	0.029
26601-64-9	Hexachlorobiphenyl	0.19	U	0.19	0.014
53742-07-7	Nonachlorobiphenyl	0.48	U	0.48	0.047
55722-26-4	Octachlorobiphenyl	0.29	U	0.29	0.037
27323-18-8	Monochlorobiphenyl	0.096	U	0.096	0.0054
2051-24-3	DCB Decachlorobiphenyl	0.48	U	0.48	0.067
25512-42-9	Dichlorobiphenyl	0.096	U	0.096	0.0052
25429-29-2	Pentachlorobiphenyl	0.19	U	0.19	0.013
26914-33-0	Tetrachlorobiphenyl	0.19	U	0.19	0.013
25323-68-6	Trichlorobiphenyl	0.096	U	0.096	0.0063

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	74		25-113

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW9B-061316 | Lab Sample ID: 240-65994-11

Matrix: Water | Lab File ID: Xf2121.D

Analysis Method: 680 | Date Collected: 06/13/2016 12:34

Extract. Method: 680 | Date Extracted: 06/16/2016 13:29

Sample wt/vol: 1038.3(mL) | Date Analyzed: 06/22/2016 05:20

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438264 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.29	U	0.29	0.029
26601-64-9	Hexachlorobiphenyl	0.19	U	0.19	0.014
53742-07-7	Nonachlorobiphenyl	0.48	U	0.48	0.047
55722-26-4	Octachlorobiphenyl	0.29	U	0.29	0.037
27323-18-8	Monochlorobiphenyl	0.096	U	0.096	0.0054
2051-24-3	DCB Decachlorobiphenyl	0.48	U	0.48	0.067
25512-42-9	Dichlorobiphenyl	0.096	U	0.096	0.0052
25429-29-2	Pentachlorobiphenyl	0.19	U	0.19	0.013
26914-33-0	Tetrachlorobiphenyl	0.19	U	0.19	0.013
25323-68-6	Trichlorobiphenyl	0.096	U	0.096	0.0063

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	68		25-113

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SWFB-061316 | Lab Sample ID: 240-65996-1

Matrix: Water | Lab File ID: Xf2122.D

Analysis Method: 680 | Date Collected: 06/13/2016 00:00

Extract. Method: 680 | Date Extracted: 06/16/2016 13:29

Sample wt/vol: 1011.3(mL) | Date Analyzed: 06/22/2016 05:48

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438264 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.30	U *	0.30	0.030
26601-64-9	Hexachlorobiphenyl	0.20	U *	0.20	0.015
53742-07-7	Nonachlorobiphenyl	0.49	U *	0.49	0.048
55722-26-4	Octachlorobiphenyl	0.30	U *	0.30	0.038
27323-18-8	Monochlorobiphenyl	0.099	U *	0.099	0.0055
2051-24-3	DCB Decachlorobiphenyl	0.49	U *	0.49	0.069
25512-42-9	Dichlorobiphenyl	0.099	U *	0.099	0.0053
25429-29-2	Pentachlorobiphenyl	0.20	U *	0.20	0.014
26914-33-0	Tetrachlorobiphenyl	0.20	U *	0.20	0.013
25323-68-6	Trichlorobiphenyl	0.099	U *	0.099	0.0064

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	81	*	25-113

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SWDUP2-061316 | Lab Sample ID: 240-65996-5

Matrix: Water | Lab File ID: Xf2123.D

Analysis Method: 680 | Date Collected: 06/13/2016 00:00

Extract. Method: 680 | Date Extracted: 06/16/2016 13:29

Sample wt/vol: 1035.6(mL) | Date Analyzed: 06/22/2016 06:17

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438264 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.29	U	0.29	0.029
26601-64-9	Hexachlorobiphenyl	0.19	U	0.19	0.014
53742-07-7	Nonachlorobiphenyl	0.48	U	0.48	0.047
55722-26-4	Octachlorobiphenyl	0.29	U	0.29	0.037
27323-18-8	Monochlorobiphenyl	0.097	U	0.097	0.0054
2051-24-3	DCB Decachlorobiphenyl	0.48	U	0.48	0.068
25512-42-9	Dichlorobiphenyl	0.097	U	0.097	0.0052
25429-29-2	Pentachlorobiphenyl	0.19	U	0.19	0.014
26914-33-0	Tetrachlorobiphenyl	0.19	U	0.19	0.013
25323-68-6	Trichlorobiphenyl	0.097	U	0.097	0.0063

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	78		25-113

Appendix C

Support Documentation

CASE NARRATIVE

Client: Tetra Tech, Inc.

Project: MRC Surface Water Sampling

Report Number: 240-65994-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 522 1,4-Dioxane analysis was performed at the TestAmerica Burlington laboratory. The 680 Polychlorinated Biphenyls analysis was performed at the TestAmerica Savannah laboratory.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 6/14/2016 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 6 coolers at receipt time were 1.1º C, 1.1º C, 1.2º C, 1.2º C, 2.0º C and 2.0º C.

One container for the following samples was received broken 1XL each for: MRC-SW5A2-061316 (240-65994-2) and MRC-SW7A-061316 (240-65994-6). There is one liter that remains for each sample to have the 680 PCB analysis extracted.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples MRC-SW5A1-061316 (240-65994-1), MRC-SWFB-061316 (240-65996-1), MRC-SW5A2-061316 (240-65994-2), MRC-SW1A-061316 (240-65996-2), MRC-SW5B-061316 (240-65994-3), MRC-SW2A-061316 (240-65996-3), MRC-SW6A-061316 (240-65994-4), TB-061316 (240-65996-4), MRC-SW6B-061316 (240-65994-5), MRC-SWDUP2-061316 (240-65996-5), MRC-SW7A-061316 (240-65994-6), MRC-SW7B-061316 (240-65994-7), MRC-SW8A-061316 (240-65994-8), MRC-SW8B-061316 (240-65994-9), MRC-SW9A-061316 (240-65994-10) and MRC-SW9B-061316 (240-65994-11) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 06/20/2016 and 06/21/2016.

The continuing calibration verification (CCV) associated with batch 240-235221 recovered above the upper control limit for multiple analytes. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MRC-SWFB-061316 (240-65996-1), MRC-SW1A-061316 (240-65996-2), MRC-SW2A-061316 (240-65996-3), TB-061316 (240-65996-4) and MRC-SWDUP2-061316 (240-65996-5).

The continuing calibration verification (CCV) for analytical batch 235154 exceeded control criteria for multiple compounds. The samples associated with this CCV were non-detects for the affected analytes. In accordance with the laboratory SOP, a low level CCV at the reporting limit (labeled as an MRL) was analyzed and the affected compounds were detected; therefore the data has been reported. No further corrective action was required. The following samples were impacted: MRC-SW5A1-061316 (240-65994-1), MRC-SW5A2-061316 (240-65994-2), MRC-SW5B-061316 (240-65994-3), MRC-SW6A-061316 (240-65994-4), MRC-SW6B-061316 (240-65994-5), MRC-SW7A-061316 (240-65994-6), MRC-SW7B-061316 (240-65994-7), MRC-SW8A-061316 (240-65994-8), MRC-SW8B-061316 (240-65994-9), MRC-SW9A-061316 (240-65994-10) and MRC-SW9B-061316 (240-65994-11).

The laboratory control sample (LCS) for 235154 recovered outside control limits for the following analytes: Methylene Chloride. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported. The following samples were impacted: MRC-SW5A1-061316 (240-65994-1), MRC-SW5A2-061316 (240-65994-2), MRC-SW5B-061316 (240-65994-3), MRC-SW6A-061316 (240-65994-4), MRC-SW6B-061316 (240-65994-5), MRC-SW7A-061316 (240-65994-6),

MRC-SW7B-061316 (240-65994-7), MRC-SW8A-061316 (240-65994-8), MRC-SW8B-061316 (240-65994-9), MRC-SW9A-061316 (240-65994-10), MRC-SW9B-061316 (240-65994-11) and (LCS 240-235154/4).

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with 235310.MRC-SW7B-061316 (240-65994-7)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

1,4-DIOXANE

Samples MRC-SWFB-061316 (240-65996-1), MRC-SW1A-061316 (240-65996-2), MRC-SW2A-061316 (240-65996-3) and MRC-SWDUP1-061316 (240-65994-12) were analyzed for 1,4-Dioxane in accordance with EPA Method 522. The samples were prepared on 06/16/2016 and 06/22/2016 and analyzed on 06/17/2016 and 06/24/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS)

Samples MRC-SW5A1-061316 (240-65994-1), MRC-SWFB-061316 (240-65996-1), MRC-SW5A2-061316 (240-65994-2), MRC-SW5B-061316 (240-65994-3), MRC-SW6A-061316 (240-65994-4), MRC-SW6B-061316 (240-65994-5), MRC-SWDUP2-061316 (240-65996-5), MRC-SW7A-061316 (240-65994-6), MRC-SW7B-061316 (240-65994-7), MRC-SW8A-061316 (240-65994-8), MRC-SW8B-061316 (240-65994-9), MRC-SW9A-061316 (240-65994-10) and MRC-SW9B-061316 (240-65994-11) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA Method 680. The samples were prepared on 06/16/2016 and analyzed on 06/20/2016 and 06/22/2016.

The SOP for the 680 Method allows that the capping CCV for soils has the limit of <30% average %D with no analyte >60%D and for liquids <20% average D with no analyte >40%D. Due to software limitations for this method, the limits are set at <20%D and flags will appear on data when data is outside that criteria. (CCV 680-438006/20) has been flagged.

The internal standard response for the following samples was outside of acceptance limits when compared to the area of the CCVIS(continuing calibration verification internal standard). The 680 method allows that the sample also be compared to the average internal standard area of the calibration (ICISAV). Due to limitations in the software, when the areas of the sample are out of control for either the CCVIS or the ICISAV both are flagged. Although a * flag appears on the data, the sample is within the area range for the internal standard area of the calibration (ICISAV). MRC-SW5A1-061316 (240-65994-1MSD)

The internal standard response for the following samples was outside of acceptance limits when compared to the area of the internal standard area of the calibration (ICISAV). The 680 method allows that the sample also be compared to the internal standard area of the CCVIS(continuing calibration verification internal standard). Due to limitations in the software, when the areas of the sample are out of control for either the CCVIS or the ICISAV both are flagged. Although a * flag appears on the data, the sample is within the area range for the internal standard area of the CCVIS(continuing calibration verification internal standard). LCS 680-437585/16-A, MB 680-437585/15-A, MRC-SW5A1-061316 (240-65994-1) and MRC-SW5A1-061316 (240-65994-1MS)

The internal standard response for the following samples was outside of acceptance limits when compared to the area of the CCVIS(continuing calibration verification internal standard). The 680 method allows that the sample also be compared to the average internal standard area of the calibration (ICISAV). Due to limitations in the software, when the areas of the sample are out of control for either the CCVIS or the ICISAV both are flagged. Although a * flag appears on the data, the sample is within the area range for the internal standard area of the calibration (ICISAV). MRC-SWFB-061316 (240-65996-1), MRC-SW6A-061316 (240-65994-4), MRC-SW6B-061316 (240-65994-5), MRC-SW7B-061316 (240-65994-7), MRC-SW8A-061316 (240-65994-8) and MRC-SW8B-061316 (240-65994-9).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Method Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Surface Water Sampling

TestAmerica Job ID: 240-65994-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL CAN
522 MOD	1,4 Dioxane (GC/MS SIM)	EPA	TAL BUR
680	Polychlorinated Biphenyls (PCBs) (GC/MS)	EPA	TAL SAV

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Surface Water Sampling

TestAmerica Job ID: 240-65994-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-65994-1	MRC-SW5A1-061316	Water	06/13/16 13:13	06/14/16 09:20
240-65994-2	MRC-SW5A2-061316	Water	06/13/16 13:18	06/14/16 09:20
240-65994-3	MRC-SW5B-061316	Water	06/13/16 13:22	06/14/16 09:20
240-65994-4	MRC-SW6A-061316	Water	06/13/16 12:41	06/14/16 09:20
240-65994-5	MRC-SW6B-061316	Water	06/13/16 12:52	06/14/16 09:20
240-65994-6	MRC-SW7A-061316	Water	06/13/16 12:18	06/14/16 09:20
240-65994-7	MRC-SW7B-061316	Water	06/13/16 12:24	06/14/16 09:20
240-65994-8	MRC-SW8A-061316	Water	06/13/16 12:57	06/14/16 09:20
240-65994-9	MRC-SW8B-061316	Water	06/13/16 13:04	06/14/16 09:20
240-65994-10	MRC-SW9A-061316	Water	06/13/16 12:29	06/14/16 09:20
240-65994-11	MRC-SW9B-061316	Water	06/13/16 12:34	06/14/16 09:20
240-65994-12	MRC-SWDUP1-061316	Water	06/13/16 00:00	06/14/16 09:20
240-65996-1	MRC-SWFB-061316	Water	06/13/16 00:00	06/14/16 09:20
240-65996-2	MRC-SW1A-061316	Water	06/13/16 11:51	06/14/16 09:20
240-65996-3	MRC-SW2A-061316	Water	06/13/16 11:58	06/14/16 09:20
240-65996-4	TB-061316	Water	06/13/16 00:00	06/14/16 09:20
240-65996-5	MRC-SWDUP2-061316	Water	06/13/16 00:00	06/14/16 09:20

1.0/2.0 0.2/.2

North Canton
4101 Shuffel Street, N. W.
North Canton, OH 44720
phone 330.497.9396 fax 330.497.0772

180325 0.1/1.1

BALTIMORE

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Tony Apanavage	Site Contact: Tony Apanavage	Date: 6/13/2016	COC No:
Tetra Tech	Tel/Fax: 301-233-8230 (cell)	Lab Contact: John McFadden	Carrier: Fedex	1 of 2 COCs
20251 Century Blvd, Suite 200	Analysis Turnaround Time			Job No.
Germantown, MD 20874	Calendar (C) or Work Days (W) _____			
(301) 528-3021 Phone	TAT if different from Below: STANDARD			SDG No.
(301) 528-3000 FAX	☐ 2 weeks			
Project Name: MRC Surface Water Sampling	☐ 1 week			Sampler: MULLIS
Site: MRC Dark Head Cove / Cow Pen Creek	☐ 2 days			
Project # 112IC07776.07	☐ 1 day			Sample Specific Notes:

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	VOCs (8260C)	PCBs (680)	1-4 dioxane (522)
MRC-SW5A1-061316	6/13/2016	1313	SW	Water	5		x	x	
MRC-SW5A2-061316	6/13/2016	1318	SW	Water	5		x	x	
MRC-SW5B-061316	6/13/2016	1322	SW	Water	5		x	x	
MRC-SW6A-061316	6/13/2016	1241	SW	Water	5		x	x	
MRC-SW6B-061316	6/13/2016	1252	SW	Water	5		x	x	
MRC-SW7A-061316	6/13/2016	1218	SW	Water	5		x	x	
MRC-SW7B-061316	6/13/2016	1234	SW	Water	5		x	x	
MRC-SW8A-061316	6/13/2016	1257	SW	Water	5		x	x	
MRC-SW8B-061316	6/13/2016	1304	SW	Water	5		x	x	
MRC-SW9A-061316	6/13/2016	1229	SW	Water	5		x	x	
MRC-SW9B-061316	6/13/2016	1234	SW	Water	5		x	x	
~~MRC-SWDUP-061316~~ MRC-SWDUP1-061316	6/13/2016	0000	SW	Water	2				X

MRC-SWDUP1-061316 Duplicate

240-65994 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____ (2) (1)

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant Poison B ☐ Unknown ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments: MRC-SWDUP1-061316 for 1,4-dioxane only

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Tetra Tech	6/13/16 1525		TestAmerica	6/13/16 1525
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TestAmerica	6/13/16 1650		TAC	6/14/16 9:20
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 2, dated 03/06/2012

TestAmerica Canton Sample Receipt Form/Narrative **Login # :** 45994
Canton Facility

Client Tetra Tech Site Name _____ Cooler unpacked by: DSD

Cooler Received on 06-14-16 Opened on 06-14-16

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # Baltimore Foam Box Client Cooler Box Other _____

Packing material used: (Bubble Wrap) Foam (Plastic Bag) None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt [X] See Multiple Cooler Form
   IR GUN# IR-8 (CF +1.3 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN #36 (CF +1.0°C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 each (Yes) No
   -Were custody seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? (Yes) No
7. Did all bottles arrive in good condition (Unbroken)? Yes (No)
8. Could all bottle labels be reconciled with the COC? (Yes) No
9. Were correct bottle(s) used for the test(s) indicated? (Yes) No
10. Sufficient quantity received to perform indicated analyses? (Yes) No
11. Are these work share samples? Yes (No)
    If yes, Questions 11-15 have been checked at the originating laboratory.
11. Were sample(s) at the correct pH upon receipt? Yes No (NA) pH Strip Lot# **HC574756**
12. Were VOAs on the COC? (Yes) No
13. Were air bubbles >6 mm in any VOA vials? Yes (No) NA
14. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____ Yes (No)
15. Was a LL Hg or Me Hg trip blank present? _____ Yes (No)

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by:

Samples MRC-SW5A2 and MRC-SW7A each had one broken 1/2 Amber. Samples MRC-SW5A1 / MRC-SW5A2 / MRC-SW8A each had one lid broken on Ambers.

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s):_____.

TestAmerica Multiple Cooler Receipt Form/Narrative — Login #: 45994

Canton Facility

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
Baltimore	36	1.0	2.0	ICE
↓	↓	0.2	1.2	↓
↓	↓	0.1	1.1	↓

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MRC-SWAPT-061316	240-65994-A-12	Amber Glass 250mL - hydrochloric	<2	_____	_____
MRC-SWAPT-061316	240-65994-B-12	Amber Glass 250mL - hydrochloric	<2	_____	_____

180325

North Canton
4101 Shuffel Street, N. W.

North Canton, OH 44720
phone 330.497.9396 fax 330.497.0772

BALTIMORE

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact		Project Manager: Tony Apanavage	Site Contact: Tony Apanavage	Date: 6/13/2016	COC No:
Tetra Tech		Tel/Fax: 301-233-8230 (cell)	Lab Contact: John Mcfadden	Carrier: Fedex	2 of 2 COCs
20251 Century Blvd, Suite 200		Analysis Turnaround Time			Job No.
Germantown, MD 20874		Calendar (C) or Work Days (W) _____			
(301) 528-3021	Phone	TAT if different from Below: STANDARD			SDG No.
(301) 528-3000	FAX	☐ 2 weeks			
Project Name: MRC Surface Water Sampling		☐ 1 week			Sampler: Mullis
Site: MRC Dark Head Cove / Cow Pen Creek		☐ 2 days			
Project # 112IC07776.07		☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	VOCs (8260C)	PCBs (680)	1,4-Dioxane (522)	Sample Specific Notes:
MRC-SWFB-061316	6/13/2016	0000	SW	Water	7		x	x	x	Field Rinsate Blank
MRC-SW1A-061316	6/13/2016	1151	SW	Water	5		x		x	
MRC-SW2A-061316	6/13/2016	1158	SW	Water	5		x		x	
TB-061316	6/13/2016	0000	SW	Water	2		x			
MRC-SWDUP2-061316	6/13/2016	0000	SW	Water	5		X	X		Duplicate 2
							2	1	1	

Page 317 of 320

240-65996 Chain of Custody

Preservation Used: 1=Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments: MRC-SWDUP2-061316 for VOCs and PCBs

	Company:	Date/Time:		Company:	Date/Time:
Relinquished by:	Tetra Tech	6/13/16 1525	Received by:	TestAmerica	6/13/16 1525
Relinquished by:	TestAmerica	6/13/16 1650	Received by:	VAC	6/14/16 9:20
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 2, dated 03/06/2012

TestAmerica Canton Sample Receipt Form/Narrative **Login # :** 165996
Canton Facility

Client Tetra Tech Site Name _____ Cooler unpacked by: DSD

Cooler Received on 06-14-16 Opened on 06-14-16

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # Baltimore Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☒ See Multiple Cooler Form
   IR GUN# IR-8 (CF +1.3 °C) Observed Cooler Temp. 0 °C Corrected Cooler Temp. _____ °C
   IR GUN #36 (CF +1.0°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 each (Yes) No
   -Were custody seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? (Yes) No
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels be reconciled with the COC? (Yes) No
9. Were correct bottle(s) used for the test(s) indicated? (Yes) No
10. Sufficient quantity received to perform indicated analyses? (Yes) No
11. Are these work share samples? Yes (No)
    If yes, Questions 11-15 have been checked at the originating laboratory.
11. Were sample(s) at the correct pH upon receipt? (Yes) No NA pH Strip Lot# **HC574756**
12. Were VOAs on the COC? (Yes) No
13. Were air bubbles >6 mm in any VOA vials? Yes (No) NA
14. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # N/A (Yes) No
15. Was a LL Hg or Me Hg trip blank present? _____ Yes (No)

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by:

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

TestAmerica Multiple Cooler Receipt Form/Narrative **Login # :** 65996
Canton Facility

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
Baltimore	36	1.0	2.0	Ice
↓	↓	0.2	1.2	↓
↓	↓	0.1	1.1	↓

X:\X-Drive Document Control\SOPs\Work Instructions\Word Version Work Instructions\WI-NC-099H-071615 Cooler Receipt Form_page 2 - Multiple Coolers.doc rls

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MRC-SWFB-061316	240-65996-D-1	Amber Glass 250mL - hydrochloric	<2		
MRC-SWFB-061316	240-65996-E-1	Amber Glass 250mL - hydrochloric	<2		
MRC-SW1A-061316	240-65996-D-2	Amber Glass 250mL - hydrochloric	<2		
MRC-SW1A-061316	240-65996-E-2	Amber Glass 250mL - hydrochloric	<2		
MRC-SW2A-061316	240-65996-D-3	Amber Glass 250mL - hydrochloric	<2		
MRC-SW2A-061316	240-65996-E-3	Amber Glass 250mL - hydrochloric	<2		

Method 8260C

Volatile Organic Compounds (GC/MS) by Method 8260C

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Lab File ID: BFB6528.D BFB Injection Date: 05/28/2016

Instrument ID: A3UX11 BFB Injection Time: 08:28

Analysis Batch No.: 232366

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	15.5	
75	30.0 - 60.0 % of mass 95	43.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	89.7	
175	5.0 - 9.0 % of mass 174	6.8	(7.6) 1
176	95.0 - 101.0 % of mass 174	86.3	(96.2) 1
177	5.0 - 9.0 % of mass 176	5.8	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-232366/2	UXJ4939.D	05/28/2016	09:12
	STD8260 240-232366/3	UXJ4940.D	05/28/2016	09:34
	STD8260 240-232366/4	UXJ4941.D	05/28/2016	09:56
	STD8260 240-232366/5	UXJ4942.D	05/28/2016	10:19
	STD8260 240-232366/6	UXJ4943.D	05/28/2016	10:40
	STD8260 240-232366/7	UXJ4944.D	05/28/2016	11:03
	ICV 240-232366/14	UXJ4945.D	05/28/2016	11:25
	ICV 240-232366/15	UXJ4952.D	05/28/2016	14:03

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Lab File ID: BFB6620.D BFB Injection Date: 06/20/2016

Instrument ID: A3UX11 BFB Injection Time: 09:01

Analysis Batch No.: 235154

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	16.2	
75	30.0 - 60.0 % of mass 95	46.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.6	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	84.1	
175	5.0 - 9.0 % of mass 174	6.4	(7.6) 1
176	95.0 - 101.0 % of mass 174	81.9	(97.4) 1
177	5.0 - 9.0 % of mass 176	5.4	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-235154/2	UXJ5601.D	06/20/2016	09:34
	LCS 240-235154/4	UXJ5602.D	06/20/2016	09:57
	CCV 240-235154/3	UXJ5603.D	06/20/2016	10:20
	MB 240-235154/6	UXJ5605.D	06/20/2016	11:05
MRC-SW5A1-061316	240-65994-1	UXJ5610.D	06/20/2016	13:13
MRC-SW5A2-061316	240-65994-2	UXJ5611.D	06/20/2016	13:35
MRC-SW5B-061316	240-65994-3	UXJ5612.D	06/20/2016	13:57
MRC-SW6A-061316	240-65994-4	UXJ5613.D	06/20/2016	14:20
MRC-SW6B-061316	240-65994-5	UXJ5614.D	06/20/2016	14:43
MRC-SW7A-061316	240-65994-6	UXJ5615.D	06/20/2016	15:05
MRC-SW7B-061316	240-65994-7	UXJ5616.D	06/20/2016	15:27
MRC-SW8A-061316	240-65994-8	UXJ5617.D	06/20/2016	15:49
MRC-SW8B-061316	240-65994-9	UXJ5618.D	06/20/2016	16:12
MRC-SW9A-061316	240-65994-10	UXJ5619.D	06/20/2016	16:34
MRC-SW9B-061316	240-65994-11	UXJ5620.D	06/20/2016	16:57
	240-65995-B-5 MS	UXJ5626.D	06/20/2016	19:12
	240-65995-B-5 MSD	UXJ5627.D	06/20/2016	19:35

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Lab File ID: BFB6621.D BFB Injection Date: 06/21/2016

Instrument ID: A3UX11 BFB Injection Time: 08:00

Analysis Batch No.: 235310

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.1	
75	30.0 - 60.0 % of mass 95	46.0	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.6	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	82.2	
175	5.0 - 9.0 % of mass 174	7.0	(8.5) 1
176	95.0 - 101.0 % of mass 174	80.6	(98.1) 1
177	5.0 - 9.0 % of mass 176	5.7	(7.1) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-235310/2	UXJ5658.D	06/21/2016	08:52
	CCV 240-235310/3	UXJ5660.D	06/21/2016	09:36
	LCS 240-235310/4	UXJ5661.D	06/21/2016	10:17
	MB 240-235310/6	UXJ5663.D	06/21/2016	11:01
MRC-SW7B-061316	240-65994-7	UXJ5670.D	06/21/2016	13:59

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Lab File ID: BFB4865.D BFB Injection Date: 06/01/2016

Instrument ID: A3UX16 BFB Injection Time: 11:38

Analysis Batch No.: 232711

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	16.1	
75	30.0 - 60.0 % of mass 95	47.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.2	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	74.9	
175	5.0 - 9.0 % of mass 174	5.3	(7.1) 1
176	95.0 - 101.0 % of mass 174	73.3	(97.9) 1
177	5.0 - 9.0 % of mass 176	5.1	(7.0) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8269 240-232711/2	UXM5570.D	06/01/2016	12:06
	STD8260 240-232711/3	UXM5571.D	06/01/2016	12:29
	STD8260 240-232711/4	UXM5572.D	06/01/2016	12:51
	STD8260 240-232711/5	UXM5573.D	06/01/2016	13:14
	STD8260 240-232711/6	UXM5574.D	06/01/2016	13:37
	STD8260 240-232711/7	UXM5575.D	06/01/2016	14:00
	STD8260 240-232711/8	UXM5576.D	06/01/2016	14:22
	ICV 240-232711/9	UXM5577.D	06/01/2016	14:45
	ICV 240-232711/16	UXM5584.D	06/01/2016	17:24

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Lab File ID: BFB4888.D BFB Injection Date: 06/20/2016

Instrument ID: A3UX16 BFB Injection Time: 11:25

Analysis Batch No.: 235221

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.0	
75	30.0 - 60.0 % of mass 95	48.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.3	
173	Less than 2.0 % of mass 174	0.2	(0.2) 1
174	50.0 - 120.00 % of mass 95	74.1	
175	5.0 - 9.0 % of mass 174	5.1	(6.9) 1
176	95.0 - 101.0 % of mass 174	72.1	(97.3) 1
177	5.0 - 9.0 % of mass 176	4.5	(6.2) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	LCS 240-235221/4	UXM6059.D	06/20/2016	12:25
	CCVIS 240-235221/2	UXM6060.D	06/20/2016	12:47
	CCV 240-235221/3	UXM6061.D	06/20/2016	13:10
	MB 240-235221/6	UXM6063.D	06/20/2016	13:55
	240-65962-B-1 MS	UXM6071.D	06/20/2016	16:56
	240-65962-B-1 MSD	UXM6072.D	06/20/2016	17:19
MRC-SWFB-061316	240-65996-1	UXM6074.D	06/20/2016	18:04
MRC-SW1A-061316	240-65996-2	UXM6075.D	06/20/2016	18:27
MRC-SW2A-061316	240-65996-3	UXM6076.D	06/20/2016	18:50
TB-061316	240-65996-4	UXM6077.D	06/20/2016	19:12
MRC-SWDUP2-061316	240-65996-5	UXM6078.D	06/20/2016	19:35

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-65994-1 Analy Batch No.: 232366

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/28/2016 09:12 Calibration End Date: 05/28/2016 11:03 Calibration ID: 34632

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-232366/7	UXJ4944.D
Level 2	STD8260 240-232366/6	UXJ4943.D
Level 3	STD8260 240-232366/5	UXJ4942.D
Level 4	STD8260 240-232366/4	UXJ4941.D
Level 5	STD8260 240-232366/3	UXJ4940.D
Level 6	STD8260 240-232366/2	UXJ4939.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.1874 0.1365	0.1804	0.1569	0.1477	0.1345	Ave		0.1572			0.1000	14.2		20.0			
Chloromethane	0.2347 0.2087	0.2368	0.2391	0.2296	0.2034	Ave		0.2254			0.1000	6.8		20.0			
Vinyl chloride	0.2661 0.1948	0.2726	0.2549	0.2398	0.2079	Ave		0.2393			0.1000	13.3		20.0			
Butadiene	0.2902 0.1915	0.2430	0.2236	0.2072	0.1931	Ave		0.2248				16.7		20.0			
Bromomethane	0.1050 0.1039	0.1171	0.1178	0.1085	0.1034	Ave		0.1093			0.0500	6.0		20.0			
Chloroethane	0.1242 0.1044	0.1183	0.1173	0.1128	0.1037	Ave		0.1134			0.0500	7.2		20.0			
Dichlorofluoromethane	0.2652 0.2353	0.2510	0.2494	0.2472	0.2313	Ave		0.2466				4.9		20.0			
Trichlorofluoromethane	0.1586 0.1718	0.1896	0.1718	0.1763	0.1658	Ave		0.1723			0.1000	6.1		20.0			
Ethyl ether	0.2791 0.1930	0.2355	0.2143	0.2247	0.1967	Ave		0.2239				14.1		20.0			
Acrolein	0.0309 0.0285	0.0362	0.0322	0.0324	0.0295	Ave		0.0316				8.6		20.0			
1,1-Dichloroethene	0.1891 0.1632	0.1879	0.1767	0.1764	0.1670	Ave		0.1767			0.1000	6.0		20.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.1179 0.1005	0.1146	0.1068	0.1044	0.0984	Ave		0.1071			0.0500	7.2		20.0			
Acetone	0.1159 0.0473	0.0784	0.0616	0.0562	0.0505	Lin1	0.1399	0.0464			0.0100				0.9990		0.9900
Iodomethane	0.2712 0.2217	0.2508	0.2518	0.2412	0.2336	Ave		0.2451				7.0		20.0			
Carbon disulfide	0.5031 0.4104	0.4698	0.4742	0.4421	0.4373	Ave		0.4562			0.1000	7.2		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-65994-1 Analy Batch No.: 232366

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/28/2016 09:12 Calibration End Date: 05/28/2016 11:03 Calibration ID: 34632

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.1477 0.1632	0.1624	0.1618	0.1717	0.1628	Ave		0.1616				4.8		20.0			
Methyl acetate	0.1492 0.1172	0.1415	0.1379	0.1354	0.1267	Ave		0.1347			0.1000	8.4		20.0			
Methylene Chloride	0.4395 0.1915	0.3287	0.2437	0.2251	0.2061	Lin1	0.2668	0.1891			0.1000				0.9990		0.9900
2-Methyl-2-propanol	0.0152 +++++	0.0127	0.0136	0.0126	0.0116	Ave		0.0132				10.4		20.0			
Acrylonitrile	0.0740 0.0627	0.0715	0.0721	0.0723	0.0674	Ave		0.0700				6.0		20.0			
Methyl tert-butyl ether	0.6968 0.6087	0.6644	0.6642	0.6935	0.6425	Ave		0.6617			0.1000	5.0		20.0			
trans-1,2-Dichloroethene	0.2888 0.2454	0.2625	0.2591	0.2657	0.2505	Ave		0.2620			0.1000	5.8		20.0			
Hexane	0.0673 0.0553	0.0534	0.0515	0.0545	0.0543	Ave		0.0561				10.1		20.0			
1,1-Dichloroethane	0.4677 0.4326	0.4478	0.4396	0.4565	0.4422	Ave		0.4477			0.2000	2.8		20.0			
Vinyl acetate	0.4182 0.3938	0.4338	0.4161	0.4307	0.4152	Ave		0.4179				3.4		20.0			
cis-1,2-Dichloroethene	0.2801 0.2752	0.2762	0.2735	0.2834	0.2738	Ave		0.2770			0.1000	1.4		20.0			
2-Butanone (MEK)	0.0983 0.0737	0.0786	0.0817	0.0829	0.0790	Ave		0.0824			0.0100	10.2		20.0			
2,2-Dichloropropane	0.2080 0.1863	0.1876	0.1977	0.2027	0.1990	Ave		0.1969				4.3		20.0			
Chlorobromomethane	0.1272 0.1276	0.1218	0.1259	0.1333	0.1309	Ave		0.1278				3.1		20.0			
Tetrahydrofuran	0.0601 0.0461	0.0557	0.0518	0.0536	0.0500	Ave		0.0529				9.1		20.0			
Chloroform	0.4249 0.3958	0.3907	0.3887	0.4080	0.4090	Ave		0.4028			0.2000	3.4		20.0			
1,1,1-Trichloroethane	0.2866 0.2625	0.2619	0.2664	0.2757	0.2770	Ave		0.2717			0.1000	3.6		20.0			
Cyclohexane	0.3397 0.2916	0.3042	0.2938	0.2971	0.2985	Ave		0.3041			0.1000	5.9		20.0			
1,1-Dichloropropene	0.3733 0.3357	0.3276	0.3319	0.3472	0.3430	Ave		0.3431				4.8		20.0			
Carbon tetrachloride	0.2549 0.2547	0.2228	0.2418	0.2613	0.2561	Ave		0.2486			0.1000	5.7		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-65994-1 Analy Batch No.: 232366

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/28/2016 09:12 Calibration End Date: 05/28/2016 11:03 Calibration ID: 34632

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0062 0.0045	0.0059	0.0063	0.0071	0.0058	Ave		0.0060				14.3		20.0			
1,2-Dichloroethane	0.2981 0.2726	0.2707	0.2764	0.2862	0.2852	Ave		0.2815			0.1000	3.7		20.0			
Benzene	1.0915 1.0604	1.0274	1.0168	1.0745	1.0726	Ave		1.0572			0.5000	2.8		20.0			
n-Heptane	0.0767 0.0562	0.0637	0.0501	0.0519	0.0539	Ave		0.0587				17.0		20.0			
Trichloroethene	0.2904 0.2807	0.2627	0.2619	0.2746	0.2860	Ave		0.2761			0.1500	4.3		20.0			
Methylcyclohexane	0.3899 0.3159	0.3438	0.3048	0.3065	0.3225	Ave		0.3306			0.1000	9.8		20.0			
1,2-Dichloropropane	0.2636 0.2540	0.2477	0.2418	0.2504	0.2626	Ave		0.2533			0.1000	3.4		20.0			
Dibromomethane	0.1260 0.1258	0.1267	0.1228	0.1240	0.1303	Ave		0.1259				2.0		20.0			
1,4-Dioxane	0.0010 +++++	0.0013	0.0014	0.0016	0.0017	Lin1	-0.017	0.0017							0.9990		0.9900
Dichlorobromomethane	0.2938 0.3017	0.2907	0.2723	0.2880	0.3112	Ave		0.2929			0.1500	4.5		20.0			
2-Chloroethyl vinyl ether	0.1384 0.1445	0.1484	0.1416	0.1458	0.1535	Ave		0.1454				3.6		20.0			
cis-1,3-Dichloropropene	0.3776 0.4191	0.3788	0.3775	0.4025	0.4308	Ave		0.3977			0.1500	5.9		20.0			
4-Methyl-2-pentanone (MIBK)	0.1794 0.1579	0.1670	0.1634	0.1645	0.1729	Ave		0.1675			0.0500	4.5		20.0			
Toluene	1.6592 1.5713	1.5809	1.5586	1.6505	1.6591	Ave		1.6133			0.4000	3.0		20.0			
trans-1,3-Dichloropropene	0.4368 0.4929	0.4583	0.4669	0.5112	0.5324	Ave		0.4831			0.1000	7.4		20.0			
Ethyl methacrylate	0.4247 0.4021	0.4124	0.4087	0.4397	0.4428	Ave		0.4217				4.0		20.0			
1,1,2-Trichloroethane	0.2779 0.2701	0.2893	0.2905	0.2951	0.3013	Ave		0.2874			0.1000	4.0		20.0			
Tetrachloroethene	0.3260 0.2981	0.2891	0.2964	0.3117	0.3178	Ave		0.3065			0.1500	4.6		20.0			
1,3-Dichloropropane	0.5178 0.4955	0.5274	0.5141	0.5435	0.5440	Ave		0.5237				3.6		20.0			
2-Hexanone	0.1845 0.1578	0.1883	0.1732	0.1827	0.1815	Ave		0.1780			0.0500	6.2		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-65994-1 Analy Batch No.: 232366

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/28/2016 09:12 Calibration End Date: 05/28/2016 11:03 Calibration ID: 34632

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Chlorodibromomethane	0.2713 0.3118	0.2819	0.2799	0.3107	0.3300	Ave		0.2976				7.8		20.0			
Ethylene Dibromide	0.2749 0.2645	0.2712	0.2625	0.2827	0.2896	Ave		0.2742				3.8		20.0			
Chlorobenzene	1.0021 0.9778	0.9625	0.9467	0.9849	1.0339	Ave		0.9846			0.3000	3.1		20.0			
1,1,1,2-Tetrachloroethane	0.3124 0.3245	0.2955	0.3071	0.3343	0.3508	Ave		0.3208				6.2		20.0			
Ethylbenzene	0.5297 0.5154	0.5166	0.5168	0.5295	0.5569	Ave		0.5275				3.0		20.0			
m-Xylene & p-Xylene	0.6526 0.6339	0.6292	0.6072	0.6409	0.6817	Ave		0.6409				3.9		20.0			
o-Xylene	0.6267 0.6070	0.5789	0.5953	0.6248	0.6608	Ave		0.6156				4.6		20.0			
Styrene	1.0612 1.0573	1.0236	1.0246	1.0787	1.1399	Ave		1.0642			0.3000	4.0		20.0			
Bromoform	0.1294 0.1729	0.1399	0.1527	0.1658	0.1841	Ave		0.1575			0.1000	13.1		20.0			
Isopropylbenzene	1.4418 1.3777	1.3579	1.3867	1.4136	1.5024	Ave		1.4133			0.1000	3.7		20.0			
1,1,2,2-Tetrachloroethane	0.7048 0.6684	0.6947	0.6821	0.7009	0.7169	Ave		0.6946			0.3000	2.5		20.0			
Bromobenzene	0.9492 0.9267	0.9025	0.8699	0.9413	0.9437	Ave		0.9222				3.3		20.0			
1,2,3-Trichloropropane	0.2266 0.2086	0.2279	0.2147	0.2187	0.2292	Ave		0.2209				3.8		20.0			
trans-1,4-Dichloro-2-butene	0.1143 0.1900	0.1405	0.1609	0.1869	0.1886	Ave		0.1635				19.0		20.0			
N-Propylbenzene	0.8818 0.9344	0.8262	0.8621	0.9134	0.9434	Ave		0.8936				5.1		20.0			
2-Chlorotoluene	0.7900 0.8102	0.7694	0.7533	0.8111	0.8197	Ave		0.7923				3.3		20.0			
1,3,5-Trimethylbenzene	2.4904 2.4634	2.4676	2.4041	2.5168	2.5605	Ave		2.4838				2.1		20.0			
4-Chlorotoluene	0.8392 0.8484	0.7868	0.8198	0.8628	0.8527	Ave		0.8349				3.3		20.0			
tert-Butylbenzene	2.0991 2.0866	2.0122	2.0006	2.1022	2.1464	Ave		2.0745				2.7		20.0			
1,2,4-Trimethylbenzene	2.5486 2.4454	2.3862	2.4030	2.4835	2.5470	Ave		2.4689				2.8		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-65994-1 Analy Batch No.: 232366

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/28/2016 09:12 Calibration End Date: 05/28/2016 11:03 Calibration ID: 34632

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
sec-Butylbenzene	2.7399 2.7081	2.5216	2.6264	2.7096	2.7610	Ave		2.6778				3.3		20.0			
1,3-Dichlorobenzene	1.4310 1.3899	1.4226	1.3716	1.4076	1.4392	Ave		1.4103			0.6000	1.8		20.0			
4-Isopropyltoluene	2.3727 2.2716	2.1405	2.1846	2.3189	2.3681	Ave		2.2761				4.2		20.0			
1,4-Dichlorobenzene	1.5090 1.3897	1.4507	1.3767	1.4493	1.4354	Ave		1.4351			0.5000	3.3		20.0			
n-Butylbenzene	1.6341 1.7034	1.5296	1.6133	1.6710	1.7165	Ave		1.6446				4.2		20.0			
1,2-Dichlorobenzene	1.3346 1.2285	1.2638	1.2189	1.2545	1.3092	Ave		1.2683			0.4000	3.6		20.0			
1,2-Dibromo-3-Chloropropane	0.1065 0.1011	0.1093	0.0973	0.1023	0.1039	Ave		0.1034			0.0500	4.0		20.0			
1,2,4-Trichlorobenzene	0.6139 0.6504	0.5991	0.5773	0.5968	0.6016	Ave		0.6065			0.2000	4.0		20.0			
Hexachlorobutadiene	0.2676 0.2710	0.2301	0.2389	0.2482	0.2407	Ave		0.2494				6.6		20.0			
Naphthalene	1.5365 1.5180	1.5623	1.4231	1.4795	1.4541	Ave		1.4956				3.5		20.0			
1,2,3-Trichlorobenzene	0.6048 0.5976	0.5621	0.5340	0.5478	0.5466	Ave		0.5655				5.2		20.0			
Dibromofluoromethane (Surr)	0.2118 0.2284	0.2331	0.2147	0.2235	0.2274	Ave		0.2231				3.7		20.0			
1,2-Dichloroethane-d4 (Surr)	0.2439 0.2455	0.2559	0.2483	0.2521	0.2548	Ave		0.2501				2.0		20.0			
Toluene-d8 (Surr)	1.3628 1.3928	1.4804	1.3814	1.4319	1.4793	Ave		1.4214				3.6		20.0			
4-Bromofluorobenzene (Surr)	0.4331 0.4121	0.4504	0.4110	0.4176	0.4550	Ave		0.4299				4.5		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-65994-1 Analy Batch No.: 232711

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/01/2016 12:06 Calibration End Date: 06/01/2016 14:22 Calibration ID: 34643

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-232711/8	UXM5576.D
Level 2	STD8260 240-232711/7	UXM5575.D
Level 3	STD8260 240-232711/6	UXM5574.D
Level 4	STD8260 240-232711/5	UXM5573.D
Level 5	STD8260 240-232711/4	UXM5572.D
Level 6	STD8260 240-232711/3	UXM5571.D
Level 7	STD8269 240-232711/2	UXM5570.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2658 0.2547	0.2105 0.2462	0.2317	0.2446	0.2397	Ave		0.2419			0.1000	7.3		20.0			
Chloromethane	0.3226 0.2701	0.3026 0.2864	0.2941	0.3192	0.2884	Ave		0.2976			0.1000	6.3		20.0			
Vinyl chloride	0.3255 0.2922	0.3084 0.2978	0.2872	0.3180	0.3044	Ave		0.3048			0.1000	4.5		20.0			
Butadiene	0.3225 0.2831	0.3028 0.2740	0.3071	0.2922	0.2814	Ave		0.2947				5.8		20.0			
Bromomethane	0.1151 0.0765	0.1086 0.0681	0.1054	0.1220	0.0735	Qua	0.0578	0.0802	-0.000339		0.0500				0.9940		0.9900
Chloroethane	0.1578 0.1246	0.1362 0.1173	0.1504	0.1643	0.1208	Ave		0.1388			0.0500	13.6		20.0			
Dichlorofluoromethane	0.5184 0.2583	0.2843 0.2476	0.3142	0.3606	0.2407	Qua	0.1531	0.2534	-0.000241						0.9970		0.9900
Trichlorofluoromethane	0.2173 0.1946	0.2095 0.1761	0.1992	0.2109	0.1892	Ave		0.1995			0.1000	7.2		20.0			
Ethyl ether	0.3560 0.2099	0.3010 0.2201	0.2684	0.2256	0.2235	Lin1	0.0783	0.2144							0.9990		0.9900
Acrolein	0.0391 0.0315	0.0353 0.0335	0.0358	0.0343	0.0330	Ave		0.0346				7.0		20.0			
1,1-Dichloroethene	0.3372 0.2539	0.2530 0.2663	0.2570	0.2618	0.2679	Ave		0.2710			0.1000	11.0		20.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.2237 0.1940	0.1930 0.1798	0.1824	0.1752	0.1856	Ave		0.1905			0.0500	8.5		20.0			
Acetone	0.2239 0.0715	0.1440 0.0727	0.0985	0.0817	0.0769	Lin1	0.1458	0.0695			0.0100				0.9990		0.9900
Iodomethane	0.4300 0.3525	0.3807 0.3707	0.3992	0.3934	0.3676	Ave		0.3849				6.6		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-65994-1 Analy Batch No.: 232711

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/01/2016 12:06 Calibration End Date: 06/01/2016 14:22 Calibration ID: 34643

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Carbon disulfide	0.9313 0.7876	0.8580 0.8159	0.8641	0.8340	0.8112	Ave		0.8432			0.1000	5.6		20.0			
3-Chloro-1-propene	0.2140 0.1616	0.1806 0.1737	0.1710	0.1652	0.1707	Ave		0.1767				9.9		20.0			
Methyl acetate	0.1637 0.1543	0.1612 0.1612	0.1513	0.1591	0.1572	Ave		0.1583			0.1000	2.7		20.0			
Methylene Chloride	0.8350 0.2580	0.5307 0.2734	0.3976	0.3123	0.2926	Lin1	0.2795	0.2595			0.1000				0.9980		0.9900
2-Methyl-2-propanol	0.0208 0.0171	0.0210 0.0174	0.0189	0.0181	0.0178	Ave		0.0187				8.6		20.0			
Acrylonitrile	0.0805 0.0796	0.0790 0.0841	0.0791	0.0816	0.0804	Ave		0.0806				2.2		20.0			
Methyl tert-butyl ether	0.8433 0.7214	0.7518 0.7709	0.7713	0.7710	0.7554	Ave		0.7693			0.1000	4.8		20.0			
trans-1,2-Dichloroethene	0.2759 0.2557	0.2949 0.2720	0.2766	0.2759	0.2675	Ave		0.2741			0.1000	4.3		20.0			
Hexane	0.0907 0.0811	0.0761 0.0748	0.0790	0.0691	0.0739	Ave		0.0778				8.8		20.0			
1,1-Dichloroethane	0.5461 0.4561	0.4860 0.4895	0.4885	0.4978	0.4882	Ave		0.4932			0.2000	5.4		20.0			
Vinyl acetate	0.5072 0.4483	0.4180 0.4888	0.4474	0.4566	0.4610	Ave		0.4610				6.3		20.0			
2,2-Dichloropropane	0.3627 0.2755	0.3022 0.2852	0.3026	0.3055	0.2945	Ave		0.3040				9.2		20.0			
cis-1,2-Dichloroethene	0.3176 0.2733	0.3126 0.2967	0.3033	0.3019	0.2957	Ave		0.3002			0.1000	4.8		20.0			
2-Butanone (MEK)	0.1380 0.0937	0.0946 0.0974	0.1032	0.1041	0.0965	Ave		0.1039			0.0100	15.0		20.0			
Chlorobromomethane	0.1735 0.1257	0.1529 0.1358	0.1423	0.1389	0.1367	Ave		0.1437				10.8		20.0			
Tetrahydrofuran	0.0892 0.0598	0.0681 0.0620	0.0641	0.0630	0.0607	Ave		0.0667				15.4		20.0			
Chloroform	0.5085 0.4143	0.4584 0.4474	0.4645	0.4572	0.4407	Ave		0.4559			0.2000	6.3		20.0			
1,1,1-Trichloroethane	0.3792 0.3224	0.3829 0.3330	0.3471	0.3382	0.3447	Ave		0.3496			0.1000	6.6		20.0			
Cyclohexane	0.5099 0.4686	0.4608 0.4527	0.4342	0.4263	0.4547	Ave		0.4582			0.1000	5.9		20.0			
1,1-Dichloropropene	0.4261 0.3658	0.3951 0.3840	0.3808	0.3873	0.3786	Ave		0.3882				4.9		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-65994-1 Analy Batch No.: 232711

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/01/2016 12:06 Calibration End Date: 06/01/2016 14:22 Calibration ID: 34643

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Carbon tetrachloride	0.3923 0.3032	0.3529 0.3132	0.3067	0.3168	0.3107	Ave		0.3280			0.1000	10.0		20.0			
Isobutyl alcohol	0.0075 0.0057	0.0066 0.0058	0.0057	0.0060	0.0058	Ave		0.0062				10.8		20.0			
1,2-Dichloroethane	0.3912 0.3357	0.3572 0.3622	0.3523	0.3560	0.3524	Ave		0.3581			0.1000	4.7		20.0			
Benzene	1.1464 1.0413	1.0898 1.1584	1.1208	1.1182	1.1146	Ave		1.1128			0.5000	3.5		20.0			
n-Heptane	0.8658 0.1847	0.4891 0.1570	0.3113	0.2049	0.1790	Lin1	0.3425	0.1521							0.9950		0.9900
Trichloroethene	0.3294 0.2661	0.2808 0.2899	0.2797	0.2846	0.2796	Ave		0.2871			0.1500	7.0		20.0			
Methylcyclohexane	0.5109 0.4682	0.4698 0.4413	0.4267	0.4101	0.4420	Ave		0.4527			0.1000	7.4		20.0			
1,2-Dichloropropane	0.3109 0.2464	0.2704 0.2680	0.2591	0.2638	0.2558	Ave		0.2678			0.1000	7.7		20.0			
Dibromomethane	0.1642 0.1341	0.1605 0.1454	0.1590	0.1411	0.1416	Ave		0.1494				7.8		20.0			
1,4-Dioxane	0.0020 0.0021	0.0022 0.0021	0.0021	0.0021	0.0023	Ave		0.0021				4.9		20.0			
Dichlorobromomethane	0.4212 0.3172	0.3564 0.3469	0.3437	0.3465	0.3397	Ave		0.3531			0.1500	9.2		20.0			
2-Chloroethyl vinyl ether	0.1538 0.1393	0.1407 0.1499	0.1420	0.1428	0.1448	Ave		0.1448				3.6		20.0			
cis-1,3-Dichloropropene	0.5169 0.4190	0.4311 0.4595	0.4377	0.4485	0.4405	Ave		0.4504			0.1500	7.1		20.0			
4-Methyl-2-pentanone (MIBK)	0.2155 0.1908	0.2069 0.1987	0.2027	0.2030	0.1990	Ave		0.2024			0.0500	3.8		20.0			
Toluene	1.8078 1.5456	1.6054 1.6831	1.6197	1.6140	1.6207	Ave		1.6423			0.4000	5.1		20.0			
trans-1,3-Dichloropropene	0.5854 0.5147	0.5278 0.5456	0.5557	0.5361	0.5421	Ave		0.5439			0.1000	4.1		20.0			
Ethyl methacrylate	0.5357 0.4188	0.4567 0.4334	0.4685	0.4479	0.4402	Ave		0.4573				8.3		20.0			
1,1,2-Trichloroethane	0.2886 0.2791	0.3013 0.2832	0.2772	0.2912	0.2815	Ave		0.2860			0.1000	2.9		20.0			
Tetrachloroethene	0.3308 0.2848	0.2972 0.2974	0.2777	0.2955	0.2960	Ave		0.2970			0.1500	5.6		20.0			
1,3-Dichloropropane	0.5948 0.5061	0.5208 0.5372	0.5370	0.5310	0.5300	Ave		0.5367				5.2		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-65994-1 Analy Batch No.: 232711

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/01/2016 12:06 Calibration End Date: 06/01/2016 14:22 Calibration ID: 34643

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
2-Hexanone	0.2702 0.1877	0.2135 0.1870	0.2111	0.1984	0.2007	Ave		0.2098			0.0500	13.6		20.0			
Chlorodibromomethane	0.4389 0.3177	0.3858 0.3399	0.3295	0.3314	0.3332	Ave		0.3538				12.3		20.0			
Ethylene Dibromide	0.3417 0.2751	0.2738 0.2835	0.2837	0.2848	0.2919	Ave		0.2906				8.0		20.0			
Chlorobenzene	1.1892 0.9615	1.0479 1.0412	1.0244	1.0192	1.0080	Ave		1.0416			0.3000	6.8		20.0			
1,1,1,2-Tetrachloroethane	0.4284 0.3412	0.3798 0.3634	0.3655	0.3675	0.3563	Ave		0.3717				7.4		20.0			
Ethylbenzene	0.6350 0.5391	0.5588 0.5736	0.5694	0.5716	0.5684	Ave		0.5737				5.1		20.0			
m-Xylene & p-Xylene	0.8090 0.6776	0.7153 0.7126	0.6856	0.7165	0.7005	Ave		0.7167				6.1		20.0			
o-Xylene	0.7828 0.6776	0.7402 0.7224	0.7109	0.7017	0.7035	Ave		0.7199				4.7		20.0			
Styrene	1.2751 1.1040	1.1525 1.1974	1.1650	1.1717	1.1713	Ave		1.1767			0.3000	4.4		20.0			
Bromoform	0.2021 0.1898	0.1856 0.1995	0.1907	0.1935	0.1934	Ave		0.1935			0.1000	2.9		20.0			
Isopropylbenzene	1.9322 1.7091	1.7543 1.8331	1.7487	1.7471	1.7692	Ave		1.7848			0.1000	4.2		20.0			
1,1,2,2-Tetrachloroethane	0.7589 0.6733	0.6721 0.6933	0.6958	0.6894	0.6915	Ave		0.6963			0.3000	4.2		20.0			
Bromobenzene	0.8272 0.7233	0.7890 0.7959	0.7889	0.7684	0.7816	Ave		0.7820				4.0		20.0			
1,2,3-Trichloropropane	0.4533 0.2033	0.2492 0.2083	0.2178	0.2037	0.2208	Lin1	0.0867	0.2029							0.9970		0.9900
trans-1,4-Dichloro-2-butene	0.2081 0.1867	0.2098 0.1943	0.2115	0.1934	0.1898	Ave		0.1991				5.2		20.0			
N-Propylbenzene	1.0373 0.8830	0.9642 0.9436	0.9090	0.9136	0.9191	Ave		0.9385				5.4		20.0			
2-Chlorotoluene	0.9555 0.7312	0.8406 0.8014	0.7688	0.7644	0.7693	Ave		0.8045				9.3		20.0			
1,3,5-Trimethylbenzene	3.0092 2.6976	2.8007 2.9872	2.8557	2.7340	2.8511	Ave		2.8479				4.1		20.0			
4-Chlorotoluene	0.9328 0.7537	0.8369 0.8293	0.8042	0.8170	0.8228	Ave		0.8281				6.5		20.0			
tert-Butylbenzene	2.5383 2.3873	2.4568 2.5572	2.4127	2.3965	2.4849	Ave		2.4620				2.8		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-65994-1 Analy Batch No.: 232711

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/01/2016 12:06 Calibration End Date: 06/01/2016 14:22 Calibration ID: 34643

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2,4-Trimethylbenzene	3.2212 2.7820	2.8942 3.1098	2.9390	2.9103	2.9845	Ave		2.9773				4.9		20.0			
sec-Butylbenzene	3.6758 3.2676	3.3683 3.5151	3.2579	3.2123	3.3949	Ave		3.3846				4.8		20.0			
1,3-Dichlorobenzene	1.6908 1.4357	1.5371 1.5792	1.5479	1.5290	1.5344	Ave		1.5506			0.6000	4.9		20.0			
4-Isopropyltoluene	3.1582 2.8283	2.9369 3.0693	2.8226	2.8587	2.9339	Ave		2.9440				4.3		20.0			
1,4-Dichlorobenzene	1.6660 1.4327	1.5476 1.5967	1.5656	1.5412	1.5577	Ave		1.5582			0.5000	4.5		20.0			
n-Butylbenzene	2.8401 2.3843	2.5420 2.5448	2.4586	2.3986	2.4954	Ave		2.5234				6.1		20.0			
1,2-Dichlorobenzene	1.6201 1.3707	1.4940 1.5114	1.4046	1.4681	1.4834	Ave		1.4789			0.4000	5.4		20.0			
1,2-Dibromo-3-Chloropropane	0.1835 0.1490	0.1734 0.1502	0.1620	0.1504	0.1537	Ave		0.1603			0.0500	8.4		20.0			
1,2,4-Trichlorobenzene	1.0780 0.8798	0.9700 0.9507	0.9787	0.9584	0.9634	Ave		0.9684			0.2000	6.0		20.0			
Hexachlorobutadiene	0.4164 0.3120	0.3404 0.3143	0.3469	0.3377	0.3325	Ave		0.3429				10.2		20.0			
Naphthalene	2.8816 2.2973	2.4776 2.3452	2.5060	2.4521	2.4179	Ave		2.4825				7.7		20.0			
1,2,3-Trichlorobenzene	1.0204 0.7849	0.8513 0.8315	0.8741	0.8778	0.8406	Ave		0.8687				8.5		20.0			
Dibromofluoromethane (Surr)	+++++ 0.2142	0.2459 0.2338	0.2421	0.2373	0.2329	Ave		0.2344				4.7		20.0			
1,2-Dichloroethane-d4 (Surr)	+++++ 0.2610	0.2977 0.2881	0.2809	0.2939	0.2799	Ave		0.2836				4.6		20.0			
Toluene-d8 (Surr)	+++++ 1.2967	1.2980 1.4211	1.3722	1.3589	1.3423	Ave		1.3482				3.5		20.0			
4-Bromofluorobenzene (Surr)	+++++ 0.4756	0.5321 0.5221	0.5183	0.5087	0.5099	Ave		0.5111				3.8		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Lab Sample ID: ICV 240-232366/14 Calibration Date: 05/28/2016 11:25

Instrument ID: A3UX11 Calib Start Date: 05/28/2016 09:12

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/28/2016 11:03

Lab File ID: UXJ4945.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1572	0.0785*	0.1000	0.00499	0.0100	-50.1*	20.0
Chloromethane	Ave	0.2254	0.1613	0.1000	0.00716	0.0100	-28.4*	20.0
Vinyl chloride	Ave	0.2393	0.1918	0.1000	0.00801	0.0100	-19.9	20.0
Butadiene	Ave	0.2248	0.1710		0.00761	0.0100	-23.9	30.0
Bromomethane	Ave	0.1093	0.0897	0.0500	0.00821	0.0100	-17.9	20.0
Chloroethane	Ave	0.1134	0.0951	0.0500	0.00838	0.0100	-16.2	20.0
Dichlorofluoromethane	Ave	0.2466	0.2222		0.00901	0.0100	-9.9	20.0
Trichlorofluoromethane	Ave	0.1723	0.1649	0.1000	0.00957	0.0100	-4.3	20.0
Ethyl ether	Ave	0.2239	0.2205		0.00985	0.0100	-1.5	20.0
Acrolein	Ave	0.0316	0.0196		0.0309	0.0500	-38.1	50.0
1,1-Dichloroethene	Ave	0.1767	0.1892	0.1000	0.0107	0.0100	7.1	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1071	0.1197	0.0500	0.0112	0.0100	11.8	20.0
Acetone	Lin1		0.0409	0.0100	0.0146	0.0200	-27.1	50.0
Iodomethane	Ave	0.2451	0.2543		0.0104	0.0100	3.8	20.0
Carbon disulfide	Ave	0.4562	0.4979	0.1000	0.0109	0.0100	9.1	20.0
3-Chloro-1-propene	Ave	0.1616	0.1753		0.0108	0.0100	8.5	20.0
Methyl acetate	Ave	0.1347	0.1285	0.1000	0.0477	0.0500	-4.6	20.0
Methylene Chloride	Lin1		0.2133	0.1000	0.00987	0.0100	-1.3	50.0
2-Methyl-2-propanol	Ave	0.0132	0.0104		0.0788	0.100	-21.2	50.0
Acrylonitrile	Ave	0.0700	0.0688		0.0982	0.100	-1.8	20.0
Methyl tert-butyl ether	Ave	0.6617	0.6529	0.1000	0.00987	0.0100	-1.3	20.0
trans-1,2-Dichloroethene	Ave	0.2620	0.2698	0.1000	0.0103	0.0100	3.0	20.0
Hexane	Ave	0.0561	0.0718		0.0128	0.0100	28.0*	20.0
1,1-Dichloroethane	Ave	0.4477	0.4276	0.2000	0.00955	0.0100	-4.5	20.0
Vinyl acetate	Ave	0.4179	0.4341		0.0104	0.0100	3.9	50.0
2-Butanone (MEK)	Ave	0.0824	0.0709	0.0100	0.0172	0.0200	-13.9	20.0
cis-1,2-Dichloroethene	Ave	0.2770	0.2702	0.1000	0.00975	0.0100	-2.5	20.0
2,2-Dichloropropane	Ave	0.1969	0.1923		0.00977	0.0100	-2.3	20.0
Chlorobromomethane	Ave	0.1278	0.1279		0.0100	0.0100	0.0	20.0
Tetrahydrofuran	Ave	0.0529	0.0487		0.0184	0.0200	-8.0	20.0
Chloroform	Ave	0.4028	0.3863	0.2000	0.00959	0.0100	-4.1	20.0
1,1,1-Trichloroethane	Ave	0.2717	0.2653	0.1000	0.00977	0.0100	-2.3	20.0
Cyclohexane	Ave	0.3041	0.3496	0.1000	0.0115	0.0100	14.9	20.0
1,1-Dichloropropene	Ave	0.3431	0.3373		0.00983	0.0100	-1.7	20.0
Carbon tetrachloride	Ave	0.2486	0.2618	0.1000	0.0105	0.0100	5.3	20.0
Isobutyl alcohol	Ave	0.0060	0.0055		0.231	0.250	-7.5	20.0
1,2-Dichloroethane	Ave	0.2815	0.2824	0.1000	0.0100	0.0100	0.3	20.0
Benzene	Ave	1.057	1.019	0.5000	0.00964	0.0100	-3.6	20.0
n-Heptane	Ave	0.0587	0.0635		0.0108	0.0100	8.1	20.0
Trichloroethene	Ave	0.2761	0.2702	0.1500	0.00979	0.0100	-2.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Lab Sample ID: ICV 240-232366/14 Calibration Date: 05/28/2016 11:25

Instrument ID: A3UX11 Calib Start Date: 05/28/2016 09:12

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/28/2016 11:03

Lab File ID: UXJ4945.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3306	0.3651	0.1000	0.0110	0.0100	10.4	20.0
1,2-Dichloropropane	Ave	0.2533	0.2462	0.1000	0.00972	0.0100	-2.8	20.0
Dibromomethane	Ave	0.1259	0.1188		0.00943	0.0100	-5.7	20.0
1,4-Dioxane	Lin1		0.0009		0.119	0.200	-40.4	50.0
Dichlorobromomethane	Ave	0.2929	0.2750	0.1500	0.00939	0.0100	-6.1	20.0
2-Chloroethyl vinyl ether	Ave	0.1454	0.1420		0.00977	0.0100	-2.3	20.0
cis-1,3-Dichloropropene	Ave	0.3977	0.3785	0.1500	0.00952	0.0100	-4.8	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1675	0.1619	0.0500	0.0193	0.0200	-3.4	20.0
Toluene	Ave	1.613	1.577	0.4000	0.00977	0.0100	-2.3	20.0
trans-1,3-Dichloropropene	Ave	0.4831	0.4634	0.1000	0.00959	0.0100	-4.1	20.0
Ethyl methacrylate	Ave	0.4217	0.4208		0.00998	0.0100	-0.2	20.0
1,1,2-Trichloroethane	Ave	0.2874	0.2803	0.1000	0.00975	0.0100	-2.5	20.0
Tetrachloroethene	Ave	0.3065	0.3058	0.1500	0.00998	0.0100	-0.2	20.0
1,3-Dichloropropane	Ave	0.5237	0.5135		0.00980	0.0100	-2.0	20.0
2-Hexanone	Ave	0.1780	0.1624	0.0500	0.0182	0.0200	-8.8	20.0
Chlorodibromomethane	Ave	0.2976	0.2888		0.00970	0.0100	-3.0	20.0
Ethylene Dibromide	Ave	0.2742	0.2692		0.00982	0.0100	-1.8	20.0
Chlorobenzene	Ave	0.9846	0.9345	0.3000	0.00949	0.0100	-5.1	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3208	0.3054		0.00952	0.0100	-4.8	20.0
Ethylbenzene	Ave	0.5275	0.5081		0.00963	0.0100	-3.7	20.0
m-Xylene & p-Xylene	Ave	0.6409	0.6189		0.00966	0.0100	-3.4	20.0
o-Xylene	Ave	0.6156	0.5915		0.00961	0.0100	-3.9	20.0
Styrene	Ave	1.064	1.036	0.3000	0.00973	0.0100	-2.7	20.0
Bromoform	Ave	0.1575	0.1606	0.1000	0.0102	0.0100	2.0	20.0
Isopropylbenzene	Ave	1.413	1.372	0.1000	0.00971	0.0100	-2.9	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6946	0.6670	0.3000	0.00960	0.0100	-4.0	20.0
Bromobenzene	Ave	0.9222	0.8545		0.00927	0.0100	-7.3	20.0
1,2,3-Trichloropropane	Ave	0.2209	0.2222		0.0101	0.0100	0.6	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1635	0.1515		0.00927	0.0100	-7.3	20.0
N-Propylbenzene	Ave	0.8936	0.8451		0.00946	0.0100	-5.4	20.0
2-Chlorotoluene	Ave	0.7923	0.7318		0.00924	0.0100	-7.6	20.0
1,3,5-Trimethylbenzene	Ave	2.484	2.313		0.00931	0.0100	-6.9	20.0
4-Chlorotoluene	Ave	0.8349	0.7709		0.00923	0.0100	-7.7	20.0
tert-Butylbenzene	Ave	2.075	1.952		0.00941	0.0100	-5.9	20.0
1,2,4-Trimethylbenzene	Ave	2.469	2.264		0.00917	0.0100	-8.3	20.0
sec-Butylbenzene	Ave	2.678	2.475		0.00924	0.0100	-7.6	20.0
1,3-Dichlorobenzene	Ave	1.410	1.275	0.6000	0.00904	0.0100	-9.6	20.0
4-Isopropyltoluene	Ave	2.276	2.122		0.00933	0.0100	-6.7	20.0
1,4-Dichlorobenzene	Ave	1.435	1.312	0.5000	0.00914	0.0100	-8.6	20.0
n-Butylbenzene	Ave	1.645	1.481		0.00901	0.0100	-9.9	20.0
1,2-Dichlorobenzene	Ave	1.268	1.157	0.4000	0.00912	0.0100	-8.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Lab Sample ID: ICV 240-232366/14 Calibration Date: 05/28/2016 11:25

Instrument ID: A3UX11 Calib Start Date: 05/28/2016 09:12

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/28/2016 11:03

Lab File ID: UXJ4945.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1034	0.0919	0.0500	0.00889	0.0100	-11.1	50.0
1,2,4-Trichlorobenzene	Ave	0.6065	0.5148	0.2000	0.00849	0.0100	-15.1	50.0
Hexachlorobutadiene	Ave	0.2494	0.2019		0.00810	0.0100	-19.0	20.0
Naphthalene	Ave	1.496	1.340		0.00896	0.0100	-10.4	50.0
1,2,3-Trichlorobenzene	Ave	0.5655	0.4760		0.00842	0.0100	-15.8	20.0
Dibromofluoromethane (Surr)	Ave	0.2231	0.2015		0.0108	0.0120	-9.7	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2501	0.2259		0.0108	0.0120	-9.7	20.0
Toluene-d8 (Surr)	Ave	1.421	1.311		0.0110	0.0120	-7.8	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4299	0.3884		0.0108	0.0120	-9.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Lab Sample ID: CCVIS 240-235154/2 Calibration Date: 06/20/2016 09:34

Instrument ID: A3UX11 Calib Start Date: 05/28/2016 09:12

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/28/2016 11:03

Lab File ID: UXJ5601.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1572	0.2042	0.1000	0.0130	0.0100	29.8*	20.0
Chloromethane	Ave	0.2254	0.2846	0.1000	0.0126	0.0100	26.3*	20.0
Vinyl chloride	Ave	0.2393	0.2630	0.1000	0.0110	0.0100	9.9	20.0
Butadiene	Ave	0.2248	0.2519		0.0112	0.0100	12.1	20.0
Bromomethane	Ave	0.1093	0.0735	0.0500	0.00673	0.0100	-32.7*	20.0
Chloroethane	Ave	0.1134	0.0992	0.0500	0.00874	0.0100	-12.6	20.0
Dichlorofluoromethane	Ave	0.2466	0.2663		0.0108	0.0100	8.0	20.0
Trichlorofluoromethane	Ave	0.1723	0.2511	0.1000	0.0146	0.0100	45.7*	20.0
Ethyl ether	Ave	0.2239	0.2029		0.00906	0.0100	-9.4	20.0
Acrolein	Ave	0.0316	0.0237		0.0374	0.0500	-25.1	50.0
1,1-Dichloroethene	Ave	0.1767	0.1907	0.1000	0.0108	0.0100	7.9	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1071	0.1162	0.0500	0.0109	0.0100	8.5	20.0
Acetone	Lin1		0.0462	0.0100	0.0169	0.0200	-15.6	50.0
Iodomethane	Ave	0.2451	0.2368		0.00966	0.0100	-3.4	20.0
Carbon disulfide	Ave	0.4562	0.4742	0.1000	0.0104	0.0100	3.9	20.0
3-Chloro-1-propene	Ave	0.1616	0.1649		0.0102	0.0100	2.0	20.0
Methyl acetate	Ave	0.1347	0.1260	0.1000	0.0468	0.0500	-6.5	20.0
Methylene Chloride	Lin1		0.2338	0.1000	0.0110	0.0100	9.5	50.0
2-Methyl-2-propanol	Ave	0.0132	0.0088		0.0671	0.100	-32.9	50.0
Acrylonitrile	Ave	0.0700	0.0649		0.0927	0.100	-7.3	20.0
Methyl tert-butyl ether	Ave	0.6617	0.6433	0.1000	0.00972	0.0100	-2.8	20.0
trans-1,2-Dichloroethene	Ave	0.2620	0.2684	0.1000	0.0102	0.0100	2.5	20.0
Hexane	Ave	0.0561	0.0636		0.0113	0.0100	13.5	20.0
1,1-Dichloroethane	Ave	0.4477	0.4635	0.2000	0.0104	0.0100	3.5	20.0
Vinyl acetate	Ave	0.4179	0.3914		0.00937	0.0100	-6.3	50.0
2-Butanone (MEK)	Ave	0.0824	0.0736	0.0100	0.0179	0.0200	-10.6	20.0
cis-1,2-Dichloroethene	Ave	0.2770	0.2881	0.1000	0.0104	0.0100	4.0	20.0
2,2-Dichloropropane	Ave	0.1969	0.2061		0.0105	0.0100	4.7	20.0
Chlorobromomethane	Ave	0.1278	0.1340		0.0105	0.0100	4.8	20.0
Tetrahydrofuran	Ave	0.0529	0.0479		0.0181	0.0200	-9.6	20.0
Chloroform	Ave	0.4028	0.4281	0.2000	0.0106	0.0100	6.3	20.0
1,1,1-Trichloroethane	Ave	0.2717	0.2699	0.1000	0.00994	0.0100	-0.6	20.0
Cyclohexane	Ave	0.3041	0.3309	0.1000	0.0109	0.0100	8.8	20.0
1,1-Dichloropropene	Ave	0.3431	0.3652		0.0106	0.0100	6.4	20.0
Carbon tetrachloride	Ave	0.2486	0.2662	0.1000	0.0107	0.0100	7.1	20.0
Isobutyl alcohol	Ave	0.0060	0.0060		0.251	0.250	0.5	20.0
1,2-Dichloroethane	Ave	0.2815	0.3067	0.1000	0.0109	0.0100	8.9	20.0
Benzene	Ave	1.057	1.102	0.5000	0.0104	0.0100	4.3	20.0
n-Heptane	Ave	0.0587	0.0646		0.0110	0.0100	10.0	20.0
Trichloroethene	Ave	0.2761	0.2817	0.1500	0.0102	0.0100	2.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Lab Sample ID: CCVIS 240-235154/2 Calibration Date: 06/20/2016 09:34

Instrument ID: A3UX11 Calib Start Date: 05/28/2016 09:12

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/28/2016 11:03

Lab File ID: UXJ5601.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3306	0.3513	0.1000	0.0106	0.0100	6.3	20.0
1,2-Dichloropropane	Ave	0.2533	0.2606	0.1000	0.0103	0.0100	2.8	20.0
Dibromomethane	Ave	0.1259	0.1313		0.0104	0.0100	4.3	20.0
1,4-Dioxane	Lin1		0.0011		0.140	0.200	-30.0	50.0
Dichlorobromomethane	Ave	0.2929	0.3045	0.1500	0.0104	0.0100	3.9	20.0
2-Chloroethyl vinyl ether	Ave	0.1454	0.1431		0.0197	0.0200	-1.6	20.0
cis-1,3-Dichloropropene	Ave	0.3977	0.3901	0.1500	0.00981	0.0100	-1.9	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1675	0.1582	0.0500	0.0189	0.0200	-5.6	20.0
Toluene	Ave	1.613	1.799	0.4000	0.0112	0.0100	11.5	20.0
trans-1,3-Dichloropropene	Ave	0.4831	0.5143	0.1000	0.0106	0.0100	6.5	20.0
Ethyl methacrylate	Ave	0.4217	0.4325		0.0103	0.0100	2.5	20.0
1,1,2-Trichloroethane	Ave	0.2874	0.3087	0.1000	0.0107	0.0100	7.4	20.0
Tetrachloroethene	Ave	0.3065	0.3272	0.1500	0.0107	0.0100	6.8	20.0
1,3-Dichloropropane	Ave	0.5237	0.5659		0.0108	0.0100	8.1	20.0
2-Hexanone	Ave	0.1780	0.1745	0.0500	0.0196	0.0200	-2.0	20.0
Chlorodibromomethane	Ave	0.2976	0.3188		0.0107	0.0100	7.1	20.0
Ethylene Dibromide	Ave	0.2742	0.2916		0.0106	0.0100	6.3	20.0
Chlorobenzene	Ave	0.9846	1.026	0.3000	0.0104	0.0100	4.2	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3208	0.3317		0.0103	0.0100	3.4	20.0
Ethylbenzene	Ave	0.5275	0.5448		0.0103	0.0100	3.3	20.0
m-Xylene & p-Xylene	Ave	0.6409	0.6844		0.0107	0.0100	6.8	20.0
o-Xylene	Ave	0.6156	0.6439		0.0105	0.0100	4.6	20.0
Styrene	Ave	1.064	1.097	0.3000	0.0103	0.0100	3.1	20.0
Bromoform	Ave	0.1575	0.1430	0.1000	0.00908	0.0100	-9.2	20.0
Isopropylbenzene	Ave	1.413	1.434	0.1000	0.0101	0.0100	1.5	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6946	0.7283	0.3000	0.0105	0.0100	4.8	20.0
Bromobenzene	Ave	0.9222	0.9786		0.0106	0.0100	6.1	20.0
1,2,3-Trichloropropane	Ave	0.2209	0.2415		0.0109	0.0100	9.3	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1635	0.1683		0.0103	0.0100	2.9	20.0
N-Propylbenzene	Ave	0.8936	1.025		0.0115	0.0100	14.8	20.0
2-Chlorotoluene	Ave	0.7923	0.8593		0.0108	0.0100	8.5	20.0
1,3,5-Trimethylbenzene	Ave	2.484	2.685		0.0108	0.0100	8.1	20.0
4-Chlorotoluene	Ave	0.8349	0.9366		0.0112	0.0100	12.2	20.0
tert-Butylbenzene	Ave	2.075	2.162		0.0104	0.0100	4.2	20.0
1,2,4-Trimethylbenzene	Ave	2.469	2.647		0.0107	0.0100	7.2	20.0
sec-Butylbenzene	Ave	2.678	2.793		0.0104	0.0100	4.3	20.0
1,3-Dichlorobenzene	Ave	1.410	1.406	0.6000	0.00997	0.0100	-0.3	20.0
4-Isopropyltoluene	Ave	2.276	2.313		0.0102	0.0100	1.6	20.0
1,4-Dichlorobenzene	Ave	1.435	1.455	0.5000	0.0101	0.0100	1.4	20.0
n-Butylbenzene	Ave	1.645	1.667		0.0101	0.0100	1.4	20.0
1,2-Dichlorobenzene	Ave	1.268	1.206	0.4000	0.00951	0.0100	-4.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Lab Sample ID: CCVIS 240-235154/2 Calibration Date: 06/20/2016 09:34

Instrument ID: A3UX11 Calib Start Date: 05/28/2016 09:12

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/28/2016 11:03

Lab File ID: UXJ5601.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1034	0.0816	0.0500	0.00789	0.0100	-21.1	50.0
1,2,4-Trichlorobenzene	Ave	0.6065	0.5723	0.2000	0.00944	0.0100	-5.6	50.0
Hexachlorobutadiene	Ave	0.2494	0.2198		0.00881	0.0100	-11.9	20.0
Naphthalene	Ave	1.496	1.391		0.00930	0.0100	-7.0	50.0
1,2,3-Trichlorobenzene	Ave	0.5655	0.5329		0.00942	0.0100	-5.8	20.0
Dibromofluoromethane (Surr)	Ave	0.2231	0.2105		0.0113	0.0120	-5.7	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2501	0.2507		0.0120	0.0120	0.3	20.0
Toluene-d8 (Surr)	Ave	1.421	1.423		0.0120	0.0120	0.1	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4299	0.3935		0.0109	0.0120	-8.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Lab Sample ID: CCVIS 240-235310/2 Calibration Date: 06/21/2016 08:52

Instrument ID: A3UX11 Calib Start Date: 05/28/2016 09:12

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/28/2016 11:03

Lab File ID: UXJ5658.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1572	0.1689	0.1000	0.0107	0.0100	7.4	20.0
Chloromethane	Ave	0.2254	0.2423	0.1000	0.0108	0.0100	7.5	20.0
Vinyl chloride	Ave	0.2393	0.2266	0.1000	0.00947	0.0100	-5.3	20.0
Butadiene	Ave	0.2248	0.2087		0.00928	0.0100	-7.2	20.0
Bromomethane	Ave	0.1093	0.0650	0.0500	0.00595	0.0100	-40.5*	20.0
Chloroethane	Ave	0.1134	0.0823	0.0500	0.00726	0.0100	-27.4*	20.0
Dichlorofluoromethane	Ave	0.2466	0.2274		0.00922	0.0100	-7.8	20.0
Trichlorofluoromethane	Ave	0.1723	0.2008	0.1000	0.0117	0.0100	16.5	20.0
Ethyl ether	Ave	0.2239	0.1935		0.00864	0.0100	-13.6	20.0
Acrolein	Ave	0.0316	0.0215		0.0340	0.0500	-32.0	50.0
1,1-Dichloroethene	Ave	0.1767	0.1787	0.1000	0.0101	0.0100	1.1	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1071	0.1027	0.0500	0.00959	0.0100	-4.1	20.0
Acetone	Lin1		0.0365	0.0100	0.0127	0.0200	-36.5	50.0
Iodomethane	Ave	0.2451	0.2228		0.00909	0.0100	-9.1	20.0
Carbon disulfide	Ave	0.4562	0.4866	0.1000	0.0107	0.0100	6.7	20.0
3-Chloro-1-propene	Ave	0.1616	0.1508		0.00933	0.0100	-6.7	20.0
Methyl acetate	Ave	0.1347	0.1144	0.1000	0.0425	0.0500	-15.0	20.0
Methylene Chloride	Lin1		0.2045	0.1000	0.00941	0.0100	-5.9	50.0
2-Methyl-2-propanol	Ave	0.0132	0.0082		0.0622	0.100	-37.8	50.0
Acrylonitrile	Ave	0.0700	0.0605		0.0864	0.100	-13.6	20.0
Methyl tert-butyl ether	Ave	0.6617	0.5887	0.1000	0.00890	0.0100	-11.0	20.0
trans-1,2-Dichloroethene	Ave	0.2620	0.2466	0.1000	0.00941	0.0100	-5.9	20.0
Hexane	Ave	0.0561	0.0617		0.0110	0.0100	10.0	20.0
1,1-Dichloroethane	Ave	0.4477	0.4287	0.2000	0.00958	0.0100	-4.2	20.0
Vinyl acetate	Ave	0.4179	0.3691		0.00883	0.0100	-11.7	50.0
cis-1,2-Dichloroethene	Ave	0.2770	0.2551	0.1000	0.00921	0.0100	-7.9	20.0
2,2-Dichloropropane	Ave	0.1969	0.1843		0.00936	0.0100	-6.4	20.0
2-Butanone (MEK)	Ave	0.0824	0.0630	0.0100	0.0153	0.0200	-23.5*	20.0
Chlorobromomethane	Ave	0.1278	0.1210		0.00946	0.0100	-5.4	20.0
Tetrahydrofuran	Ave	0.0529	0.0444		0.0168	0.0200	-16.1	20.0
Chloroform	Ave	0.4028	0.3828	0.2000	0.00950	0.0100	-5.0	20.0
1,1,1-Trichloroethane	Ave	0.2717	0.2502	0.1000	0.00921	0.0100	-7.9	20.0
Cyclohexane	Ave	0.3041	0.3056	0.1000	0.0100	0.0100	0.5	20.0
1,1-Dichloropropene	Ave	0.3431	0.3313		0.00965	0.0100	-3.5	20.0
Carbon tetrachloride	Ave	0.2486	0.2326	0.1000	0.00936	0.0100	-6.4	20.0
Isobutyl alcohol	Ave	0.0060	0.0054		0.226	0.250	-9.5	20.0
1,2-Dichloroethane	Ave	0.2815	0.2865	0.1000	0.0102	0.0100	1.7	20.0
Benzene	Ave	1.057	1.003	0.5000	0.00949	0.0100	-5.1	20.0
n-Heptane	Ave	0.0587	0.0578		0.00984	0.0100	-1.6	20.0
Trichloroethene	Ave	0.2761	0.2556	0.1500	0.00926	0.0100	-7.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Lab Sample ID: CCVIS 240-235310/2 Calibration Date: 06/21/2016 08:52

Instrument ID: A3UX11 Calib Start Date: 05/28/2016 09:12

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/28/2016 11:03

Lab File ID: UXJ5658.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3306	0.3178	0.1000	0.00961	0.0100	-3.9	20.0
1,2-Dichloropropane	Ave	0.2533	0.2303	0.1000	0.00909	0.0100	-9.1	20.0
Dibromomethane	Ave	0.1259	0.1203		0.00955	0.0100	-4.5	20.0
1,4-Dioxane	Lin1		0.0012		0.147	0.200	-26.5	50.0
Dichlorobromomethane	Ave	0.2929	0.2693	0.1500	0.00919	0.0100	-8.1	20.0
2-Chloroethyl vinyl ether	Ave	0.1454	0.1282		0.0176	0.0200	-11.8	20.0
cis-1,3-Dichloropropene	Ave	0.3977	0.3428	0.1500	0.00862	0.0100	-13.8	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1675	0.1470	0.0500	0.0176	0.0200	-12.2	20.0
Toluene	Ave	1.613	1.622	0.4000	0.0101	0.0100	0.5	20.0
trans-1,3-Dichloropropene	Ave	0.4831	0.4473	0.1000	0.00926	0.0100	-7.4	20.0
Ethyl methacrylate	Ave	0.4217	0.3893		0.00923	0.0100	-7.7	20.0
1,1,2-Trichloroethane	Ave	0.2874	0.2810	0.1000	0.00978	0.0100	-2.2	20.0
1,3-Dichloropropane	Ave	0.5237	0.5170		0.00987	0.0100	-1.3	20.0
Tetrachloroethene	Ave	0.3065	0.2963	0.1500	0.00967	0.0100	-3.3	20.0
2-Hexanone	Ave	0.1780	0.1510	0.0500	0.0170	0.0200	-15.2	20.0
Chlorodibromomethane	Ave	0.2976	0.2761		0.00928	0.0100	-7.2	20.0
Ethylene Dibromide	Ave	0.2742	0.2608		0.00951	0.0100	-4.9	20.0
Chlorobenzene	Ave	0.9846	0.9258	0.3000	0.00940	0.0100	-6.0	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3208	0.3015		0.00940	0.0100	-6.0	20.0
Ethylbenzene	Ave	0.5275	0.5163		0.00979	0.0100	-2.1	20.0
m-Xylene & p-Xylene	Ave	0.6409	0.6193		0.00966	0.0100	-3.4	20.0
o-Xylene	Ave	0.6156	0.5720		0.00929	0.0100	-7.1	20.0
Styrene	Ave	1.064	1.009	0.3000	0.00948	0.0100	-5.2	20.0
Bromoform	Ave	0.1575	0.1254	0.1000	0.00796	0.0100	-20.4*	20.0
Isopropylbenzene	Ave	1.413	1.310	0.1000	0.00927	0.0100	-7.3	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6946	0.6708	0.3000	0.00966	0.0100	-3.4	20.0
Bromobenzene	Ave	0.9222	0.9004		0.00976	0.0100	-2.4	20.0
1,2,3-Trichloropropane	Ave	0.2209	0.2233		0.0101	0.0100	1.1	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1635	0.1219		0.00746	0.0100	-25.4*	20.0
N-Propylbenzene	Ave	0.8936	0.9048		0.0101	0.0100	1.3	20.0
2-Chlorotoluene	Ave	0.7923	0.7753		0.00979	0.0100	-2.1	20.0
1,3,5-Trimethylbenzene	Ave	2.484	2.428		0.00978	0.0100	-2.2	20.0
4-Chlorotoluene	Ave	0.8349	0.8245		0.00987	0.0100	-1.3	20.0
tert-Butylbenzene	Ave	2.075	1.943		0.00937	0.0100	-6.3	20.0
1,2,4-Trimethylbenzene	Ave	2.469	2.379		0.00964	0.0100	-3.6	20.0
sec-Butylbenzene	Ave	2.678	2.548		0.00952	0.0100	-4.8	20.0
1,3-Dichlorobenzene	Ave	1.410	1.291	0.6000	0.00915	0.0100	-8.5	20.0
4-Isopropyltoluene	Ave	2.276	2.115		0.00929	0.0100	-7.1	20.0
1,4-Dichlorobenzene	Ave	1.435	1.304	0.5000	0.00908	0.0100	-9.2	20.0
n-Butylbenzene	Ave	1.645	1.507		0.00916	0.0100	-8.4	20.0
1,2-Dichlorobenzene	Ave	1.268	1.114	0.4000	0.00879	0.0100	-12.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Lab Sample ID: CCVIS 240-235310/2 Calibration Date: 06/21/2016 08:52

Instrument ID: A3UX11 Calib Start Date: 05/28/2016 09:12

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/28/2016 11:03

Lab File ID: UXJ5658.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1034	0.0751	0.0500	0.00726	0.0100	-27.4	50.0
1,2,4-Trichlorobenzene	Ave	0.6065	0.5140	0.2000	0.00847	0.0100	-15.3	50.0
Hexachlorobutadiene	Ave	0.2494	0.1959		0.00785	0.0100	-21.5*	20.0
Naphthalene	Ave	1.496	1.240		0.00829	0.0100	-17.1	50.0
1,2,3-Trichlorobenzene	Ave	0.5655	0.4764		0.00842	0.0100	-15.8	20.0
Dibromofluoromethane (Surr)	Ave	0.2231	0.2064		0.0111	0.0120	-7.5	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2501	0.2401		0.0115	0.0120	-4.0	20.0
Toluene-d8 (Surr)	Ave	1.421	1.354		0.0114	0.0120	-4.7	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4299	0.3806		0.0106	0.0120	-11.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Lab Sample ID: ICV 240-232711/9 Calibration Date: 06/01/2016 14:45

Instrument ID: A3UX16 Calib Start Date: 06/01/2016 12:06

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 06/01/2016 14:22

Lab File ID: UXM5577.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2419	0.3305	0.1000	0.0137	0.0100	36.6*	20.0
Chloromethane	Ave	0.2976	0.3513	0.1000	0.0118	0.0100	18.0	20.0
Vinyl chloride	Ave	0.3048	0.3483	0.1000	0.0114	0.0100	14.3	20.0
Butadiene	Ave	0.2947	0.3177		0.0108	0.0100	7.8	30.0
Bromomethane	Qua		0.1145	0.0500	0.0144	0.0100	44.4*	20.0
Chloroethane	Ave	0.1388	0.1683	0.0500	0.0121	0.0100	21.3*	20.0
Dichlorofluoromethane	Qua		0.3588		0.0137	0.0100	37.3*	20.0
Trichlorofluoromethane	Ave	0.1995	0.2430	0.1000	0.0122	0.0100	21.8*	20.0
Ethyl ether	Lin1		0.2244		0.0101	0.0100	1.0	20.0
Acrolein	Ave	0.0346	0.0395		0.0569	0.0500	13.9	50.0
1,1-Dichloroethene	Ave	0.2710	0.2759	0.1000	0.0102	0.0100	1.8	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1905	0.1970	0.0500	0.0103	0.0100	3.4	20.0
Acetone	Lin1		0.0687	0.0100	0.0177	0.0200	-11.7	50.0
Iodomethane	Ave	0.3849	0.4271		0.0111	0.0100	11.0	20.0
Carbon disulfide	Ave	0.8432	0.8967	0.1000	0.0106	0.0100	6.3	20.0
3-Chloro-1-propene	Ave	0.1767	0.1932		0.0109	0.0100	9.3	20.0
Methyl acetate	Ave	0.1583	0.1544	0.1000	0.0488	0.0500	-2.5	20.0
Methylene Chloride	Lin1		0.3051	0.1000	0.0107	0.0100	6.8	50.0
2-Methyl-2-propanol	Ave	0.0187	0.0175		0.0933	0.100	-6.7	50.0
Acrylonitrile	Ave	0.0806	0.0825		0.102	0.100	2.3	20.0
trans-1,2-Dichloroethene	Ave	0.2741	0.2952	0.1000	0.0108	0.0100	7.7	20.0
Methyl tert-butyl ether	Ave	0.7693	0.7901	0.1000	0.0103	0.0100	2.7	20.0
Hexane	Ave	0.0778	0.0778		0.0100	0.0100	-0.0	20.0
1,1-Dichloroethane	Ave	0.4932	0.4950	0.2000	0.0100	0.0100	0.4	20.0
Vinyl acetate	Ave	0.4610	0.5063		0.0110	0.0100	9.8	50.0
2,2-Dichloropropane	Ave	0.3040	0.3134		0.0103	0.0100	3.1	20.0
2-Butanone (MEK)	Ave	0.1039	0.0862	0.0100	0.0166	0.0200	-17.0	20.0
cis-1,2-Dichloroethene	Ave	0.3002	0.3024	0.1000	0.0101	0.0100	0.7	20.0
Chlorobromomethane	Ave	0.1437	0.1388		0.00966	0.0100	-3.4	20.0
Tetrahydrofuran	Ave	0.0667	0.0577		0.0173	0.0200	-13.5	20.0
Chloroform	Ave	0.4559	0.4658	0.2000	0.0102	0.0100	2.2	20.0
1,1,1-Trichloroethane	Ave	0.3496	0.3618	0.1000	0.0103	0.0100	3.5	20.0
Cyclohexane	Ave	0.4582	0.4706	0.1000	0.0103	0.0100	2.7	20.0
1,1-Dichloropropene	Ave	0.3882	0.3966		0.0102	0.0100	2.1	20.0
Carbon tetrachloride	Ave	0.3280	0.3396	0.1000	0.0104	0.0100	3.6	20.0
Isobutyl alcohol	Ave	0.0062	0.0056		0.229	0.250	-8.3	20.0
1,2-Dichloroethane	Ave	0.3581	0.3730	0.1000	0.0104	0.0100	4.1	20.0
Benzene	Ave	1.113	1.149	0.5000	0.0103	0.0100	3.2	20.0
n-Heptane	Lin1		0.1858		0.00996	0.0100	-0.4	20.0
Trichloroethene	Ave	0.2871	0.2971	0.1500	0.0103	0.0100	3.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Lab Sample ID: ICV 240-232711/9 Calibration Date: 06/01/2016 14:45

Instrument ID: A3UX16 Calib Start Date: 06/01/2016 12:06

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 06/01/2016 14:22

Lab File ID: UXM5577.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.4527	0.4581	0.1000	0.0101	0.0100	1.2	20.0
1,2-Dichloropropane	Ave	0.2678	0.2796	0.1000	0.0104	0.0100	4.4	20.0
Dibromomethane	Ave	0.1494	0.1494		0.0100	0.0100	-0.0	20.0
1,4-Dioxane	Ave	0.0021	0.0020		0.188	0.200	-6.2	50.0
Dichlorobromomethane	Ave	0.3531	0.3505	0.1500	0.00993	0.0100	-0.7	20.0
2-Chloroethyl vinyl ether	Ave	0.1448	0.1445		0.00998	0.0100	-0.2	20.0
cis-1,3-Dichloropropene	Ave	0.4504	0.4612	0.1500	0.0102	0.0100	2.4	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2024	0.1946	0.0500	0.0192	0.0200	-3.8	20.0
Toluene	Ave	1.642	1.695	0.4000	0.0103	0.0100	3.2	20.0
trans-1,3-Dichloropropene	Ave	0.5439	0.5423	0.1000	0.00997	0.0100	-0.3	20.0
Ethyl methacrylate	Ave	0.4573	0.4489		0.00982	0.0100	-1.8	20.0
1,1,2-Trichloroethane	Ave	0.2860	0.2886	0.1000	0.0101	0.0100	0.9	20.0
1,3-Dichloropropane	Ave	0.5367	0.5305		0.00988	0.0100	-1.2	20.0
Tetrachloroethene	Ave	0.2970	0.3033	0.1500	0.0102	0.0100	2.1	20.0
2-Hexanone	Ave	0.2098	0.1810	0.0500	0.0173	0.0200	-13.7	20.0
Chlorodibromomethane	Ave	0.3538	0.3434		0.00971	0.0100	-2.9	20.0
Ethylene Dibromide	Ave	0.2906	0.2993		0.0103	0.0100	3.0	20.0
Chlorobenzene	Ave	1.042	1.058	0.3000	0.0102	0.0100	1.5	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3717	0.3698		0.00995	0.0100	-0.5	20.0
Ethylbenzene	Ave	0.5737	0.5909		0.0103	0.0100	3.0	20.0
m-Xylene & p-Xylene	Ave	0.7167	0.7377		0.0103	0.0100	2.9	20.0
o-Xylene	Ave	0.7199	0.7248		0.0101	0.0100	0.7	20.0
Styrene	Ave	1.177	1.231	0.3000	0.0105	0.0100	4.6	20.0
Bromoform	Ave	0.1935	0.2144	0.1000	0.0111	0.0100	10.8	20.0
Isopropylbenzene	Ave	1.785	1.881	0.1000	0.0105	0.0100	5.4	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6963	0.6931	0.3000	0.00995	0.0100	-0.5	20.0
Bromobenzene	Ave	0.7820	0.7968		0.0102	0.0100	1.9	20.0
1,2,3-Trichloropropane	Lin1		0.2166		0.0102	0.0100	2.5	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1991	0.1927		0.00968	0.0100	-3.2	20.0
N-Propylbenzene	Ave	0.9385	0.9345		0.00996	0.0100	-0.4	20.0
2-Chlorotoluene	Ave	0.8045	0.7957		0.00989	0.0100	-1.1	20.0
1,3,5-Trimethylbenzene	Ave	2.848	2.896		0.0102	0.0100	1.7	20.0
4-Chlorotoluene	Ave	0.8281	0.8207		0.00991	0.0100	-0.9	20.0
tert-Butylbenzene	Ave	2.462	2.517		0.0102	0.0100	2.2	20.0
1,2,4-Trimethylbenzene	Ave	2.977	2.954		0.00992	0.0100	-0.8	20.0
sec-Butylbenzene	Ave	3.385	3.413		0.0101	0.0100	0.8	20.0
1,3-Dichlorobenzene	Ave	1.551	1.549	0.6000	0.00999	0.0100	-0.0	20.0
4-Isopropyltoluene	Ave	2.944	3.021		0.0103	0.0100	2.6	20.0
1,4-Dichlorobenzene	Ave	1.558	1.570	0.5000	0.0101	0.0100	0.8	20.0
n-Butylbenzene	Ave	2.523	2.525		0.0100	0.0100	0.0	20.0
1,2-Dichlorobenzene	Ave	1.479	1.513	0.4000	0.0102	0.0100	2.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Lab Sample ID: ICV 240-232711/9 Calibration Date: 06/01/2016 14:45

Instrument ID: A3UX16 Calib Start Date: 06/01/2016 12:06

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 06/01/2016 14:22

Lab File ID: UXM5577.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1603	0.1597	0.0500	0.00996	0.0100	-0.4	50.0
1,2,4-Trichlorobenzene	Ave	0.9684	0.9683	0.2000	0.0100	0.0100	-0.0	50.0
Hexachlorobutadiene	Ave	0.3429	0.3303		0.00963	0.0100	-3.7	20.0
Naphthalene	Ave	2.483	2.405		0.00969	0.0100	-3.1	50.0
1,2,3-Trichlorobenzene	Ave	0.8687	0.8247		0.00949	0.0100	-5.1	20.0
Dibromofluoromethane (Surr)	Ave	0.2344	0.2353		0.0100	0.0100	0.4	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2836	0.2858		0.0101	0.0100	0.8	20.0
Toluene-d8 (Surr)	Ave	1.348	1.356		0.0101	0.0100	0.6	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5111	0.5095		0.00997	0.0100	-0.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Lab Sample ID: ICV 240-232711/16 Calibration Date: 06/01/2016 17:24

Instrument ID: A3UX16 Calib Start Date: 06/01/2016 15:08

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 06/01/2016 17:02

Lab File ID: UXM5584.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0228	0.0233		0.102	0.100	2.0	20.0
Isopropyl ether	Ave	0.2496	0.2758		0.0110	0.0100	10.5	20.0
2-Chloro-1,3-butadiene	Ave	0.4316	0.4683		0.0109	0.0100	8.5	20.0
Tert-butyl ethyl ether	Ave	0.8440	0.9047		0.0107	0.0100	7.2	20.0
Propionitrile	Ave	0.0286	0.0300		0.105	0.100	4.9	20.0
Ethyl acetate	Ave	0.1684	0.1820		0.0216	0.0200	8.1	50.0
Methacrylonitrile	Ave	0.1290	0.1351		0.105	0.100	4.7	20.0
Tert-amyl methyl ether	Ave	0.7756	0.8251		0.0106	0.0100	6.4	20.0
n-Butanol	Ave	0.0049	0.0047		0.240	0.250	-4.0	20.0
Methyl methacrylate	Ave	0.1806	0.1852		0.0205	0.0200	2.5	20.0
2-Nitropropane	Ave	0.0636	0.0608		0.0191	0.0200	-4.4	20.0
1-Chlorohexane	Ave	0.4765	0.4839		0.0102	0.0100	1.6	20.0
Cyclohexanone	Lin1		0.0159		0.0945	0.100	-5.5	20.0
1,2,3-Trimethylbenzene	Ave	2.977	3.064		0.0103	0.0100	2.9	20.0
1,3,5-Trichlorobenzene	Ave	0.996	1.031		0.0104	0.0100	3.5	20.0
2-Methylnaphthalene	Ave	1.416	1.326		0.0187	0.0200	-6.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Lab Sample ID: CCVIS 240-235221/2 Calibration Date: 06/20/2016 12:47

Instrument ID: A3UX16 Calib Start Date: 06/01/2016 12:06

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 06/01/2016 14:22

Lab File ID: UXM6060.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2419	0.3045	0.1000	0.0126	0.0100	25.9*	20.0
Chloromethane	Ave	0.2976	0.3690	0.1000	0.0124	0.0100	24.0*	20.0
Vinyl chloride	Ave	0.3048	0.3498	0.1000	0.0115	0.0100	14.8	20.0
Butadiene	Ave	0.2947	0.3436		0.0117	0.0100	16.6	20.0
Bromomethane	Qua		0.0938	0.0500	0.0115	0.0100	15.4	20.0
Chloroethane	Ave	0.1388	0.1270	0.0500	0.00915	0.0100	-8.5	20.0
Dichlorofluoromethane	Qua		0.3349		0.0128	0.0100	27.7*	20.0
Trichlorofluoromethane	Ave	0.1995	0.2550	0.1000	0.0128	0.0100	27.8*	20.0
Ethyl ether	Lin1		0.2092		0.00939	0.0100	-6.1	20.0
Acrolein	Ave	0.0346	0.0256		0.0369	0.0500	-26.1	50.0
1,1-Dichloroethene	Ave	0.2710	0.2533	0.1000	0.00935	0.0100	-6.5	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1905	0.1799	0.0500	0.00944	0.0100	-5.6	20.0
Acetone	Lin1		0.0705	0.0100	0.0182	0.0200	-9.1	50.0
Iodomethane	Ave	0.3849	0.3976		0.0103	0.0100	3.3	20.0
Carbon disulfide	Ave	0.8432	0.8429	0.1000	0.0100	0.0100	-0.0	20.0
3-Chloro-1-propene	Ave	0.1767	0.1561		0.00883	0.0100	-11.7	20.0
Methyl acetate	Ave	0.1583	0.1373	0.1000	0.0434	0.0500	-13.2	20.0
Methylene Chloride	Lin1		0.2847	0.1000	0.00989	0.0100	-1.1	50.0
2-Methyl-2-propanol	Ave	0.0187	0.0159		0.0848	0.100	-15.2	50.0
Acrylonitrile	Ave	0.0806	0.0703		0.0872	0.100	-12.8	20.0
Methyl tert-butyl ether	Ave	0.7693	0.7135	0.1000	0.00927	0.0100	-7.3	20.0
trans-1,2-Dichloroethene	Ave	0.2741	0.2731	0.1000	0.00996	0.0100	-0.4	20.0
Hexane	Ave	0.0778	0.0763		0.00980	0.0100	-2.0	20.0
1,1-Dichloroethane	Ave	0.4932	0.5040	0.2000	0.0102	0.0100	2.2	20.0
Vinyl acetate	Ave	0.4610	0.4171		0.00905	0.0100	-9.5	50.0
2,2-Dichloropropane	Ave	0.3040	0.3496		0.0115	0.0100	15.0	20.0
2-Butanone (MEK)	Ave	0.1039	0.0871	0.0100	0.0168	0.0200	-16.2	20.0
cis-1,2-Dichloroethene	Ave	0.3002	0.2990	0.1000	0.00996	0.0100	-0.4	20.0
Chlorobromomethane	Ave	0.1437	0.1277		0.00889	0.0100	-11.1	20.0
Tetrahydrofuran	Ave	0.0667	0.0520		0.0156	0.0200	-22.0*	20.0
Chloroform	Ave	0.4559	0.4494	0.2000	0.00986	0.0100	-1.4	20.0
1,1,1-Trichloroethane	Ave	0.3496	0.3703	0.1000	0.0106	0.0100	5.9	20.0
Cyclohexane	Ave	0.4582	0.4711	0.1000	0.0103	0.0100	2.8	20.0
1,1-Dichloropropene	Ave	0.3882	0.3864		0.00995	0.0100	-0.5	20.0
Carbon tetrachloride	Ave	0.3280	0.3094	0.1000	0.00943	0.0100	-5.7	20.0
Isobutyl alcohol	Ave	0.0062	0.0051		0.208	0.250	-16.7	20.0
1,2-Dichloroethane	Ave	0.3581	0.3429	0.1000	0.00957	0.0100	-4.3	20.0
Benzene	Ave	1.113	1.120	0.5000	0.0101	0.0100	0.7	20.0
n-Heptane	Lin1		0.1848		0.00990	0.0100	-1.0	20.0
Trichloroethene	Ave	0.2871	0.2798	0.1500	0.00974	0.0100	-2.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Lab Sample ID: CCVIS 240-235221/2 Calibration Date: 06/20/2016 12:47

Instrument ID: A3UX16 Calib Start Date: 06/01/2016 12:06

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 06/01/2016 14:22

Lab File ID: UXM6060.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.4527	0.4490	0.1000	0.00992	0.0100	-0.8	20.0
1,2-Dichloropropane	Ave	0.2678	0.2618	0.1000	0.00978	0.0100	-2.2	20.0
Dibromomethane	Ave	0.1494	0.1352		0.00905	0.0100	-9.5	20.0
1,4-Dioxane	Ave	0.0021	0.0018		0.170	0.200	-15.1	50.0
Dichlorobromomethane	Ave	0.3531	0.3198	0.1500	0.00906	0.0100	-9.4	20.0
2-Chloroethyl vinyl ether	Ave	0.1448	0.1225		0.0169	0.0200	-15.4	20.0
cis-1,3-Dichloropropene	Ave	0.4504	0.4085	0.1500	0.00907	0.0100	-9.3	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2024	0.1752	0.0500	0.0173	0.0200	-13.4	20.0
Toluene	Ave	1.642	1.674	0.4000	0.0102	0.0100	2.0	20.0
trans-1,3-Dichloropropene	Ave	0.5439	0.4881	0.1000	0.00897	0.0100	-10.3	20.0
Ethyl methacrylate	Ave	0.4573	0.3963		0.00867	0.0100	-13.3	20.0
1,1,2-Trichloroethane	Ave	0.2860	0.2732	0.1000	0.00955	0.0100	-4.5	20.0
1,3-Dichloropropane	Ave	0.5367	0.5078		0.00946	0.0100	-5.4	20.0
Tetrachloroethene	Ave	0.2970	0.2945	0.1500	0.00992	0.0100	-0.8	20.0
2-Hexanone	Ave	0.2098	0.1803	0.0500	0.0172	0.0200	-14.1	20.0
Chlorodibromomethane	Ave	0.3538	0.3004		0.00849	0.0100	-15.1	20.0
Ethylene Dibromide	Ave	0.2906	0.2608		0.00897	0.0100	-10.3	20.0
Chlorobenzene	Ave	1.042	1.027	0.3000	0.00986	0.0100	-1.4	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3717	0.3528		0.00949	0.0100	-5.1	20.0
Ethylbenzene	Ave	0.5737	0.5706		0.00995	0.0100	-0.5	20.0
m-Xylene & p-Xylene	Ave	0.7167	0.7060		0.00985	0.0100	-1.5	20.0
o-Xylene	Ave	0.7199	0.7289		0.0101	0.0100	1.3	20.0
Styrene	Ave	1.177	1.156	0.3000	0.00982	0.0100	-1.8	20.0
Bromoform	Ave	0.1935	0.1556	0.1000	0.00804	0.0100	-19.6	20.0
Isopropylbenzene	Ave	1.785	1.817	0.1000	0.0102	0.0100	1.8	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6963	0.6338	0.3000	0.00910	0.0100	-9.0	20.0
Bromobenzene	Ave	0.7820	0.7591		0.00971	0.0100	-2.9	20.0
1,2,3-Trichloropropane	Lin1		0.1878		0.00883	0.0100	-11.7	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1991	0.1270		0.00638	0.0100	-36.2*	20.0
N-Propylbenzene	Ave	0.9385	0.9346		0.00996	0.0100	-0.4	20.0
2-Chlorotoluene	Ave	0.8045	0.7893		0.00981	0.0100	-1.9	20.0
1,3,5-Trimethylbenzene	Ave	2.848	2.835		0.00996	0.0100	-0.4	20.0
4-Chlorotoluene	Ave	0.8281	0.8238		0.00995	0.0100	-0.5	20.0
tert-Butylbenzene	Ave	2.462	2.541		0.0103	0.0100	3.2	20.0
1,2,4-Trimethylbenzene	Ave	2.977	2.990		0.0100	0.0100	0.4	20.0
sec-Butylbenzene	Ave	3.385	3.470		0.0103	0.0100	2.5	20.0
1,3-Dichlorobenzene	Ave	1.551	1.530	0.6000	0.00987	0.0100	-1.3	20.0
4-Isopropyltoluene	Ave	2.944	3.001		0.0102	0.0100	1.9	20.0
1,4-Dichlorobenzene	Ave	1.558	1.573	0.5000	0.0101	0.0100	1.0	20.0
n-Butylbenzene	Ave	2.523	2.544		0.0101	0.0100	0.8	20.0
1,2-Dichlorobenzene	Ave	1.479	1.484	0.4000	0.0100	0.0100	0.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Lab Sample ID: CCVIS 240-235221/2 Calibration Date: 06/20/2016 12:47

Instrument ID: A3UX16 Calib Start Date: 06/01/2016 12:06

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 06/01/2016 14:22

Lab File ID: UXM6060.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1603	0.1143	0.0500	0.00713	0.0100	-28.7	50.0
1,2,4-Trichlorobenzene	Ave	0.9684	0.9206	0.2000	0.00951	0.0100	-4.9	50.0
Hexachlorobutadiene	Ave	0.3429	0.3131		0.00913	0.0100	-8.7	20.0
Naphthalene	Ave	2.483	2.079		0.00838	0.0100	-16.2	50.0
1,2,3-Trichlorobenzene	Ave	0.8687	0.8010		0.00922	0.0100	-7.8	20.0
Dibromofluoromethane (Surr)	Ave	0.2344	0.2242		0.00957	0.0100	-4.3	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2836	0.2682		0.00946	0.0100	-5.4	20.0
Toluene-d8 (Surr)	Ave	1.348	1.399		0.0104	0.0100	3.8	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5111	0.5053		0.00989	0.0100	-1.1	20.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Lab File ID: UXJ5605.D Lab Sample ID: MB 240-235154/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX11 Date Analyzed: 06/20/2016 11:05

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-235154/4	UXJ5602.D	06/20/2016 09:57
MRC-SW5A1-061316	240-65994-1	UXJ5610.D	06/20/2016 13:13
MRC-SW5A2-061316	240-65994-2	UXJ5611.D	06/20/2016 13:35
MRC-SW5B-061316	240-65994-3	UXJ5612.D	06/20/2016 13:57
MRC-SW6A-061316	240-65994-4	UXJ5613.D	06/20/2016 14:20
MRC-SW6B-061316	240-65994-5	UXJ5614.D	06/20/2016 14:43
MRC-SW7A-061316	240-65994-6	UXJ5615.D	06/20/2016 15:05
MRC-SW7B-061316	240-65994-7	UXJ5616.D	06/20/2016 15:27
MRC-SW8A-061316	240-65994-8	UXJ5617.D	06/20/2016 15:49
MRC-SW8B-061316	240-65994-9	UXJ5618.D	06/20/2016 16:12
MRC-SW9A-061316	240-65994-10	UXJ5619.D	06/20/2016 16:34
MRC-SW9B-061316	240-65994-11	UXJ5620.D	06/20/2016 16:57
	240-65995-B-5 MS	UXJ5626.D	06/20/2016 19:12
	240-65995-B-5 MSD	UXJ5627.D	06/20/2016 19:35

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-235154/6

Matrix: Water | Lab File ID: UXJ5605.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 11:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235154 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.44
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.24
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.30
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.45
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.32
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.82
106-93-4	Ethylene Dibromide	1.0	U	1.0	0.32
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.25
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.23
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.25
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.19
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.27
78-93-3	2-Butanone (MEK)	10	U	10	0.53
591-78-6	2-Hexanone	10	U	10	0.48
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	0.99
67-64-1	Acetone	10	U	10	0.94
71-43-2	Benzene	1.0	U	1.0	0.35
75-27-4	Dichlorobromomethane	1.0	U	1.0	0.29
75-25-2	Bromoform	1.0	U	1.0	0.56
74-83-9	Bromomethane	1.0	U	1.0	0.44
75-15-0	Carbon disulfide	1.0	U	1.0	0.38
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.43
108-90-7	Chlorobenzene	1.0	U	1.0	0.25
75-00-3	Chloroethane	1.0	U	1.0	0.32
67-66-3	Chloroform	1.0	U	1.0	0.25
74-87-3	Chloromethane	1.0	U	1.0	0.44
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.26
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.46
110-82-7	Cyclohexane	1.0	U	1.0	0.45
124-48-1	Chlorodibromomethane	1.0	U	1.0	0.43
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.32
100-41-4	Ethylbenzene	1.0	U	1.0	0.25
98-82-8	Isopropylbenzene	1.0	U	1.0	0.35

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-235154/6

Matrix: Water | Lab File ID: UXJ5605.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 11:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235154 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	10	U	10	2.3
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.20
108-87-2	Methylcyclohexane	1.0	U	1.0	0.43
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
100-42-5	Styrene	1.0	U	1.0	0.45
127-18-4	Tetrachloroethene	1.0	U	1.0	0.31
108-88-3	Toluene	1.0	U	1.0	0.23
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.30
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.56
79-01-6	Trichloroethene	1.0	U	1.0	0.22
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.49
75-01-4	Vinyl chloride	1.0	U	1.0	0.29
1330-20-7	Xylenes, Total	2.0	U	2.0	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	92		80-120
1868-53-7	Dibromofluoromethane (Surr)	91		79-120
460-00-4	4-Bromofluorobenzene (Surr)	88		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		78-125

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Lab File ID: UXM6063.D Lab Sample ID: MB 240-235221/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX16 Date Analyzed: 06/20/2016 13:55

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-235221/4	UXM6059.D	06/20/2016 12:25
	240-65962-B-1 MS	UXM6071.D	06/20/2016 16:56
	240-65962-B-1 MSD	UXM6072.D	06/20/2016 17:19
MRC-SWFB-061316	240-65996-1	UXM6074.D	06/20/2016 18:04
MRC-SW1A-061316	240-65996-2	UXM6075.D	06/20/2016 18:27
MRC-SW2A-061316	240-65996-3	UXM6076.D	06/20/2016 18:50
TB-061316	240-65996-4	UXM6077.D	06/20/2016 19:12
MRC-SWDUP2-061316	240-65996-5	UXM6078.D	06/20/2016 19:35

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-235221/6

Matrix: Water | Lab File ID: UXM6063.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 13:55

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235221 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.44
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.24
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.30
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.45
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.32
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.82
106-93-4	Ethylene Dibromide	1.0	U	1.0	0.32
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.25
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.23
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.25
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.19
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.27
78-93-3	2-Butanone (MEK)	10	U	10	0.53
591-78-6	2-Hexanone	10	U	10	0.48
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	0.99
67-64-1	Acetone	10	U	10	0.94
71-43-2	Benzene	1.0	U	1.0	0.35
75-27-4	Dichlorobromomethane	1.0	U	1.0	0.29
75-25-2	Bromoform	1.0	U	1.0	0.56
74-83-9	Bromomethane	1.0	U	1.0	0.44
75-15-0	Carbon disulfide	1.0	U	1.0	0.38
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.43
108-90-7	Chlorobenzene	1.0	U	1.0	0.25
75-00-3	Chloroethane	1.0	U	1.0	0.32
67-66-3	Chloroform	1.0	U	1.0	0.25
74-87-3	Chloromethane	1.0	U	1.0	0.44
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.26
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.46
110-82-7	Cyclohexane	1.0	U	1.0	0.45
124-48-1	Chlorodibromomethane	1.0	U	1.0	0.43
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.32
100-41-4	Ethylbenzene	1.0	U	1.0	0.25
98-82-8	Isopropylbenzene	1.0	U	1.0	0.35

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-235221/6

Matrix: Water | Lab File ID: UXM6063.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 13:55

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235221 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	10	U	10	2.3
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.20
108-87-2	Methylcyclohexane	1.0	U	1.0	0.43
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
100-42-5	Styrene	1.0	U	1.0	0.45
127-18-4	Tetrachloroethene	1.0	U	1.0	0.31
108-88-3	Toluene	1.0	U	1.0	0.23
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.30
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.56
79-01-6	Trichloroethene	1.0	U	1.0	0.22
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.49
75-01-4	Vinyl chloride	1.0	U	1.0	0.29
1330-20-7	Xylenes, Total	2.0	U	2.0	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	103		80-120
1868-53-7	Dibromofluoromethane (Surr)	95		79-120
460-00-4	4-Bromofluorobenzene (Surr)	97		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		78-125

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Lab File ID: UXJ5663.D Lab Sample ID: MB 240-235310/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX11 Date Analyzed: 06/21/2016 11:01

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-235310/4	UXJ5661.D	06/21/2016 10:17
MRC-SW7B-061316	240-65994-7	UXJ5670.D	06/21/2016 13:59

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-235310/6

Matrix: Water | Lab File ID: UXJ5663.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 06/21/2016 11:01

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235310 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.44
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.24
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.30
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.45
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.32
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.82
106-93-4	Ethylene Dibromide	1.0	U	1.0	0.32
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.25
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.23
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.25
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.19
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.27
78-93-3	2-Butanone (MEK)	10	U	10	0.53
591-78-6	2-Hexanone	10	U	10	0.48
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U	10	0.99
67-64-1	Acetone	10	U	10	0.94
71-43-2	Benzene	1.0	U	1.0	0.35
75-27-4	Dichlorobromomethane	1.0	U	1.0	0.29
75-25-2	Bromoform	1.0	U	1.0	0.56
74-83-9	Bromomethane	1.0	U	1.0	0.44
75-15-0	Carbon disulfide	1.0	U	1.0	0.38
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.43
108-90-7	Chlorobenzene	1.0	U	1.0	0.25
75-00-3	Chloroethane	1.0	U	1.0	0.32
67-66-3	Chloroform	1.0	U	1.0	0.25
74-87-3	Chloromethane	1.0	U	1.0	0.44
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.26
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.46
110-82-7	Cyclohexane	1.0	U	1.0	0.45
124-48-1	Chlorodibromomethane	1.0	U	1.0	0.43
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.32
100-41-4	Ethylbenzene	1.0	U	1.0	0.25
98-82-8	Isopropylbenzene	1.0	U	1.0	0.35

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-235310/6

Matrix: Water | Lab File ID: UXJ5663.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 06/21/2016 11:01

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235310 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	10	U	10	2.3
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.20
108-87-2	Methylcyclohexane	1.0	U	1.0	0.43
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
100-42-5	Styrene	1.0	U	1.0	0.45
127-18-4	Tetrachloroethene	1.0	U	1.0	0.31
108-88-3	Toluene	1.0	U	1.0	0.23
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.30
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.56
79-01-6	Trichloroethene	1.0	U	1.0	0.22
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.49
75-01-4	Vinyl chloride	1.0	U	1.0	0.29
1330-20-7	Xylenes, Total	2.0	U	2.0	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	109		80-120
1868-53-7	Dibromofluoromethane (Surr)	115		79-120
460-00-4	4-Bromofluorobenzene (Surr)	104		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	118		78-125

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
MRC-SW5A1-061316	240-65994-1	92	96	90	86
MRC-SW5A2-061316	240-65994-2	93	97	94	89
MRC-SW5B-061316	240-65994-3	93	95	90	85
MRC-SW6A-061316	240-65994-4	93	96	91	86
MRC-SW6B-061316	240-65994-5	113	115	110	104
MRC-SW7A-061316	240-65994-6	91	96	89	83
MRC-SW7B-061316	240-65994-7	91	93	89	84
MRC-SW7B-061316	240-65994-7	97	100	95	89
MRC-SW8A-061316	240-65994-8	96	99	94	89
MRC-SW8B-061316	240-65994-9	91	95	91	84
MRC-SW9A-061316	240-65994-10	94	97	94	87
MRC-SW9B-061316	240-65994-11	93	97	91	86
MRC-SWFB-061316	240-65996-1	99	95	104	99
MRC-SW1A-061316	240-65996-2	94	96	104	99
MRC-SW2A-061316	240-65996-3	91	93	102	97
TB-061316	240-65996-4	97	97	104	100
MRC-SWDUP2-061316	240-65996-5	92	94	100	98
	MB 240-235154/6	91	94	92	88
	MB 240-235221/6	95	94	103	97
	MB 240-235310/6	115	118	109	104
	LCS 240-235154/4	97	101	96	90
	LCS 240-235221/4	93	92	102	99
	LCS 240-235310/4	94	101	95	88
	240-65995-B-5 MS	98	104	96	92
	240-65962-B-1 MS	95	92	104	98
	240-65995-B-5 MSD	97	102	96	92
	240-65962-B-1 MSD	95	94	105	98

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	79-120
DCA = 1,2-Dichloroethane-d4 (Surr)	78-125
TOL = Toluene-d8 (Surr)	80-120
BFB = 4-Bromofluorobenzene (Surr)	61-120

Column to be used to flag recovery values

FORM II 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ5602.D

Lab ID: LCS 240-235154/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1-Trichloroethane	10.0	11.0	110	77-123	
1,1,2,2-Tetrachloroethane	10.0	11.9	119	71-123	
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	7.70	77	67-138	
1,1,2-Trichloroethane	10.0	11.0	110	80-120	
1,1-Dichloroethane	10.0	11.2	112	79-125	
1,1-Dichloroethene	10.0	11.8	118	76-124	
1,2,4-Trichlorobenzene	10.0	10.5	105	61-120	
1,2-Dibromo-3-Chloropropane	10.0	9.15	91	50-132	
Ethylene Dibromide	10.0	11.2	112	80-120	
1,2-Dichlorobenzene	10.0	10.0	100	79-120	
1,2-Dichloroethane	10.0	11.9	119	80-120	
1,2-Dichloropropane	10.0	10.7	107	78-124	
1,3-Dichlorobenzene	10.0	10.3	103	79-120	
1,4-Dichlorobenzene	10.0	10.6	106	79-120	
2-Butanone (MEK)	20.0	19.3	97	56-138	
2-Hexanone	20.0	20.1	101	55-141	
4-Methyl-2-pentanone (MIBK)	20.0	20.4	102	64-135	
Acetone	20.0	18.0	90	34-148	
Benzene	10.0	11.0	110	80-120	
Dichlorobromomethane	10.0	10.5	105	80-120	
Bromoform	10.0	10.1	101	56-122	
Bromomethane	10.0	7.40	74	38-132	
Carbon disulfide	10.0	13.2	132	65-144	
Carbon tetrachloride	10.0	10.7	107	77-131	
Chlorobenzene	10.0	10.5	105	80-120	
Chloroethane	10.0	8.56	86	36-126	
Chloroform	10.0	11.1	111	80-120	
Chloromethane	10.0	11.6	116	48-133	
cis-1,2-Dichloroethene	10.0	10.9	109	79-120	
cis-1,3-Dichloropropene	10.0	9.91	99	74-126	
Cyclohexane	10.0	8.41	84	60-140	
Chlorodibromomethane	10.0	10.5	105	74-120	
Dichlorodifluoromethane	10.0	6.14	61	23-136	
Ethylbenzene	10.0	10.7	107	80-120	
Isopropylbenzene	10.0	10.4	104	77-120	
Methyl acetate	50.0	54.0	108	67-131	
Methyl tert-butyl ether	10.0	11.1	111	69-121	
Methylcyclohexane	10.0	7.51	75	61-134	
Methylene Chloride	10.0	13.1	131	77-129	*
Styrene	10.0	10.6	106	76-122	
Tetrachloroethene	10.0	9.93	99	78-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ5602.D

Lab ID: LCS 240-235154/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Toluene	10.0	11.2	112	80-120	
trans-1,2-Dichloroethene	10.0	11.6	116	80-124	
trans-1,3-Dichloropropene	10.0	10.3	103	75-131	
Trichloroethene	10.0	10.7	107	80-121	
Trichlorofluoromethane	10.0	9.13	91	61-133	
Vinyl chloride	10.0	9.48	95	52-121	
Xylenes, Total	20.0	21.1	106	80-120	
m-Xylene & p-Xylene	10.0	10.7	107	80-120	
o-Xylene	10.0	10.4	104	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM6059.D

Lab ID: LCS 240-235221/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1-Trichloroethane	10.0	9.62	96	77-123	
1,1,2,2-Tetrachloroethane	10.0	8.24	82	71-123	
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	8.44	84	67-138	
1,1,2-Trichloroethane	10.0	8.73	87	80-120	
1,1-Dichloroethane	10.0	9.16	92	79-125	
1,1-Dichloroethene	10.0	8.38	84	76-124	
1,2,4-Trichlorobenzene	10.0	8.52	85	61-120	
1,2-Dibromo-3-Chloropropane	10.0	6.30	63	50-132	
Ethylene Dibromide	10.0	8.44	84	80-120	
1,2-Dichlorobenzene	10.0	9.04	90	79-120	
1,2-Dichloroethane	10.0	8.84	88	80-120	
1,2-Dichloropropane	10.0	9.24	92	78-124	
1,3-Dichlorobenzene	10.0	9.07	91	79-120	
1,4-Dichlorobenzene	10.0	9.17	92	79-120	
2-Butanone (MEK)	20.0	14.5	72	56-138	
2-Hexanone	20.0	15.0	75	55-141	
4-Methyl-2-pentanone (MIBK)	20.0	15.2	76	64-135	
Acetone	20.0	12.6	63	34-148	
Benzene	10.0	9.25	93	80-120	
Dichlorobromomethane	10.0	8.58	86	80-120	
Bromoform	10.0	8.16	82	56-122	
Bromomethane	10.0	8.13	81	38-132	
Carbon disulfide	10.0	8.82	88	65-144	
Carbon tetrachloride	10.0	8.99	90	77-131	
Chlorobenzene	10.0	9.21	92	80-120	
Chloroethane	10.0	6.91	69	36-126	
Chloroform	10.0	9.23	92	80-120	
Chloromethane	10.0	9.86	99	48-133	
cis-1,2-Dichloroethene	10.0	9.12	91	79-120	
cis-1,3-Dichloropropene	10.0	8.58	86	74-126	
Cyclohexane	10.0	9.27	93	60-140	
Chlorodibromomethane	10.0	7.92	79	74-120	
Dichlorodifluoromethane	10.0	8.77	88	23-136	
Ethylbenzene	10.0	9.26	93	80-120	
Isopropylbenzene	10.0	9.53	95	77-120	
Methyl acetate	50.0	38.4	77	67-131	
Methyl tert-butyl ether	10.0	8.59	86	69-121	
Methylcyclohexane	10.0	9.02	90	61-134	
Methylene Chloride	10.0	9.66	97	77-129	
Styrene	10.0	9.23	92	76-122	
Tetrachloroethene	10.0	9.24	92	78-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM6059.D

Lab ID: LCS 240-235221/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Toluene	10.0	9.54	95	80-120	
trans-1,2-Dichloroethene	10.0	9.31	93	80-124	
trans-1,3-Dichloropropene	10.0	8.30	83	75-131	
Trichloroethene	10.0	9.09	91	80-121	
Trichlorofluoromethane	10.0	9.97	100	61-133	
Vinyl chloride	10.0	9.23	92	52-121	
Xylenes, Total	20.0	18.4	92	80-120	
m-Xylene & p-Xylene	10.0	9.22	92	80-120	
o-Xylene	10.0	9.21	92	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ5661.D

Lab ID: LCS 240-235310/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1-Trichloroethane	10.0	9.86	99	77-123	
1,1,2,2-Tetrachloroethane	10.0	10.1	101	71-123	
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	10.4	104	67-138	
1,1,2-Trichloroethane	10.0	9.96	100	80-120	
1,1-Dichloroethane	10.0	9.66	97	79-125	
1,1-Dichloroethene	10.0	10.6	106	76-124	
1,2,4-Trichlorobenzene	10.0	8.42	84	61-120	
1,2-Dibromo-3-Chloropropane	10.0	7.86	79	50-132	
Ethylene Dibromide	10.0	9.99	100	80-120	
1,2-Dichlorobenzene	10.0	8.92	89	79-120	
1,2-Dichloroethane	10.0	10.6	106	80-120	
1,2-Dichloropropane	10.0	9.38	94	78-124	
1,3-Dichlorobenzene	10.0	9.01	90	79-120	
1,4-Dichlorobenzene	10.0	9.38	94	79-120	
2-Butanone (MEK)	20.0	17.8	89	56-138	
2-Hexanone	20.0	17.7	88	55-141	
4-Methyl-2-pentanone (MIBK)	20.0	18.4	92	64-135	
Acetone	20.0	18.5	92	34-148	
Benzene	10.0	9.73	97	80-120	
Dichlorobromomethane	10.0	9.27	93	80-120	
Bromoform	10.0	9.53	95	56-122	
Bromomethane	10.0	6.15	61	38-132	
Carbon disulfide	10.0	11.3	113	65-144	
Carbon tetrachloride	10.0	10.1	101	77-131	
Chlorobenzene	10.0	9.29	93	80-120	
Chloroethane	10.0	7.57	76	36-126	
Chloroform	10.0	9.91	99	80-120	
Chloromethane	10.0	10.6	106	48-133	
cis-1,2-Dichloroethene	10.0	9.81	98	79-120	
cis-1,3-Dichloropropene	10.0	8.80	88	74-126	
Cyclohexane	10.0	10.7	107	60-140	
Chlorodibromomethane	10.0	9.54	95	74-120	
Dichlorodifluoromethane	10.0	10.4	104	23-136	
Ethylbenzene	10.0	9.52	95	80-120	
Isopropylbenzene	10.0	9.33	93	77-120	
Methyl acetate	50.0	49.1	98	67-131	
Methyl tert-butyl ether	10.0	9.87	99	69-121	
Methylcyclohexane	10.0	9.69	97	61-134	
Methylene Chloride	10.0	11.1	111	77-129	
Styrene	10.0	9.39	94	76-122	
Tetrachloroethene	10.0	9.24	92	78-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ5661.D

Lab ID: LCS 240-235310/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Toluene	10.0	9.97	100	80-120	
trans-1,2-Dichloroethene	10.0	10.2	102	80-124	
trans-1,3-Dichloropropene	10.0	9.17	92	75-131	
Trichloroethene	10.0	9.45	95	80-121	
Trichlorofluoromethane	10.0	12.6	126	61-133	
Vinyl chloride	10.0	9.75	98	52-121	
Xylenes, Total	20.0	18.4	92	80-120	
m-Xylene & p-Xylene	10.0	9.38	94	80-120	
o-Xylene	10.0	9.03	90	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ5626.D

Lab ID: 240-65995-B-5 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1-Trichloroethane	1670	170 U	1810	109	69-122	
1,1,2,2-Tetrachloroethane	1670	170 U	1860	112	61-130	
1,1,2-Trichloro-1,2,2-trifluoroethane	1670	170 U	1030	62	44-140	
1,1,2-Trichloroethane	1670	170 U	1820	109	72-125	
1,1-Dichloroethane	1670	170 U	1830	110	73-124	
1,1-Dichloroethene	1670	170 U	2000	120	67-124	
1,2,4-Trichlorobenzene	1670	170 U	1640	98	48-120	
1,2-Dibromo-3-Chloropropane	1670	330 U	1380	83	42-130	
Ethylene Dibromide	1670	170 U	1830	110	69-125	
1,2-Dichlorobenzene	1670	170 U	1620	97	67-118	
1,2-Dichloroethane	1670	170 U	1980	119	74-125	
1,2-Dichloropropane	1670	170 U	1760	106	73-122	
1,3-Dichlorobenzene	1670	170 U	1650	99	65-120	
1,4-Dichlorobenzene	1670	170 U	1650	99	66-120	
2-Butanone (MEK)	3330	6200	9790	106	49-132	
2-Hexanone	3330	1700 U	3190	96	49-142	
4-Methyl-2-pentanone (MIBK)	3330	1700 U	3460	104	58-136	
Acetone	3330	8000	12900	149	32-126	F1
Benzene	1670	170 U	1830	110	73-121	
Dichlorobromomethane	1670	170 U	1730	104	72-120	
Bromoform	1670	170 U	1480	89	45-121	
Bromomethane	1670	170 U	1050	63	26-136	
Carbon disulfide	1670	170 U	2080	125	54-144	
Carbon tetrachloride	1670	170 U	1680	101	65-129	
Chlorobenzene	1670	170 U	1690	101	72-120	
Chloroethane	1670	170 U	1370	82	27-131	
Chloroform	1670	170 U	1890	113	73-121	
Chloromethane	1670	170 U	2080	125	39-134	
cis-1,2-Dichloroethene	1670	170 U	1830	110	66-124	
cis-1,3-Dichloropropene	1670	170 U	1590	96	60-120	
Cyclohexane	1670	170 U	1180	71	41-137	
Chlorodibromomethane	1670	170 U	1620	97	62-122	
Dichlorodifluoromethane	1670	170 U	1250	75	14-137	
Ethylbenzene	1670	170 U	1680	101	68-121	
Isopropylbenzene	1670	170 U	1610	96	61-122	
Methyl acetate	8330	1700 U	9080	109	64-124	
Methyl tert-butyl ether	1670	170 U	1850	111	61-121	
Methylcyclohexane	1670	170 U	985	59	39-135	
Methylene Chloride	1670	170 U	2080	125	70-124	F1
Styrene	1670	170 U	1690	101	64-126	
Tetrachloroethene	1670	170 U	1520	91	59-125	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ5626.D

Lab ID: 240-65995-B-5 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Toluene	1670	170 U	1750	105	72-122	
trans-1,2-Dichloroethene	1670	170 U	1880	113	72-125	
trans-1,3-Dichloropropene	1670	170 U	1580	95	58-132	
Trichloroethene	1670	170 U	1760	105	61-129	
Trichlorofluoromethane	1670	170 U	1850	111	49-133	
Vinyl chloride	1670	170 U	1730	104	44-122	
Xylenes, Total	3330	330 U	3310	99	67-122	
m-Xylene & p-Xylene	1670	330 U	1650	99	66-123	
o-Xylene	1670	170 U	1660	99	68-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM6071.D

Lab ID: 240-65962-B-1 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1-Trichloroethane	3330	330 U	3230	97	69-122	
1,1,2,2-Tetrachloroethane	3330	330 U	2640	79	61-130	
1,1,2-Trichloro-1,2,2-trifluoroethane	3330	330 U	2730	82	44-140	
1,1,2-Trichloroethane	3330	330 U	2820	85	72-125	
1,1-Dichloroethane	3330	330 U	3030	91	73-124	
1,1-Dichloroethene	3330	330 U	2770	83	67-124	
1,2,4-Trichlorobenzene	3330	330 U	2870	86	48-120	
1,2-Dibromo-3-Chloropropane	3330	670 U	2080	62	42-130	
Ethylene Dibromide	3330	330 U	2690	81	69-125	
1,2-Dichlorobenzene	3330	330 U	3020	91	67-118	
1,2-Dichloroethane	3330	330 U	2900	87	74-125	
1,2-Dichloropropane	3330	330 U	2980	89	73-122	
1,3-Dichlorobenzene	3330	330 U	3020	91	65-120	
1,4-Dichlorobenzene	3330	330 U	3100	93	66-120	
2-Butanone (MEK)	6670	3300 U	4250	64	49-132	
2-Hexanone	6670	3300 U	4590	69	49-142	
4-Methyl-2-pentanone (MIBK)	6670	3300 U	4760	71	58-136	
Acetone	6670	3300 U	3700	56	32-126	
Benzene	3330	330 U	3080	92	73-121	
Dichlorobromomethane	3330	330 U	2760	83	72-120	
Bromoform	3330	330 U	2590	78	45-121	
Bromomethane	3330	330 U	3280	98	26-136	
Carbon disulfide	3330	330 U	2910	87	54-144	
Carbon tetrachloride	3330	330 U	3010	90	65-129	
Chlorobenzene	3330	330 U	3030	91	72-120	
Chloroethane	3330	330 U	2600	78	27-131	
Chloroform	3330	330 U	3110	93	73-121	
Chloromethane	3330	330 U	3220	97	39-134	
cis-1,2-Dichloroethene	3330	3400	6410	91	66-124	
cis-1,3-Dichloropropene	3330	330 U	2730	82	60-120	
Cyclohexane	3330	330 U	3050	92	41-137	
Chlorodibromomethane	3330	330 U	2530	76	62-122	
Dichlorodifluoromethane	3330	330 U	2830	85	14-137	
Ethylbenzene	3330	330 U	3100	93	68-121	
Isopropylbenzene	3330	330 U	3180	95	61-122	
Methyl acetate	16700	3300 U	12200	73	64-124	
Methyl tert-butyl ether	3330	330 U	2740	82	61-121	
Methylcyclohexane	3330	330 U	2960	89	39-135	
Methylene Chloride	3330	330 U	3090	93	70-124	
Styrene	3330	330 U	2990	90	64-126	
Tetrachloroethene	3330	330 U	3050	92	59-125	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM6071.D

Lab ID: 240-65962-B-1 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Toluene	3330	330 U	3170	95	72-122	
trans-1,2-Dichloroethene	3330	330 U	3160	95	72-125	
trans-1,3-Dichloropropene	3330	330 U	2620	79	58-132	
Trichloroethene	3330	9400	12300	86	61-129	
Trichlorofluoromethane	3330	330 U	4020	121	49-133	
Vinyl chloride	3330	330 U	3120	94	44-122	
Xylenes, Total	6670	670 U	6060	91	67-122	
m-Xylene & p-Xylene	3330	670 U	3060	92	66-123	
o-Xylene	3330	330 U	3000	90	68-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ5627.D

Lab ID: 240-65995-B-5 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1-Trichloroethane	1670	1790	107	1	14	69-122	
1,1,2,2-Tetrachloroethane	1670	1930	116	4	18	61-130	
1,1,2-Trichloro-1,2,2-trifluoroethane	1670	1790	107	53	35	44-140	F2
1,1,2-Trichloroethane	1670	1800	108	1	19	72-125	
1,1-Dichloroethane	1670	1790	107	3	14	73-124	
1,1-Dichloroethene	1670	2070	124	4	24	67-124	
1,2,4-Trichlorobenzene	1670	1730	104	5	28	48-120	
1,2-Dibromo-3-Chloropropane	1670	1520	91	10	24	42-130	
Ethylene Dibromide	1670	1800	108	1	24	69-125	
1,2-Dichlorobenzene	1670	1600	96	1	15	67-118	
1,2-Dichloroethane	1670	1930	116	3	24	74-125	
1,2-Dichloropropane	1670	1720	103	2	15	73-122	
1,3-Dichlorobenzene	1670	1650	99	0	15	65-120	
1,4-Dichlorobenzene	1670	1660	100	1	16	66-120	
2-Butanone (MEK)	3330	9330	93	5	19	49-132	
2-Hexanone	3330	3160	95	1	27	49-142	
4-Methyl-2-pentanone (MIBK)	3330	3530	106	2	32	58-136	
Acetone	3330	12600	139	3	28	32-126	F1
Benzene	1670	1760	106	4	13	73-121	
Dichlorobromomethane	1670	1690	102	2	19	72-120	
Bromoform	1670	1510	90	2	19	45-121	
Bromomethane	1670	1200	72	13	35	26-136	
Carbon disulfide	1670	2090	125	1	34	54-144	
Carbon tetrachloride	1670	1850	111	10	20	65-129	
Chlorobenzene	1670	1660	99	2	15	72-120	
Chloroethane	1670	1430	86	5	35	27-131	
Chloroform	1670	1830	110	3	17	73-121	
Chloromethane	1670	1980	119	5	20	39-134	
cis-1,2-Dichloroethene	1670	1770	106	3	22	66-124	
cis-1,3-Dichloropropene	1670	1560	93	2	21	60-120	
Cyclohexane	1670	1830	110	43	35	41-137	F2
Chlorodibromomethane	1670	1640	99	1	19	62-122	
Dichlorodifluoromethane	1670	1710	102	31	34	14-137	
Ethylbenzene	1670	1630	98	3	16	68-121	
Isopropylbenzene	1670	1630	98	1	20	61-122	
Methyl acetate	8330	9210	111	1	12	64-124	
Methyl tert-butyl ether	1670	1840	110	0	12	61-121	
Methylcyclohexane	1670	1670	100	51	35	39-135	F2
Methylene Chloride	1670	2030	122	2	14	70-124	
Styrene	1670	1650	99	2	15	64-126	
Tetrachloroethene	1670	1590	95	4	20	59-125	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ5627.D

Lab ID: 240-65995-B-5 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Toluene	1670	1740	104	0	15	72-122	
trans-1,2-Dichloroethene	1670	1860	112	1	25	72-125	
trans-1,3-Dichloropropene	1670	1560	94	1	22	58-132	
Trichloroethene	1670	1690	102	4	14	61-129	
Trichlorofluoromethane	1670	2230	134	19	25	49-133	F1
Vinyl chloride	1670	1770	106	2	35	44-122	
Xylenes, Total	3330	3290	99	1	14	67-122	
m-Xylene & p-Xylene	1670	1650	99	0	15	66-123	
o-Xylene	1670	1640	98	1	14	68-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM6072.D

Lab ID: 240-65962-B-1 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1-Trichloroethane	3330	3250	98	1	14	69-122	
1,1,2,2-Tetrachloroethane	3330	2790	84	5	18	61-130	
1,1,2-Trichloro-1,2,2-trifluoroethane	3330	2870	86	5	35	44-140	
1,1,2-Trichloroethane	3330	2990	90	6	19	72-125	
1,1-Dichloroethane	3330	3040	91	0	14	73-124	
1,1-Dichloroethene	3330	2810	84	1	24	67-124	
1,2,4-Trichlorobenzene	3330	2980	89	4	28	48-120	
1,2-Dibromo-3-Chloropropane	3330	2190	66	5	24	42-130	
Ethylene Dibromide	3330	2850	86	6	24	69-125	
1,2-Dichlorobenzene	3330	3140	94	4	15	67-118	
1,2-Dichloroethane	3330	2890	87	0	24	74-125	
1,2-Dichloropropane	3330	3090	93	3	15	73-122	
1,3-Dichlorobenzene	3330	3140	94	4	15	65-120	
1,4-Dichlorobenzene	3330	3190	96	3	16	66-120	
2-Butanone (MEK)	6670	4260	64	0	19	49-132	
2-Hexanone	6670	4890	73	6	27	49-142	
4-Methyl-2-pentanone (MIBK)	6670	5010	75	5	32	58-136	
Acetone	6670	4070	61	9	28	32-126	
Benzene	3330	3080	92	0	13	73-121	
Dichlorobromomethane	3330	2840	85	3	19	72-120	
Bromoform	3330	2590	78	0	19	45-121	
Bromomethane	3330	2510	75	26	35	26-136	
Carbon disulfide	3330	2940	88	1	34	54-144	
Carbon tetrachloride	3330	3020	91	0	20	65-129	
Chlorobenzene	3330	3170	95	4	15	72-120	
Chloroethane	3330	2250	67	15	35	27-131	
Chloroform	3330	3100	93	0	17	73-121	
Chloromethane	3330	3150	95	2	20	39-134	
cis-1,2-Dichloroethene	3330	6330	89	1	22	66-124	
cis-1,3-Dichloropropene	3330	2830	85	3	21	60-120	
Cyclohexane	3330	3120	94	2	35	41-137	
Chlorodibromomethane	3330	2630	79	4	19	62-122	
Dichlorodifluoromethane	3330	2950	88	4	34	14-137	
Ethylbenzene	3330	3210	96	3	16	68-121	
Isopropylbenzene	3330	3270	98	3	20	61-122	
Methyl acetate	16700	12700	76	4	12	64-124	
Methyl tert-butyl ether	3330	2820	85	3	12	61-121	
Methylcyclohexane	3330	3070	92	4	35	39-135	
Methylene Chloride	3330	3000	90	3	14	70-124	
Styrene	3330	3120	94	4	15	64-126	
Tetrachloroethene	3330	3100	93	1	20	59-125	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM6072.D

Lab ID: 240-65962-B-1 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Toluene	3330	3250	98	3	15	72-122	
trans-1,2-Dichloroethene	3330	3180	95	1	25	72-125	
trans-1,3-Dichloropropene	3330	2790	84	6	22	58-132	
Trichloroethene	3330	12100	81	1	14	61-129	
Trichlorofluoromethane	3330	3670	110	9	25	49-133	
Vinyl chloride	3330	3140	94	1	35	44-122	
Xylenes, Total	6670	6300	95	4	14	67-122	
m-Xylene & p-Xylene	3330	3160	95	3	15	66-123	
o-Xylene	3330	3140	94	5	14	68-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Sample No.: STD8260 240-232366/4 Date Analyzed: 05/28/2016 09:56

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXJ4941.D Heated Purge: (Y/N) N

Calibration ID: 34632

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1420065	5.12	934240	7.78	380946	10.01
UPPER LIMIT		2840130	5.62	1868480	8.28	761892	10.51
LOWER LIMIT		710033	4.62	467120	7.28	190473	9.51
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-232366/14		1349328	5.12	892490	7.78	381895	10.03
ICV 240-232366/15		1213041	5.12	839047	7.78	340685	10.01
CCVIS 240-235154/2		1716764	5.12	1087867	7.78	406999	10.03
CCVIS 240-235310/2		1764914	5.12	1113939	7.78	422612	10.03

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Sample No.: CCVIS 240-235154/2 Date Analyzed: 06/20/2016 09:34

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXJ5601.D Heated Purge: (Y/N) N

Calibration ID: 34635

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1716764	5.12	1087867	7.78	406999	10.03
UPPER LIMIT		3433528	5.62	2175734	8.28	813998	10.53
LOWER LIMIT		858382	4.62	543934	7.28	203500	9.53
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-235154/4		1371391	5.12	891005	7.78	335807	10.03
CCV 240-235154/3		1258361	5.12	837101	7.78	306679	10.03
MB 240-235154/6		1216667	5.12	818773	7.78	305253	10.03
240-65994-1	MRC-SW5A1-061316	1207550	5.12	812550	7.78	300326	10.03
240-65994-2	MRC-SW5A2-061316	1167662	5.12	784965	7.78	285557	10.03
240-65994-3	MRC-SW5B-061316	1165506	5.12	799768	7.78	292761	10.03
240-65994-4	MRC-SW6A-061316	1187019	5.12	803788	7.78	294540	10.03
240-65994-5	MRC-SW6B-061316	968710	5.12	656984	7.78	237604	10.03
240-65994-6	MRC-SW7A-061316	1200151	5.12	814993	7.78	290465	10.03
240-65994-7	MRC-SW7B-061316	1183978	5.12	806752	7.78	293158	10.03
240-65994-8	MRC-SW8A-061316	1135030	5.12	762893	7.78	279192	10.03
240-65994-9	MRC-SW8B-061316	1185147	5.12	807191	7.78	290157	10.03
240-65994-10	MRC-SW9A-061316	1174059	5.12	788089	7.78	291883	10.03
240-65994-11	MRC-SW9B-061316	1168374	5.12	802392	7.78	292727	10.03
240-65995-B-5 MS		1177106	5.12	791875	7.78	297138	10.03
240-65995-B-5 MSD		1207951	5.12	798086	7.78	290014	10.03

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Sample No.: CCVIS 240-235310/2 Date Analyzed: 06/21/2016 08:52

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXJ5658.D Heated Purge: (Y/N) N

Calibration ID: 34635

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1764914	5.12	1113939	7.78	422612	10.03
UPPER LIMIT		3529828	5.62	2227878	8.28	845224	10.53
LOWER LIMIT		882457	4.62	556970	7.28	211306	9.53
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-235310/3		1213542	5.12	834047	7.78	306694	10.03
LCS 240-235310/4		1498486	5.12	959721	7.78	359922	10.03
MB 240-235310/6		966867	5.12	676769	7.78	243781	10.03
240-65994-7	MRC-SW7B-061316	1152494	5.12	782399	7.78	290345	10.03

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Sample No.: STD8260 240-232711/4 Date Analyzed: 06/01/2016 12:51

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM5572.D Heated Purge: (Y/N) N

Calibration ID: 34643

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1415622	5.17	1000389	7.87	522407	10.10
UPPER LIMIT		2831244	5.67	2000778	8.37	1044814	10.60
LOWER LIMIT		707811	4.67	500195	7.37	261204	9.60
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-232711/9		1350700	5.17	956772	7.85	515548	10.10
ICV 240-232711/16		1312230	5.17	922566	7.85	494155	10.10
CCVIS 240-235221/2		1396171	5.17	949016	7.85	500239	10.10

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Sample No.: CCVIS 240-235221/2 Date Analyzed: 06/20/2016 12:47

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM6060.D Heated Purge: (Y/N) N

Calibration ID: 34649

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1396171	5.17	949016	7.85	500239	10.10
UPPER LIMIT		2792342	5.67	1898032	8.35	1000478	10.60
LOWER LIMIT		698086	4.67	474508	7.35	250120	9.60
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-235221/3		1375714	5.17	916832	7.85	492698	10.10
MB 240-235221/6		1343976	5.17	893870	7.85	468158	10.10
240-65962-B-1 MS		1390550	5.17	929879	7.85	499779	10.10
240-65962-B-1 MSD		1373761	5.17	912327	7.87	488907	10.10
240-65996-1	MRC-SWFB-061316	1312400	5.17	902446	7.85	487740	10.10
240-65996-2	MRC-SW1A-061316	1340107	5.17	890190	7.85	473162	10.10
240-65996-3	MRC-SW2A-061316	1336499	5.17	896030	7.85	484805	10.10
240-65996-4	TB-061316	1339479	5.17	890612	7.87	476238	10.10
240-65996-5	MRC-SWDUP2-061316	1369329	5.17	924281	7.85	481400	10.10

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Instrument ID: A3UX11 Start Date: 05/28/2016 08:28

Analysis Batch Number: 232366 End Date: 05/28/2016 14:03

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-232366/1		05/28/2016 08:28	1	BFB6528.D	DB-624 0.18(mm)
STD8260 240-232366/2 IC		05/28/2016 09:12	1	UXJ4939.D	DB-624 0.18(mm)
STD8260 240-232366/3 IC		05/28/2016 09:34	1	UXJ4940.D	DB-624 0.18(mm)
STD8260 240-232366/4 ICIS		05/28/2016 09:56	1	UXJ4941.D	DB-624 0.18(mm)
STD8260 240-232366/5 IC		05/28/2016 10:19	1	UXJ4942.D	DB-624 0.18(mm)
STD8260 240-232366/6 IC		05/28/2016 10:40	1	UXJ4943.D	DB-624 0.18(mm)
STD8260 240-232366/7 IC		05/28/2016 11:03	1	UXJ4944.D	DB-624 0.18(mm)
ICV 240-232366/14		05/28/2016 11:25	1	UXJ4945.D	DB-624 0.18(mm)
STD6 240-232366/8 IC		05/28/2016 11:48	1		DB-624 0.18(mm)
STD5 240-232366/9 IC		05/28/2016 12:10	1		DB-624 0.18(mm)
STD4 240-232366/10 IC		05/28/2016 12:33	1		DB-624 0.18(mm)
STD3 240-232366/11 IC		05/28/2016 12:56	1		DB-624 0.18(mm)
STD2 240-232366/12 IC		05/28/2016 13:18	1		DB-624 0.18(mm)
STD1 240-232366/13 IC		05/28/2016 13:41	1		DB-624 0.18(mm)
ICV 240-232366/15		05/28/2016 14:03	1	UXJ4952.D	DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Instrument ID: A3UX11 Start Date: 06/20/2016 09:01

Analysis Batch Number: 235154 End Date: 06/20/2016 19:35

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-235154/1		06/20/2016 09:01	1	BFB6620.D	DB-624 0.18(mm)
CCVIS 240-235154/2		06/20/2016 09:34	1	UXJ5601.D	DB-624 0.18(mm)
LCS 240-235154/4		06/20/2016 09:57	1	UXJ5602.D	DB-624 0.18(mm)
CCV 240-235154/3		06/20/2016 10:20	1	UXJ5603.D	DB-624 0.18(mm)
ZZZZZ		06/20/2016 10:43	1		DB-624 0.18(mm)
MB 240-235154/6		06/20/2016 11:05	1	UXJ5605.D	DB-624 0.18(mm)
ZZZZZ		06/20/2016 11:42	1		DB-624 0.18(mm)
ZZZZZ		06/20/2016 12:05	1		DB-624 0.18(mm)
ZZZZZ		06/20/2016 12:28	20		DB-624 0.18(mm)
ZZZZZ		06/20/2016 12:50	33.33		DB-624 0.18(mm)
240-65994-1		06/20/2016 13:13	1	UXJ5610.D	DB-624 0.18(mm)
240-65994-2		06/20/2016 13:35	1	UXJ5611.D	DB-624 0.18(mm)
240-65994-3		06/20/2016 13:57	1	UXJ5612.D	DB-624 0.18(mm)
240-65994-4		06/20/2016 14:20	1	UXJ5613.D	DB-624 0.18(mm)
240-65994-5		06/20/2016 14:43	1	UXJ5614.D	DB-624 0.18(mm)
240-65994-6		06/20/2016 15:05	1	UXJ5615.D	DB-624 0.18(mm)
240-65994-7		06/20/2016 15:27	1	UXJ5616.D	DB-624 0.18(mm)
240-65994-8		06/20/2016 15:49	1	UXJ5617.D	DB-624 0.18(mm)
240-65994-9		06/20/2016 16:12	1	UXJ5618.D	DB-624 0.18(mm)
240-65994-10		06/20/2016 16:34	1	UXJ5619.D	DB-624 0.18(mm)
240-65994-11		06/20/2016 16:57	1	UXJ5620.D	DB-624 0.18(mm)
ZZZZZ		06/20/2016 17:19	166.67		DB-624 0.18(mm)
ZZZZZ		06/20/2016 17:42	166.67		DB-624 0.18(mm)
ZZZZZ		06/20/2016 18:04	166.67		DB-624 0.18(mm)
ZZZZZ		06/20/2016 18:27	166.67		DB-624 0.18(mm)
ZZZZZ		06/20/2016 18:50	3.33		DB-624 0.18(mm)
240-65995-B-5 MS		06/20/2016 19:12	166.67	UXJ5626.D	DB-624 0.18(mm)
240-65995-B-5 MSD		06/20/2016 19:35	166.67	UXJ5627.D	DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Instrument ID: A3UX11 Start Date: 06/21/2016 08:00

Analysis Batch Number: 235310 End Date: 06/21/2016 13:59

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-235310/1		06/21/2016 08:00	1	BFB6621.D	DB-624 0.18(mm)
CCVIS 240-235310/2		06/21/2016 08:52	1	UXJ5658.D	DB-624 0.18(mm)
CCV 240-235310/3		06/21/2016 09:36	1	UXJ5660.D	DB-624 0.18(mm)
LCS 240-235310/4		06/21/2016 10:17	1	UXJ5661.D	DB-624 0.18(mm)
MB 240-235310/6		06/21/2016 11:01	1	UXJ5663.D	DB-624 0.18(mm)
240-65994-7		06/21/2016 13:59	1	UXJ5670.D	DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Instrument ID: A3UX16 Start Date: 06/01/2016 11:38

Analysis Batch Number: 232711 End Date: 06/01/2016 19:41

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-232711/1		06/01/2016 11:38	1	BFB4865.D	DB-624 0.18(mm)
STD8269 240-232711/2 IC		06/01/2016 12:06	1	UXM5570.D	DB-624 0.18(mm)
STD8260 240-232711/3 IC		06/01/2016 12:29	1	UXM5571.D	DB-624 0.18(mm)
STD8260 240-232711/4 ICIS		06/01/2016 12:51	1	UXM5572.D	DB-624 0.18(mm)
STD8260 240-232711/5 IC		06/01/2016 13:14	1	UXM5573.D	DB-624 0.18(mm)
STD8260 240-232711/6 IC		06/01/2016 13:37	1	UXM5574.D	DB-624 0.18(mm)
STD8260 240-232711/7 IC		06/01/2016 14:00	1	UXM5575.D	DB-624 0.18(mm)
STD8260 240-232711/8 IC		06/01/2016 14:22	1	UXM5576.D	DB-624 0.18(mm)
ICV 240-232711/9		06/01/2016 14:45	1	UXM5577.D	DB-624 0.18(mm)
STDA9 240-232711/10 IC		06/01/2016 15:08	1		DB-624 0.18(mm)
STDA9 240-232711/11 IC		06/01/2016 15:31	1		DB-624 0.18(mm)
STDA9 240-232711/12 IC		06/01/2016 15:53	1		DB-624 0.18(mm)
STDA9 240-232711/13 IC		06/01/2016 16:16	1		DB-624 0.18(mm)
STDA9 240-232711/14 IC		06/01/2016 16:39	1		DB-624 0.18(mm)
STDA9 240-232711/15 IC		06/01/2016 17:02	1		DB-624 0.18(mm)
ICV 240-232711/16		06/01/2016 17:24	1	UXM5584.D	DB-624 0.18(mm)
STDTHT 240-232711/17 IC		06/01/2016 17:47	1		DB-624 0.18(mm)
STDTHT 240-232711/18 IC		06/01/2016 18:10	1		DB-624 0.18(mm)
STDTHT 240-232711/19 IC		06/01/2016 18:33	1		DB-624 0.18(mm)
STDTHT 240-232711/20 IC		06/01/2016 18:55	1		DB-624 0.18(mm)
STDTHT 240-232711/21 IC		06/01/2016 19:18	1		DB-624 0.18(mm)
STDTHT 240-232711/22 IC		06/01/2016 19:41	1		DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-65994-1

SDG No.:

Instrument ID: A3UX16 Start Date: 06/20/2016 11:25

Analysis Batch Number: 235221 End Date: 06/20/2016 22:59

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-235221/1		06/20/2016 11:25	1	BFB4888.D	DB-624 0.18(mm)
LCS 240-235221/4		06/20/2016 12:25	1	UXM6059.D	DB-624 0.18(mm)
CCVIS 240-235221/2		06/20/2016 12:47	1	UXM6060.D	DB-624 0.18(mm)
CCV 240-235221/3		06/20/2016 13:10	1	UXM6061.D	DB-624 0.18(mm)
ZZZZZ		06/20/2016 13:33	1		DB-624 0.18(mm)
MB 240-235221/6		06/20/2016 13:55	1	UXM6063.D	DB-624 0.18(mm)
ZZZZZ		06/20/2016 14:41	10000		DB-624 0.18(mm)
ZZZZZ		06/20/2016 15:04	10000		DB-624 0.18(mm)
ZZZZZ		06/20/2016 15:26	66.67		DB-624 0.18(mm)
ZZZZZ		06/20/2016 15:49	25		DB-624 0.18(mm)
ZZZZZ		06/20/2016 16:11	1		DB-624 0.18(mm)
ZZZZZ		06/20/2016 16:33	333.33		DB-624 0.18(mm)
240-65962-B-1 MS		06/20/2016 16:56	333.33	UXM6071.D	DB-624 0.18(mm)
240-65962-B-1 MSD		06/20/2016 17:19	333.33	UXM6072.D	DB-624 0.18(mm)
240-65996-1		06/20/2016 18:04	1	UXM6074.D	DB-624 0.18(mm)
240-65996-2		06/20/2016 18:27	1	UXM6075.D	DB-624 0.18(mm)
240-65996-3		06/20/2016 18:50	1	UXM6076.D	DB-624 0.18(mm)
240-65996-4		06/20/2016 19:12	1	UXM6077.D	DB-624 0.18(mm)
240-65996-5		06/20/2016 19:35	1	UXM6078.D	DB-624 0.18(mm)
ZZZZZ		06/20/2016 19:58	1		DB-624 0.18(mm)
ZZZZZ		06/20/2016 20:43	40		DB-624 0.18(mm)
ZZZZZ		06/20/2016 21:06	100		DB-624 0.18(mm)
ZZZZZ		06/20/2016 21:29	1		DB-624 0.18(mm)
ZZZZZ		06/20/2016 21:51	1		DB-624 0.18(mm)
ZZZZZ		06/20/2016 22:14	1		DB-624 0.18(mm)
ZZZZZ		06/20/2016 22:36	1		DB-624 0.18(mm)
ZZZZZ		06/20/2016 22:59	1		DB-624 0.18(mm)

Method 522 MOD

1,4 Dioxane (GC/MS SIM) by Method 522

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Burlington Job No.: 240-65994-1

SDG No.:

Lab File ID: 20247_01.D BFB Injection Date: 06/01/2016

Instrument ID: CHS.i BFB Injection Time: 12:42

Analysis Batch No.: 105200

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	22.9	
75	30.0 - 80.0 % of mass 95	51.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.7	(1.0) 1
174	>50.0 % of mass 95	65.3	
175	5.0 - 9.0 % of mass 174	4.6	(7.0) 1
176	>95.0 but <101.0 % of mass 174	63.7	(97.6) 1
177	5.0 - 9.0 % of mass 176	4.1	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 200-105200/2	20247_02.D	06/01/2016	12:52
	IC 200-105200/3	20247_03.D	06/01/2016	13:05
	IC 200-105200/4	20247_04.D	06/01/2016	13:19
	ICIS 200-105200/5	20247_05.D	06/01/2016	13:32
	IC 200-105200/6	20247_06.D	06/01/2016	13:46
	IC 200-105200/7	20247_07.D	06/01/2016	13:59
	IC 200-105200/8	20247_08.D	06/01/2016	14:13
	ICV 200-105200/9	20247_09.D	06/01/2016	14:26
	CCVL 200-105857/2	20474_02.D	06/17/2016	10:56
	LCS 200-105835/2-A	20474_03.D	06/17/2016	11:09
	MB 200-105835/1-A	20474_04.D	06/17/2016	11:22
	CCV 200-105857/15	20474_15.D	06/17/2016	13:50
	660-74368-A-3-B MSD	20474_17.D	06/17/2016	14:17
	660-74368-A-3-C MS	20474_18.D	06/17/2016	14:31
	CCV 200-105857/26	20474_26.D	06/17/2016	16:18
MRC-SWDUP1-061316	240-65994-12	20474_27.D	06/17/2016	16:32
	CCV 200-105857/28	20474_28.D	06/17/2016	16:45
	CCVL 200-106154/2	20570_02.D	06/23/2016	20:51
	LCS 200-106090/2-A	20570_09.D	06/23/2016	22:26
	MB 200-106090/1-A	20570_10.D	06/23/2016	22:40
	CCV 200-106154/14	20570_14.D	06/23/2016	23:34
	CCVL 200-106221/2	20593_02.D	06/24/2016	20:37
	480-101917-E-32-D MS	20593_10.D	06/24/2016	22:25
	480-101917-E-32-C MSD	20593_11.D	06/24/2016	22:38
	CCV 200-106221/13	20593_13.D	06/24/2016	23:05
MRC-SWFB-061316	240-65996-1	20593_15.D	06/24/2016	23:32
MRC-SW1A-061316	240-65996-2	20593_16.D	06/24/2016	23:45
MRC-SW2A-061316	240-65996-3	20593_17.D	06/24/2016	23:59

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Burlington Job No.: 240-65994-1

SDG No.:

Lab File ID: BFB Injection Date:

Instrument ID: BFB Injection Time:

Lab File ID: DFTPP Injection Date:

Instrument ID: DFTPP Injection Time:

Analysis Batch No.:

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 200-106221/24	20593_24.D	06/25/2016	01:33

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Burlington Job No.: 240-65994-1 Analy Batch No.: 105200

SDG No.:

Instrument ID: CHS.i GC Column: Rxi-5ms ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/01/2016 12:52 Calibration End Date: 06/01/2016 14:13 Calibration ID: 34839

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 200-105200/8	20247_08.D
Level 2	IC 200-105200/7	20247_07.D
Level 3	IC 200-105200/6	20247_06.D
Level 4	ICIS 200-105200/5	20247_05.D
Level 5	IC 200-105200/4	20247_04.D
Level 6	IC 200-105200/3	20247_03.D
Level 7	IC 200-105200/2	20247_02.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,4-Dioxane	0.5850 0.6358	0.6144 0.6477	0.5567	0.5785	0.5757	Ave		0.5991			0.0500	5.7		15.0			0.9900
1,4-Dioxane-d8 (Surr)	0.5502 0.5927	0.5478 0.5710	0.5635	0.5442	0.5514	Ave		0.5601				3.1		15.0			0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 240-65994-1

SDG No.:

Lab Sample ID: ICV 200-105200/9 Calibration Date: 06/01/2016 14:26

Instrument ID: CHS.i Calib Start Date: 06/01/2016 12:52

GC Column: Rxi-5ms ID: 0.25(mm) Calib End Date: 06/01/2016 14:13

Lab File ID: 20247_09.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5991	0.6292	0.0500	210	200	5.0	20.0

FORM VII 522 MOD

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 240-65994-1

SDG No.:

Lab Sample ID: CCVL 200-105857/2 Calibration Date: 06/17/2016 10:56

Instrument ID: CHS.i Calib Start Date: 06/01/2016 12:52

GC Column: Rxi-5ms ID: 0.25(mm) Calib End Date: 06/01/2016 14:13

Lab File ID: 20474_02.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5991	0.7389	0.0500	12.3	10.0	23.3	50.0
1,4-Dioxane-d8 (Surr)	Ave	0.5601	0.6933	0.0500	619	500	23.8	50.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 240-65994-1

SDG No.:

Lab Sample ID: CCV 200-105857/15 Calibration Date: 06/17/2016 13:50

Instrument ID: CHS.i Calib Start Date: 06/01/2016 12:52

GC Column: Rxi-5ms ID: 0.25(mm) Calib End Date: 06/01/2016 14:13

Lab File ID: 20474_15.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5991	0.6665	0.0500	111	100	11.3	30.0
1,4-Dioxane-d8 (Surr)	Ave	0.5601	0.6648	0.0500	593	500	18.7	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 240-65994-1

SDG No.:

Lab Sample ID: CCV 200-105857/26 Calibration Date: 06/17/2016 16:18

Instrument ID: CHS.i Calib Start Date: 06/01/2016 12:52

GC Column: Rxi-5ms ID: 0.25(mm) Calib End Date: 06/01/2016 14:13

Lab File ID: 20474_26.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5991	0.6693	0.0500	894	800	11.7	30.0
1,4-Dioxane-d8 (Surr)	Ave	0.5601	0.6753	0.0500	603	500	20.6	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 240-65994-1

SDG No.:

Lab Sample ID: CCV 200-105857/28 Calibration Date: 06/17/2016 16:45

Instrument ID: CHS.i Calib Start Date: 06/01/2016 12:52

GC Column: Rxi-5ms ID: 0.25(mm) Calib End Date: 06/01/2016 14:13

Lab File ID: 20474_28.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5991	0.6569	0.0500	110	100	9.6	30.0
1,4-Dioxane-d8 (Surr)	Ave	0.5601	0.6582	0.0500	587	500	17.5	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 240-65994-1

SDG No.:

Lab Sample ID: CCVL 200-106154/2 Calibration Date: 06/23/2016 20:51

Instrument ID: CHS.i Calib Start Date: 06/01/2016 12:52

GC Column: Rxi-5ms ID: 0.25(mm) Calib End Date: 06/01/2016 14:13

Lab File ID: 20570_02.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5991	0.5277	0.0500	8.81	10.0	-11.9	50.0
1,4-Dioxane-d8 (Surr)	Ave	0.5601	0.6275	0.0500	560	500	12.0	50.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 240-65994-1

SDG No.:

Lab Sample ID: CCV 200-106154/14 Calibration Date: 06/23/2016 23:34

Instrument ID: CHS.i Calib Start Date: 06/01/2016 12:52

GC Column: Rxi-5ms ID: 0.25(mm) Calib End Date: 06/01/2016 14:13

Lab File ID: 20570_14.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5991	0.6390	0.0500	107	100	6.7	30.0
1,4-Dioxane-d8 (Surr)	Ave	0.5601	0.6328	0.0500	565	500	13.0	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 240-65994-1

SDG No.:

Lab Sample ID: CCVL 200-106221/2 Calibration Date: 06/24/2016 20:37

Instrument ID: CHS.i Calib Start Date: 06/01/2016 12:52

GC Column: Rxi-5ms ID: 0.25(mm) Calib End Date: 06/01/2016 14:13

Lab File ID: 20593_02.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5991	0.7496	0.0500	12.5	10.0	25.1	50.0
1,4-Dioxane-d8 (Surr)	Ave	0.5601	0.6885	0.0500	615	500	22.9	50.0

FORM VII 522 MOD

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 240-65994-1

SDG No.:

Lab Sample ID: CCV 200-106221/13 Calibration Date: 06/24/2016 23:05

Instrument ID: CHS.i Calib Start Date: 06/01/2016 12:52

GC Column: Rxi-5ms ID: 0.25(mm) Calib End Date: 06/01/2016 14:13

Lab File ID: 20593_13.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5991	0.6774	0.0500	113	100	13.1	30.0
1,4-Dioxane-d8 (Surr)	Ave	0.5601	0.6482	0.0500	579	500	15.7	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 240-65994-1

SDG No.:

Lab Sample ID: CCV 200-106221/24 Calibration Date: 06/25/2016 01:33

Instrument ID: CHS.i Calib Start Date: 06/01/2016 12:52

GC Column: Rxi-5ms ID: 0.25(mm) Calib End Date: 06/01/2016 14:13

Lab File ID: 20593_24.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5991	0.7081	0.0500	946	800	18.2	30.0
1,4-Dioxane-d8 (Surr)	Ave	0.5601	0.5975	0.0500	533	500	6.7	30.0

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Burlington Job No.: 240-65994-1

SDG No.:

Lab File ID: 20474_04.D Lab Sample ID: MB 200-105835/1-A

Matrix: Water Date Extracted: 06/16/2016 18:26

Instrument ID: CHS.i Date Analyzed: 06/17/2016 11:22

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 200-105835/2-A	20474_03.D	06/17/2016 11:09
	660-74368-A-3-B MSD	20474_17.D	06/17/2016 14:17
	660-74368-A-3-C MS	20474_18.D	06/17/2016 14:31
MRC-SWDUP1-061316	240-65994-12	20474_27.D	06/17/2016 16:32

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington | Job No.: 240-65994-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 200-105835/1-A

Matrix: Water | Lab File ID: 20474_04.D

Analysis Method: 522 MOD | Date Collected:

Extract. Method: 3535A | Date Extracted: 06/16/2016 18:26

Sample wt/vol: 100(mL) | Date Analyzed: 06/17/2016 11:22

Con. Extract Vol.: 2000(uL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 105857 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.20	U	0.20	0.057

CAS NO.	SURROGATE	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8 (Surr)	110		70-130

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Burlington Job No.: 240-65994-1

SDG No.:

Lab File ID: 20570_10.D Lab Sample ID: MB 200-106090/1-A

Matrix: Water Date Extracted: 06/22/2016 18:02

Instrument ID: CHS.i Date Analyzed: 06/23/2016 22:40

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 200-106090/2-A	20570_09.D	06/23/2016 22:26
	480-101917-E-32-D MS	20593_10.D	06/24/2016 22:25
	480-101917-E-32-C MSD	20593_11.D	06/24/2016 22:38
MRC-SWFB-061316	240-65996-1	20593_15.D	06/24/2016 23:32
MRC-SW1A-061316	240-65996-2	20593_16.D	06/24/2016 23:45
MRC-SW2A-061316	240-65996-3	20593_17.D	06/24/2016 23:59

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington | Job No.: 240-65994-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 200-106090/1-A

Matrix: Water | Lab File ID: 20570_10.D

Analysis Method: 522 MOD | Date Collected:

Extract. Method: 3535A | Date Extracted: 06/22/2016 18:02

Sample wt/vol: 100(mL) | Date Analyzed: 06/23/2016 22:40

Con. Extract Vol.: 2000(uL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 106154 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.20	U	0.20	0.057

CAS NO.	SURROGATE	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8 (Surr)	91		70-130

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Burlington Job No.: 240-65994-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): Rxi-5ms ID: 0.25(mm)

Client Sample ID	Lab Sample ID	DXE #
MRC-SWDUP1-061316	240-65994-12	105
MRC-SWFB-061316	240-65996-1	95
MRC-SW1A-061316	240-65996-2	92
MRC-SW2A-061316	240-65996-3	97
	MB 200-105835/1-A	110
	MB 200-106090/1-A	91
	LCS 200-105835/2-A	99
	LCS 200-106090/2-A	99
	660-74368-A-3-C MS	97
	480-101917-E-32-D MS	103
	660-74368-A-3-B MSD	91
	480-101917-E-32-C MSD	102

	QC LIMITS
DXE = 1,4-Dioxane-d8 (Surr)	70-130

Column to be used to flag recovery values

FORM II 522 MOD

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Burlington Job No.: 240-65994-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20474_03.D

Lab ID: LCS 200-105835/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	8.00	8.12	101	70-130	

Column to be used to flag recovery and RPD values

FORM III 522 MOD

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Burlington Job No.: 240-65994-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20570_09.D

Lab ID: LCS 200-106090/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	2.00	1.95	98	70-130	

Column to be used to flag recovery and RPD values

FORM III 522 MOD

FORM III
GC/MS SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Burlington Job No.: 240-65994-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20474_18.D

Lab ID: 660-74368-A-3-C MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,4-Dioxane	2.00	3.5	5.46	99	70-130	

Column to be used to flag recovery and RPD values

FORM III 522 MOD

FORM III
GC/MS SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Burlington Job No.: 240-65994-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20593_10.D

Lab ID: 480-101917-E-32-D MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,4-Dioxane	2.00	1.5	3.32	92	70-130	

Column to be used to flag recovery and RPD values

FORM III 522 MOD

FORM III
GC/MS SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Burlington Job No.: 240-65994-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20474_17.D

Lab ID: 660-74368-A-3-B MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,4-Dioxane	2.00	4.97	75	9	30	70-130	

Column to be used to flag recovery and RPD values

FORM III 522 MOD

FORM III
GC/MS SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Burlington Job No.: 240-65994-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20593_11.D

Lab ID: 480-101917-E-32-C MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,4-Dioxane	2.00	3.56	104	7	30	70-130	

Column to be used to flag recovery and RPD values

FORM III 522 MOD

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Burlington Job No.: 240-65994-1

SDG No.:

Sample No.: ICIS 200-105200/5 Date Analyzed: 06/01/2016 13:32

Instrument ID: CHS.i GC Column: Rxi-5ms ID: 0.25(mm)

Lab File ID (Standard): 20247_05.D Heated Purge: (Y/N) N

Calibration ID: 34839

		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		361147	3.08				
UPPER LIMIT		541721	3.58				
LOWER LIMIT		180574	2.58				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 200-105200/9		334566	3.07				
CCVL 200-105857/2		344275	3.12				
LCS 200-105835/2-A		392530	3.11				
MB 200-105835/1-A		360040	3.11				
CCV 200-105857/15		336524	3.11				
660-74368-A-3-B MSD		375717	3.10				
660-74368-A-3-C MS		380078	3.10				
CCV 200-105857/26		336842	3.10				
240-65994-12	MRC-SWDUP1-061316	374633	3.11				
CCV 200-105857/28		332938	3.11				
CCVL 200-106154/2		329535	3.10				
LCS 200-106090/2-A		291429	3.09				
MB 200-106090/1-A		325171	3.10				
CCV 200-106154/14		340665	3.11				
CCVL 200-106221/2		349171	3.13				
480-101917-E-32-D MS		364283	3.11				
480-101917-E-32-C MSD		359007	3.11				
CCV 200-106221/13		314090	3.11				
240-65996-1	MRC-SWFB-061316	341279	3.10				
240-65996-2	MRC-SW1A-061316	340502	3.10				
240-65996-3	MRC-SW2A-061316	345460	3.10				
CCV 200-106221/24		304270	3.10				

= Tetrahydrofuran-d8

Area Limit = 50%-150% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 522 MOD

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Burlington Job No.: 240-65994-1

SDG No.:

Instrument ID: CHS.i Start Date: 06/01/2016 12:42

Analysis Batch Number: 105200 End Date: 06/01/2016 21:00

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 200-105200/1		06/01/2016 12:42	1	20247_01.D	Rxi-5ms 0.25(mm)
IC 200-105200/2		06/01/2016 12:52	1	20247_02.D	Rxi-5ms 0.25(mm)
IC 200-105200/3		06/01/2016 13:05	1	20247_03.D	Rxi-5ms 0.25(mm)
IC 200-105200/4		06/01/2016 13:19	1	20247_04.D	Rxi-5ms 0.25(mm)
ICIS 200-105200/5		06/01/2016 13:32	1	20247_05.D	Rxi-5ms 0.25(mm)
IC 200-105200/6		06/01/2016 13:46	1	20247_06.D	Rxi-5ms 0.25(mm)
IC 200-105200/7		06/01/2016 13:59	1	20247_07.D	Rxi-5ms 0.25(mm)
IC 200-105200/8		06/01/2016 14:13	1	20247_08.D	Rxi-5ms 0.25(mm)
ICV 200-105200/9		06/01/2016 14:26	1	20247_09.D	Rxi-5ms 0.25(mm)
ZZZZZ		06/01/2016 14:42	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/01/2016 14:56	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/01/2016 15:09	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/01/2016 15:22	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/01/2016 15:36	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/01/2016 15:49	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/01/2016 16:03	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/01/2016 16:16	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/01/2016 16:30	1		Rxi-5ms 0.25(mm)
CCV 200-105200/19		06/01/2016 16:43	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/01/2016 16:57	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/01/2016 17:11	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/01/2016 17:24	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/01/2016 17:37	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/01/2016 17:51	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/01/2016 18:04	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/01/2016 18:18	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/01/2016 18:31	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/01/2016 18:45	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/01/2016 18:58	1		Rxi-5ms 0.25(mm)
CCV 200-105200/30		06/01/2016 19:12	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/01/2016 19:25	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/01/2016 19:39	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/01/2016 19:52	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/01/2016 20:06	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/01/2016 20:19	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/01/2016 20:33	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/01/2016 20:46	10		Rxi-5ms 0.25(mm)
CCV 200-105200/38		06/01/2016 21:00	1		Rxi-5ms 0.25(mm)

522 MOD

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Burlington Job No.: 240-65994-1

SDG No.:

Instrument ID: CHS.i Start Date: 06/17/2016 10:43

Analysis Batch Number: 105857 End Date: 06/17/2016 16:45

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		06/17/2016 10:43	1		Rxi-5ms 0.25(mm)
CCVL 200-105857/2		06/17/2016 10:56	1	20474_02.D	Rxi-5ms 0.25(mm)
LCS 200-105835/2-A		06/17/2016 11:09	1	20474_03.D	Rxi-5ms 0.25(mm)
MB 200-105835/1-A		06/17/2016 11:22	1	20474_04.D	Rxi-5ms 0.25(mm)
ZZZZZ		06/17/2016 11:36	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/17/2016 11:49	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/17/2016 12:03	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/17/2016 12:16	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/17/2016 12:29	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/17/2016 12:43	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/17/2016 12:56	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/17/2016 13:10	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/17/2016 13:23	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/17/2016 13:37	1		Rxi-5ms 0.25(mm)
CCV 200-105857/15		06/17/2016 13:50	1	20474_15.D	Rxi-5ms 0.25(mm)
ZZZZZ		06/17/2016 14:04	1		Rxi-5ms 0.25(mm)
660-74368-A-3-B MSD		06/17/2016 14:17	1	20474_17.D	Rxi-5ms 0.25(mm)
660-74368-A-3-C MS		06/17/2016 14:31	1	20474_18.D	Rxi-5ms 0.25(mm)
ZZZZZ		06/17/2016 14:44	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/17/2016 14:57	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/17/2016 15:11	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/17/2016 15:24	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/17/2016 15:38	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/17/2016 15:51	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/17/2016 16:05	1		Rxi-5ms 0.25(mm)
CCV 200-105857/26		06/17/2016 16:18	1	20474_26.D	Rxi-5ms 0.25(mm)
240-65994-12		06/17/2016 16:32	1	20474_27.D	Rxi-5ms 0.25(mm)
CCV 200-105857/28		06/17/2016 16:45	1	20474_28.D	Rxi-5ms 0.25(mm)

522 MOD

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Burlington Job No.: 240-65994-1

SDG No.:

Instrument ID: CHS.i Start Date: 06/23/2016 20:38

Analysis Batch Number: 106154 End Date: 06/24/2016 09:26

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		06/23/2016 20:38	1		Rxi-5ms 0.25(mm)
CCVL 200-106154/2		06/23/2016 20:51	1	20570_02.D	Rxi-5ms 0.25(mm)
ZZZZZ		06/23/2016 21:05	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/23/2016 21:19	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/23/2016 21:32	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/23/2016 21:46	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/23/2016 21:59	2.5		Rxi-5ms 0.25(mm)
ZZZZZ		06/23/2016 22:13	2.5		Rxi-5ms 0.25(mm)
LCS 200-106090/2-A		06/23/2016 22:26	1	20570_09.D	Rxi-5ms 0.25(mm)
MB 200-106090/1-A		06/23/2016 22:40	1	20570_10.D	Rxi-5ms 0.25(mm)
ZZZZZ		06/23/2016 22:53	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/23/2016 23:07	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/23/2016 23:20	1		Rxi-5ms 0.25(mm)
CCV 200-106154/14		06/23/2016 23:34	1	20570_14.D	Rxi-5ms 0.25(mm)
ZZZZZ		06/23/2016 23:47	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 00:01	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 00:14	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 00:27	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 00:41	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 00:54	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 01:08	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 01:21	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 01:35	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 01:48	1		Rxi-5ms 0.25(mm)
CCV 200-106154/25		06/24/2016 02:02	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 02:15	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 02:29	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 02:42	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 02:56	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 03:09	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 03:23	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 03:36	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 03:49	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 04:03	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 04:16	1		Rxi-5ms 0.25(mm)
CCV 200-106154/38		06/24/2016 04:30	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 04:43	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 04:57	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 05:10	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 05:24	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 05:37	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 05:51	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 06:04	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 06:17	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 06:31	1		Rxi-5ms 0.25(mm)

522 MOD

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Burlington Job No.: 240-65994-1

SDG No.:

Instrument ID: CHS.i Start Date: 06/23/2016 20:38

Analysis Batch Number: 106154 End Date: 06/24/2016 09:26

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		06/24/2016 06:44	1		Rxi-5ms 0.25(mm)
CCV 200-106154/49		06/24/2016 06:58	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 07:11	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 07:25	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 07:38	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 07:52	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 08:05	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 08:18	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 08:32	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 08:45	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 08:59	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 09:12	1		Rxi-5ms 0.25(mm)
CCV 200-106154/60		06/24/2016 09:26	1		Rxi-5ms 0.25(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Burlington Job No.: 240-65994-1

SDG No.:

Instrument ID: CHS.i Start Date: 06/24/2016 20:23

Analysis Batch Number: 106221 End Date: 06/25/2016 06:29

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		06/24/2016 20:23	1		Rxi-5ms 0.25(mm)
CCVL 200-106221/2		06/24/2016 20:37	1	20593_02.D	Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 20:50	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 21:04	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 21:17	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 21:31	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 21:44	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 21:58	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 22:11	1		Rxi-5ms 0.25(mm)
480-101917-E-32-D MS		06/24/2016 22:25	1	20593_10.D	Rxi-5ms 0.25(mm)
480-101917-E-32-C MSD		06/24/2016 22:38	1	20593_11.D	Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 22:52	1		Rxi-5ms 0.25(mm)
CCV 200-106221/13		06/24/2016 23:05	1	20593_13.D	Rxi-5ms 0.25(mm)
ZZZZZ		06/24/2016 23:18	1		Rxi-5ms 0.25(mm)
240-65996-1		06/24/2016 23:32	1	20593_15.D	Rxi-5ms 0.25(mm)
240-65996-2		06/24/2016 23:45	1	20593_16.D	Rxi-5ms 0.25(mm)
240-65996-3		06/24/2016 23:59	1	20593_17.D	Rxi-5ms 0.25(mm)
ZZZZZ		06/25/2016 00:12	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/25/2016 00:26	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/25/2016 00:39	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/25/2016 00:53	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/25/2016 01:06	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/25/2016 01:20	1		Rxi-5ms 0.25(mm)
CCV 200-106221/24		06/25/2016 01:33	1	20593_24.D	Rxi-5ms 0.25(mm)
ZZZZZ		06/25/2016 01:47	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/25/2016 02:00	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/25/2016 02:14	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/25/2016 02:27	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/25/2016 02:41	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/25/2016 02:54	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/25/2016 03:08	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/25/2016 03:21	5		Rxi-5ms 0.25(mm)
ZZZZZ		06/25/2016 03:34	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/25/2016 03:48	5		Rxi-5ms 0.25(mm)
CCV 200-106221/35		06/25/2016 04:01	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/25/2016 04:15	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/25/2016 04:28	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/25/2016 04:42	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/25/2016 04:55	2		Rxi-5ms 0.25(mm)
ZZZZZ		06/25/2016 05:09	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/25/2016 05:22	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/25/2016 05:36	2		Rxi-5ms 0.25(mm)
ZZZZZ		06/25/2016 05:49	1		Rxi-5ms 0.25(mm)
ZZZZZ		06/25/2016 06:02	1		Rxi-5ms 0.25(mm)

522 MOD

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Burlington Job No.: 240-65994-1

SDG No.:

Instrument ID: CHS.i Start Date: 06/24/2016 20:23

Analysis Batch Number: 106221 End Date: 06/25/2016 06:29

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		06/25/2016 06:16	1		Rxi-5ms 0.25(mm)
CCV 200-106221/46		06/25/2016 06:29	1		Rxi-5ms 0.25(mm)

522 MOD

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Burlington Job No.: 240-65994-1

SDG No.:

Batch Number: 105835 Batch Start Date: 06/16/16 18:26 Batch Analyst: Bourdeau, Timothy P

Batch Method: 3535A Batch End Date: 06/16/16 20:17

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	EX522SPi 00011	EX522SUi 00018		
MB 200-105835/1		3535A, 522 MOD		100 mL	2000 uL		100 uL		
LCS 200-105835/2		3535A, 522 MOD		100 mL	2000 uL	400 uL	100 uL		
660-74368-A-3 MSD		3535A, 522 MOD	T	100 mL	2000 uL	100 uL	100 uL		
660-74368-A-3 MS		3535A, 522 MOD	T	100 mL	2000 uL	100 uL	100 uL		
240-65994-A-12	MRC-SWDUP1-061316	3535A, 522 MOD	T	100 mL	2000 uL		100 uL		

Batch Notes	
Acid ID	936696
Acid Name	HCl
First End time	1950
Solvent Lot #	935927
Solvent Name	MeCl2
SPE Cartridge ID	7332203
First Start time	1903

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Burlington Job No.: 240-65994-1

SDG No.:

Batch Number: 106090 Batch Start Date: 06/22/16 18:02 Batch Analyst: Bourdeau, Timothy P

Batch Method: 3535A Batch End Date: 06/22/16 20:51

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	EX522SPi 00011	EX522SUi 00018	AnalysisComment	
MB 200-106090/1		3535A, 522 MOD		100 mL	2000 uL		100 uL		
LCS 200-106090/2		3535A, 522 MOD		100 mL	2000 uL	100 uL	100 uL		
480-101917-E-32 MSD		3535A, 522 MOD	T	100 mL	2000 uL	100 uL	100 uL	Containers D and E used to generate sample	
480-101917-E-32 MS		3535A, 522 MOD	T	100 mL	2000 uL	100 uL	100 uL	Containers D and E used to generate sample	
240-65996-E-1	MRC-SWFB-061316	3535A, 522 MOD	T	100 mL	2000 uL		100 uL		
240-65996-D-2	MRC-SW1A-061316	3535A, 522 MOD	T	100 mL	2000 uL		100 uL		
240-65996-D-3	MRC-SW2A-061316	3535A, 522 MOD	T	100 mL	2000 uL		100 uL		

Batch Notes	
Acid ID	936696
Acid Name	HCl
First End time	1925
Analyst ID - Reagent Drop Witness	BDL
Solvent Lot #	942210
Solvent Name	Methylene Chloride
SPE Cartridge ID	7463302
First Start time	1855

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Method 680

Polychlorinated Biphenyls (PCBs) (GC/MS) by Method 680

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-65994-1

SDG No.:

Lab File ID: Xd2402.D DFTPP Injection Date: 04/24/2016

Instrument ID: CMSX DFTPP Injection Time: 14:32

Analysis Batch No.: 430367

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	47.8
197	Less than 1 % of mass 198	0.6
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.4
275	10 - 30% of mass 198	25.7
365	Greater than 1% of mass 198	3.3
441	Present but less than mass 443	11.4 (64.3) 2
442	Greater than 40% of mass 198	92.8
443	17 - 23% of mass 442	17.7 (19.1) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICISAV 680-430367/4	Xd2404.D	04/24/2016	15:41
	IC 680-430367/25	Xd2405.D	04/24/2016	16:10
	IC 680-430367/26	Xd2406.D	04/24/2016	16:38
	IC 680-430367/27	Xd2407.D	04/24/2016	17:07
	IC 680-430367/28	Xd2408.D	04/24/2016	17:35
	ICV 680-430367/30	Xd2409.D	04/24/2016	18:04

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-65994-1

SDG No.:

Lab File ID: Xf2002a.D DFTPP Injection Date: 06/20/2016

Instrument ID: CMSX DFTPP Injection Time: 08:48

Analysis Batch No.: 438006

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	50.7
197	Less than 1 % of mass 198	0.0
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.2
275	10 - 30% of mass 198	26.0
365	Greater than 1% of mass 198	3.6
441	Present but less than mass 443	10.4 (66.9) 2
442	Greater than 40% of mass 198	83.8
443	17 - 23% of mass 442	15.6 (18.6) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	WDM 680-438006/3	Xf2003.D	06/20/2016	09:19
	CCVIS 680-438006/4	Xf2004.D	06/20/2016	09:49
	MB 680-437585/15-A	Xf2014.D	06/20/2016	14:35
	LCS 680-437585/16-A	Xf2015.D	06/20/2016	15:04
MRC-SW5A1-061316 MS	240-65994-1 MS	Xf2016.D	06/20/2016	15:33
MRC-SW5A1-061316	240-65994-1	Xf2018.D	06/20/2016	16:30
	CCV 680-438006/20	Xf2020.D	06/20/2016	17:28

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-65994-1

SDG No.:

Lab File ID: Xf2102.D DFTPP Injection Date: 06/21/2016

Instrument ID: CMSX DFTPP Injection Time: 20:10

Analysis Batch No.: 438264

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	55.5
197	Less than 1 % of mass 198	1.0
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.5
275	10 - 30% of mass 198	26.1
365	Greater than 1% of mass 198	3.0
441	Present but less than mass 443	4.4 (32.2) 2
442	Greater than 40% of mass 198	68.5
443	17 - 23% of mass 442	13.8 (20.2) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	WDM 680-438264/3	Xf2103.D	06/21/2016	20:41
	CCVIS 680-438264/4	Xf2104.D	06/21/2016	21:12
MRC-SW5A1-061316 MSD	240-65994-1 MSD	Xf2110.D	06/22/2016	00:04
MRC-SW5A2-061316	240-65994-2	Xf2112.D	06/22/2016	01:01
MRC-SW5B-061316	240-65994-3	Xf2113.D	06/22/2016	01:30
MRC-SW6A-061316	240-65994-4	Xf2114.D	06/22/2016	01:59
MRC-SW6B-061316	240-65994-5	Xf2115.D	06/22/2016	02:27
MRC-SW7A-061316	240-65994-6	Xf2116.D	06/22/2016	02:56
MRC-SW7B-061316	240-65994-7	Xf2117.D	06/22/2016	03:25
MRC-SW8A-061316	240-65994-8	Xf2118.D	06/22/2016	03:54
MRC-SW8B-061316	240-65994-9	Xf2119.D	06/22/2016	04:22
MRC-SW9A-061316	240-65994-10	Xf2120.D	06/22/2016	04:51
MRC-SW9B-061316	240-65994-11	Xf2121.D	06/22/2016	05:20
MRC-SWFB-061316	240-65996-1	Xf2122.D	06/22/2016	05:48
MRC-SWDUP2-061316	240-65996-5	Xf2123.D	06/22/2016	06:17
	CCV 680-438264/24	Xf2124.D	06/22/2016	06:45

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-65994-1 Analy Batch No.: 430367

SDG No.:

Instrument ID: CMSX GC Column: DB-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/24/2016 15:41 Calibration End Date: 04/24/2016 17:35 Calibration ID: 45292

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-430367/28	Xd2408.D
Level 2	IC 680-430367/27	Xd2407.D
Level 3	ICISAV 680-430367/4	Xd2404.D
Level 4	IC 680-430367/26	Xd2406.D
Level 5	IC 680-430367/25	Xd2405.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochlorobiphenyl	0.9409	0.9877	0.9866	1.0018	1.0386	Ave		0.9911				3.5		20.0			
Dichlorobiphenyl	0.6430	0.6782	0.6962	0.6962	0.7337	Ave		0.6895				4.8		20.0			
Trichlorobiphenyl	0.4097	0.4114	0.4253	0.4324	0.4604	Ave		0.4278				4.8		20.0			
PCB-104			0.2443			Ave		0.2443						30.0			
Tetrachlorobiphenyl	0.2470	0.2621	0.2562	0.2680	0.2810	Ave		0.2629				4.9		20.0			
Pentachlorobiphenyl	0.1465	0.1582	0.1680	0.1763	0.1852	Ave		0.1668				9.1		20.0			
PCB-77			0.3640			Ave		0.3640						30.0			
Hexachlorobiphenyl	0.1338	0.1411	0.1498	0.1546	0.1625	Ave		0.1484				7.6		20.0			
Heptachlorobiphenyl	0.1015	0.1109	0.1179	0.1228	0.1323	Ave		0.1171				10.0		20.0			
Octachlorobiphenyl	0.0938	0.1067	0.1105	0.1195	0.1284	Ave		0.1118				11.7		20.0			
PCB-208			0.0500			Ave		0.0500						30.0			
Nonachlorobiphenyl			0.0409			Ave		0.0380				14.1		20.0			
DCB Decachlorobiphenyl	0.0297	0.0366	0.0390	0.0413	0.0437	Ave		0.0380				14.1		20.0			
Decachlorobiphenyl-13C12	0.0248	0.0311	0.0307	0.0339	0.0354	Ave		0.0312				13.1		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-65994-1

SDG No.:

Lab Sample ID (1): ICISAV 680-430367/4 Instrument ID (1): CMSX

GC Column (1): DB-5MS ID: 0.25(mm) Date Analyzed (1): 04/24/2016 15:41

ANALYTE	RT	RESOLUTION (%)
Monochlorobiphenyl	8.82	100.0
Dichlorobiphenyl	10.58	100.0
Trichlorobiphenyl	12.25	100.0
Tetrachlorobiphenyl	13.75	100.0
Pentachlorobiphenyl	15.16	100.0
Hexachlorobiphenyl	16.45	100.0
Heptachlorobiphenyl	17.59	100.0
Octachlorobiphenyl	18.69	100.0
Nonachlorobiphenyl	19.75	100.0
DCB Decachlorobiphenyl	20.76	100.0

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-65994-1

SDG No.:

Lab Sample ID (1): CCVIS 680-438006/4 Instrument ID (1): CMSX

GC Column (1): DB-5MS ID: 0.25(mm) Date Analyzed (1): 06/20/2016 09:49

ANALYTE	RT	RESOLUTION (%)
Monochlorobiphenyl	8.48	100.0
Dichlorobiphenyl	10.23	100.0
Trichlorobiphenyl	11.87	100.0
Tetrachlorobiphenyl	13.37	100.0
Pentachlorobiphenyl	14.77	100.0
Hexachlorobiphenyl	16.07	100.0
Heptachlorobiphenyl	17.20	100.0
Octachlorobiphenyl	18.29	100.0
DCB Decachlorobiphenyl	20.34	100.0

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-65994-1

SDG No.:

Lab Sample ID (1): CCVIS 680-438264/4 Instrument ID (1): CMSX

GC Column (1): DB-5MS ID: 0.25(mm) Date Analyzed (1): 06/21/2016 21:12

ANALYTE	RT	RESOLUTION (%)
Monochlorobiphenyl	8.48	100.0
Dichlorobiphenyl	10.23	100.0
Trichlorobiphenyl	11.87	100.0
Tetrachlorobiphenyl	13.37	100.0
Pentachlorobiphenyl	14.77	100.0
Hexachlorobiphenyl	16.07	100.0
Heptachlorobiphenyl	17.20	100.0
Octachlorobiphenyl	18.29	100.0
DCB Decachlorobiphenyl	20.36	100.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-65994-1

SDG No.:

Lab Sample ID: ICV 680-430367/30 Calibration Date: 04/24/2016 18:04

Instrument ID: CMSX Calib Start Date: 04/24/2016 15:41

GC Column: DB-5MS ID: 0.25(mm) Calib End Date: 04/24/2016 17:35

Lab File ID: Xd2409.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.9911	0.997		1.01	1.00	0.6	20.0
Dichlorobiphenyl	Ave	0.6895	0.6585		0.955	1.00	-4.5	20.0
Trichlorobiphenyl	Ave	0.4278	0.4548		1.06	1.00	6.3	20.0
Tetrachlorobiphenyl	Ave	0.2629	0.2724		2.07	2.00	3.6	20.0
Pentachlorobiphenyl	Ave	0.1668	0.1718		2.06	2.00	3.0	20.0
Hexachlorobiphenyl	Ave	0.1484	0.1534		2.07	2.00	3.4	20.0
Heptachlorobiphenyl	Ave	0.1171	0.1249		3.20	3.00	6.7	20.0
Octachlorobiphenyl	Ave	0.1118	0.1197		3.21	3.00	7.1	20.0
Nonachlorobiphenyl	Ave	0.0409	0.0557		5.86	4.00	36.3*	20.0
DCB Decachlorobiphenyl	Ave	0.0380	0.0408		5.36	5.00	7.2	20.0
Decachlorobiphenyl-13C12	Ave	0.0312	0.0325		5.21	5.00	4.2	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-65994-1

SDG No.:

Lab Sample ID: CCVIS 680-438006/4 Calibration Date: 06/20/2016 09:49

Instrument ID: CMSX Calib Start Date: 04/24/2016 15:41

GC Column: DB-5MS ID: 0.25(mm) Calib End Date: 04/24/2016 17:35

Lab File ID: Xf2004.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.9911	0.9317		0.940	1.00	-6.0	20.0
Dichlorobiphenyl	Ave	0.6895	0.6668		0.967	1.00	-3.3	20.0
Trichlorobiphenyl	Ave	0.4278	0.4318		1.01	1.00	0.9	20.0
Tetrachlorobiphenyl	Ave	0.2629	0.2655		2.02	2.00	1.0	20.0
Pentachlorobiphenyl	Ave	0.1668	0.1804		2.16	2.00	8.1	20.0
Hexachlorobiphenyl	Ave	0.1484	0.1566		2.11	2.00	5.5	20.0
Heptachlorobiphenyl	Ave	0.1171	0.1236		3.17	3.00	5.6	20.0
Octachlorobiphenyl	Ave	0.1118	0.1167		3.13	3.00	4.4	20.0
DCB Decachlorobiphenyl	Ave	0.0380	0.0322		4.24	5.00	-15.3	20.0
Decachlorobiphenyl-13C12	Ave	0.0312	0.0292		4.68	5.00	-6.4	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-65994-1

SDG No.:

Lab Sample ID: CCV 680-438006/20 Calibration Date: 06/20/2016 17:28

Instrument ID: CMSX Calib Start Date: 04/24/2016 15:41

GC Column: DB-5MS ID: 0.25(mm) Calib End Date: 04/24/2016 17:35

Lab File ID: Xf2020.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.9911	0.9482		0.957	1.00	-4.3	20.0
Dichlorobiphenyl	Ave	0.6895	0.6651		0.965	1.00	-3.5	20.0
Trichlorobiphenyl	Ave	0.4278	0.4229		0.989	1.00	-1.1	20.0
Tetrachlorobiphenyl	Ave	0.2629	0.2577		1.96	2.00	-2.0	20.0
Pentachlorobiphenyl	Ave	0.1668	0.1721		2.06	2.00	3.2	20.0
Hexachlorobiphenyl	Ave	0.1484	0.1457		1.96	2.00	-1.8	20.0
Heptachlorobiphenyl	Ave	0.1171	0.1142		2.93	3.00	-2.4	20.0
Octachlorobiphenyl	Ave	0.1118	0.1077		2.89	3.00	-3.7	20.0
DCB Decachlorobiphenyl	Ave	0.0380	0.0293		3.86	5.00	-22.9*	20.0
Decachlorobiphenyl-13C12	Ave	0.0312	0.0268		4.29	5.00	-14.1	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-65994-1

SDG No.:

Lab Sample ID: CCVIS 680-438264/4 Calibration Date: 06/21/2016 21:12

Instrument ID: CMSX Calib Start Date: 04/24/2016 15:41

GC Column: DB-5MS ID: 0.25(mm) Calib End Date: 04/24/2016 17:35

Lab File ID: Xf2104.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.9911	0.9780		0.987	1.00	-1.3	20.0
Dichlorobiphenyl	Ave	0.6895	0.6920		1.00	1.00	0.4	20.0
Trichlorobiphenyl	Ave	0.4278	0.4442		1.04	1.00	3.8	20.0
Tetrachlorobiphenyl	Ave	0.2629	0.2761		2.10	2.00	5.0	20.0
Pentachlorobiphenyl	Ave	0.1668	0.1807		2.17	2.00	8.3	20.0
Hexachlorobiphenyl	Ave	0.1484	0.1593		2.15	2.00	7.3	20.0
Heptachlorobiphenyl	Ave	0.1171	0.1242		3.18	3.00	6.1	20.0
Octachlorobiphenyl	Ave	0.1118	0.1197		3.21	3.00	7.1	20.0
DCB Decachlorobiphenyl	Ave	0.0380	0.0338		4.45	5.00	-11.1	20.0
Decachlorobiphenyl-13C12	Ave	0.0312	0.0312		5.00	5.00	0.0	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-65994-1

SDG No.:

Lab Sample ID: CCV 680-438264/24 Calibration Date: 06/22/2016 06:45

Instrument ID: CMSX Calib Start Date: 04/24/2016 15:41

GC Column: DB-5MS ID: 0.25(mm) Calib End Date: 04/24/2016 17:35

Lab File ID: Xf2124.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.9911	1.015		1.02	1.00	2.4	20.0
Dichlorobiphenyl	Ave	0.6895	0.7260		1.05	1.00	5.3	20.0
Trichlorobiphenyl	Ave	0.4278	0.4529		1.06	1.00	5.9	20.0
Tetrachlorobiphenyl	Ave	0.2629	0.2801		2.13	2.00	6.5	20.0
Pentachlorobiphenyl	Ave	0.1668	0.1900		2.28	2.00	13.9	20.0
Hexachlorobiphenyl	Ave	0.1484	0.1674		2.26	2.00	12.8	20.0
Heptachlorobiphenyl	Ave	0.1171	0.1285		3.29	3.00	9.8	20.0
Octachlorobiphenyl	Ave	0.1118	0.1223		3.28	3.00	9.4	20.0
DCB Decachlorobiphenyl	Ave	0.0380	0.0345		4.54	5.00	-9.3	20.0
Decachlorobiphenyl-13C12	Ave	0.0312	0.0309		4.96	5.00	-0.8	20.0

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-65994-1

SDG No.:

Lab File ID: Xf2014.D Lab Sample ID: MB 680-437585/15-A

Matrix: Water Date Extracted: 06/16/2016 13:29

Instrument ID: CMSX Date Analyzed: 06/20/2016 14:35

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 680-437585/16-A	Xf2015.D	06/20/2016 15:04
MRC-SW5A1-061316 MS	240-65994-1 MS	Xf2016.D	06/20/2016 15:33
MRC-SW5A1-061316	240-65994-1	Xf2018.D	06/20/2016 16:30
MRC-SW5A1-061316 MSD	240-65994-1 MSD	Xf2110.D	06/22/2016 00:04
MRC-SW5A2-061316	240-65994-2	Xf2112.D	06/22/2016 01:01
MRC-SW5B-061316	240-65994-3	Xf2113.D	06/22/2016 01:30
MRC-SW6A-061316	240-65994-4	Xf2114.D	06/22/2016 01:59
MRC-SW6B-061316	240-65994-5	Xf2115.D	06/22/2016 02:27
MRC-SW7A-061316	240-65994-6	Xf2116.D	06/22/2016 02:56
MRC-SW7B-061316	240-65994-7	Xf2117.D	06/22/2016 03:25
MRC-SW8A-061316	240-65994-8	Xf2118.D	06/22/2016 03:54
MRC-SW8B-061316	240-65994-9	Xf2119.D	06/22/2016 04:22
MRC-SW9A-061316	240-65994-10	Xf2120.D	06/22/2016 04:51
MRC-SW9B-061316	240-65994-11	Xf2121.D	06/22/2016 05:20
MRC-SWFB-061316	240-65996-1	Xf2122.D	06/22/2016 05:48
MRC-SWDUP2-061316	240-65996-5	Xf2123.D	06/22/2016 06:17

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-65994-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 680-437585/15-A

Matrix: Water | Lab File ID: Xf2014.D

Analysis Method: 680 | Date Collected:

Extract. Method: 680 | Date Extracted: 06/16/2016 13:29

Sample wt/vol: 1000(mL) | Date Analyzed: 06/20/2016 14:35

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438006 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.30	U	0.30	0.030
26601-64-9	Hexachlorobiphenyl	0.20	U	0.20	0.015
53742-07-7	Nonachlorobiphenyl	0.50	U	0.50	0.049
55722-26-4	Octachlorobiphenyl	0.30	U	0.30	0.038
27323-18-8	Monochlorobiphenyl	0.10	U	0.10	0.0056
2051-24-3	DCB Decachlorobiphenyl	0.50	U	0.50	0.070
25512-42-9	Dichlorobiphenyl	0.10	U	0.10	0.0054
25429-29-2	Pentachlorobiphenyl	0.20	U	0.20	0.014
26914-33-0	Tetrachlorobiphenyl	0.20	U	0.20	0.013
25323-68-6	Trichlorobiphenyl	0.10	U	0.10	0.0065

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	75	*	25-113

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-65994-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-5MS ID: 0.25(mm)

Client Sample ID	Lab Sample ID	13DCB	#
MRC-SW5A1-061316	240-65994-1	48	*
MRC-SW5A2-061316	240-65994-2	83	
MRC-SW5B-061316	240-65994-3	71	
MRC-SW6A-061316	240-65994-4	74	*
MRC-SW6B-061316	240-65994-5	71	*
MRC-SW7A-061316	240-65994-6	68	
MRC-SW7B-061316	240-65994-7	78	*
MRC-SW8A-061316	240-65994-8	72	*
MRC-SW8B-061316	240-65994-9	67	*
MRC-SW9A-061316	240-65994-10	74	
MRC-SW9B-061316	240-65994-11	68	
MRC-SWFB-061316	240-65996-1	81	*
MRC-SWDUP2-061316	240-65996-5	78	
	MB 680-437585/15-A	75	*
	LCS 680-437585/16-A	64	*
MRC-SW5A1-061316 MS	240-65994-1 MS	63	*
MRC-SW5A1-061316 MSD	240-65994-1 MSD	60	

	QC LIMITS
13DCB = Decachlorobiphenyl-13C12	25-113

Column to be used to flag recovery values

FORM II 680

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-65994-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Xf2015.D

Lab ID: LCS 680-437585/16-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.42	74	62-130	*
Hexachlorobiphenyl	4.00	2.88	72	62-130	*
Nonachlorobiphenyl	10.0	9.09	91	70-195	*
Octachlorobiphenyl	6.00	4.50	75	64-130	*
Monochlorobiphenyl	2.00	1.20	60	42-130	*
DCB Decachlorobiphenyl	10.0	5.98	60	59-130	*
Dichlorobiphenyl	2.00	1.28	64	49-130	*
Pentachlorobiphenyl	4.00	2.94	74	63-130	*
Tetrachlorobiphenyl	4.00	2.72	68	54-130	*
Trichlorobiphenyl	2.00	1.37	68	51-130	*

Column to be used to flag recovery and RPD values

FORM III 680

FORM III
GC/MS SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-65994-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Xf2016.D

Lab ID: 240-65994-1 MS Client ID: MRC-SW5A1-061316 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Heptachlorobiphenyl	5.98	0.30 U	4.66	78	62-130	*
Hexachlorobiphenyl	3.99	0.20 U	3.07	77	62-130	*
Nonachlorobiphenyl	9.97	0.50 U	9.73	98	70-195	*
Octachlorobiphenyl	5.98	0.30 U	4.86	81	64-130	*
Monochlorobiphenyl	1.99	0.099 U	0.976	49	42-130	*
DCB Decachlorobiphenyl	9.97	0.50 U	6.48	65	59-130	*
Dichlorobiphenyl	1.99	0.099 U	1.16	58	49-130	*
Pentachlorobiphenyl	3.99	0.20 U	4.75	119	63-130	*
Tetrachlorobiphenyl	3.99	0.20 U	2.61	65	54-130	*
Trichlorobiphenyl	1.99	0.099 U	1.32	66	51-130	*

Column to be used to flag recovery and RPD values

FORM III 680

FORM III
GC/MS SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-65994-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Xf2110.D

Lab ID: 240-65994-1 MSD Client ID: MRC-SW5A1-061316 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Heptachlorobiphenyl	5.78	4.01	69	15	40	62-130	
Hexachlorobiphenyl	3.86	2.55	66	18	40	62-130	
Nonachlorobiphenyl	9.64	8.14	84	18	40	70-195	
Octachlorobiphenyl	5.78	4.15	72	16	40	64-130	
Monochlorobiphenyl	1.93	0.918	48	6	40	42-130	
DCB Decachlorobiphenyl	9.64	5.61	58	14	40	59-130	F1
Dichlorobiphenyl	1.93	1.06	55	9	40	49-130	
Pentachlorobiphenyl	3.86	4.12	107	14	40	63-130	
Tetrachlorobiphenyl	3.86	2.28	59	13	40	54-130	
Trichlorobiphenyl	1.93	1.16	60	13	40	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-65994-1

SDG No.:

Instrument ID: CMSX Calibration Start Date: 04/24/2016 15:41

GC Column: DB-5MS ID: 0.25(mm) Calibration End Date: 04/24/2016 17:35

Calibration ID: 45292

		PHN		CRY			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		50088	11.38	42340	17.58		
UPPER LIMIT		75132	11.88	63510	18.08		
LOWER LIMIT		25044	10.88	21170	17.08		
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCVIS 680-438006/4		70060	11.00	48548	17.18		
MB 680-437585/15-A		81212*	11.01	52624	17.18		
LCS 680-437585/16-A		81077*	11.01	54298	17.18		
240-65994-1 MS	MRC-SW5A1-061316 MS	89943*	11.00	67009*	17.18		
240-65994-1	MRC-SW5A1-061316	89042*	11.00	63930*	17.18		
CCV 680-438006/20		72492	11.00	49012	17.18		
CCVIS 680-438264/4		38876	11.01	29902	17.18		
240-65994-1 MSD	MRC-SW5A1-061316 MSD	60632	11.01	46821	17.18		
240-65994-2	MRC-SW5A2-061316	49231	11.01	36697	17.18		
240-65994-3	MRC-SW5B-061316	55078	11.01	43310	17.18		
240-65994-4	MRC-SW6A-061316	61380*	11.01	48888*	17.18		
240-65994-5	MRC-SW6B-061316	70730*	11.01	55487*	17.18		
240-65994-6	MRC-SW7A-061316	58171	11.01	45678*	17.18		
240-65994-7	MRC-SW7B-061316	63478*	11.00	49763*	17.18		
240-65994-8	MRC-SW8A-061316	65299*	11.01	52331*	17.18		
240-65994-9	MRC-SW8B-061316	61876*	11.01	46997*	17.18		
240-65994-10	MRC-SW9A-061316	54250	11.00	43462	17.18		
240-65994-11	MRC-SW9B-061316	57973	11.01	44013	17.18		
240-65996-1	MRC-SWFB-061316	65480*	11.01	51756*	17.18		
240-65996-5	MRC-SWDUP2-061316	51793	11.01	42507	17.18		
CCV 680-438264/24		39470	11.01	29231	17.18		

ok, samples within limits for IC or CCVIS

PHN = Phenanthrene-d10
CRY = Chrysene-d12

Area Limit = 50%-150% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 680

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-65994-1

SDG No.:

Sample No.: CCVIS 680-438006/4 Date Analyzed: 06/20/2016 09:49

Instrument ID: CMSX GC Column: DB-5MS ID: 0.25(mm)

Lab File ID (Standard): Xf2004.D Heated Purge: (Y/N) N

Calibration ID: 45292

		PHN		CRY			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		70060	11.00	48548	17.18		
UPPER LIMIT		91078	11.50	63112	17.68		
LOWER LIMIT		49042	10.50	33984	16.68		
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 680-437585/15-A		81212*	11.01	52624	17.18		
LCS 680-437585/16-A		81077*	11.01	54298	17.18		
240-65994-1 MS	MRC-SW5A1-061316 MS	89943*	11.00	67009*	17.18		
240-65994-1	MRC-SW5A1-061316	89042*	11.00	63930*	17.18		
CCV 680-438006/20		72492	11.00	49012	17.18		

ok, samples within limits for IC or CCVIS

PHN = Phenanthrene-d10
CRY = Chrysene-d12

Area Limit = 70%-130% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 680

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-65994-1

SDG No.:

Sample No.: CCVIS 680-438264/4 Date Analyzed: 06/21/2016 21:12

Instrument ID: CMSX GC Column: DB-5MS ID: 0.25(mm)

Lab File ID (Standard): Xf2104.D Heated Purge: (Y/N) N

Calibration ID: 45292

		PHN		CRY			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		38876	11.01	29902	17.18		
UPPER LIMIT		50539	11.51	38873	17.68		
LOWER LIMIT		27213	10.51	20931	16.68		
LAB SAMPLE ID	CLIENT SAMPLE ID						
240-65994-1 MSD	MRC-SW5A1-061316 MSD	60632	11.01	46821	17.18		
240-65994-2	MRC-SW5A2-061316	49231	11.01	36697	17.18		
240-65994-3	MRC-SW5B-061316	55078	11.01	43310	17.18		
240-65994-4	MRC-SW6A-061316	61380*	11.01	48888*	17.18		
240-65994-5	MRC-SW6B-061316	70730*	11.01	55487*	17.18		
240-65994-6	MRC-SW7A-061316	58171	11.01	45678*	17.18		
240-65994-7	MRC-SW7B-061316	63478*	11.00	49763*	17.18		
240-65994-8	MRC-SW8A-061316	65299*	11.01	52331*	17.18		
240-65994-9	MRC-SW8B-061316	61876*	11.01	46997*	17.18		
240-65994-10	MRC-SW9A-061316	54250	11.00	43462	17.18		
240-65994-11	MRC-SW9B-061316	57973	11.01	44013	17.18		
240-65996-1	MRC-SWFB-061316	65480*	11.01	51756*	17.18		
240-65996-5	MRC-SWDUP2-061316	51793	11.01	42507	17.18		
CCV 680-438264/24		39470	11.01	29231	17.18		

PHN = Phenanthrene-d10
CRY = Chrysene-d12

Area Limit = 70%-130% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 680

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Savannah Job No.: 240-65994-1

SDG No.:

Instrument ID: CMSX Start Date: 04/24/2016 14:32

Analysis Batch Number: 430367 End Date: 04/24/2016 22:50

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 680-430367/2		04/24/2016 14:32	1	Xd2402.D	DB-5MS 0.25(mm)
WDM 680-430367/3		04/24/2016 15:03	1		DB-5MS 0.25(mm)
ICISAV 680-430367/4		04/24/2016 15:41	1	Xd2404.D	DB-5MS 0.25(mm)
IC 680-430367/25		04/24/2016 16:10	1	Xd2405.D	DB-5MS 0.25(mm)
IC 680-430367/26		04/24/2016 16:38	1	Xd2406.D	DB-5MS 0.25(mm)
IC 680-430367/27		04/24/2016 17:07	1	Xd2407.D	DB-5MS 0.25(mm)
IC 680-430367/28		04/24/2016 17:35	1	Xd2408.D	DB-5MS 0.25(mm)
ICV 680-430367/30		04/24/2016 18:04	1	Xd2409.D	DB-5MS 0.25(mm)
ZZZZZ		04/24/2016 19:01	1		DB-5MS 0.25(mm)
ZZZZZ		04/24/2016 19:30	1		DB-5MS 0.25(mm)
ZZZZZ		04/24/2016 19:58	1		DB-5MS 0.25(mm)
ZZZZZ		04/24/2016 20:27	1		DB-5MS 0.25(mm)
ZZZZZ		04/24/2016 20:55	1		DB-5MS 0.25(mm)
ZZZZZ		04/24/2016 21:24	1		DB-5MS 0.25(mm)
ZZZZZ		04/24/2016 21:53	1		DB-5MS 0.25(mm)
ZZZZZ		04/24/2016 22:21	1		DB-5MS 0.25(mm)
CCVC 680-430367/24		04/24/2016 22:50	1		DB-5MS 0.25(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Savannah Job No.: 240-65994-1

SDG No.:

Instrument ID: CMSX Start Date: 06/20/2016 08:48

Analysis Batch Number: 438006 End Date: 06/20/2016 17:28

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 680-438006/2		06/20/2016 08:48	1	Xf2002a.D	DB-5MS 0.25(mm)
WDM 680-438006/3		06/20/2016 09:19	1	Xf2003.D	DB-5MS 0.25(mm)
CCVIS 680-438006/4		06/20/2016 09:49	1	Xf2004.D	DB-5MS 0.25(mm)
ZZZZZ		06/20/2016 10:18	1		DB-5MS 0.25(mm)
ZZZZZ		06/20/2016 10:46	1		DB-5MS 0.25(mm)
ZZZZZ		06/20/2016 12:41	1		DB-5MS 0.25(mm)
ZZZZZ		06/20/2016 14:07	1		DB-5MS 0.25(mm)
MB 680-437585/15-A		06/20/2016 14:35	1	Xf2014.D	DB-5MS 0.25(mm)
LCS 680-437585/16-A		06/20/2016 15:04	1	Xf2015.D	DB-5MS 0.25(mm)
240-65994-1 MS		06/20/2016 15:33	1	Xf2016.D	DB-5MS 0.25(mm)
240-65994-1		06/20/2016 16:30	1	Xf2018.D	DB-5MS 0.25(mm)
ZZZZZ		06/20/2016 16:59	1		DB-5MS 0.25(mm)
CCV 680-438006/20		06/20/2016 17:28	1	Xf2020.D	DB-5MS 0.25(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Savannah Job No.: 240-65994-1

SDG No.:

Instrument ID: CMSX Start Date: 06/21/2016 20:10

Analysis Batch Number: 438264 End Date: 06/22/2016 06:45

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 680-438264/2		06/21/2016 20:10	1	Xf2102.D	DB-5MS 0.25(mm)
WDM 680-438264/3		06/21/2016 20:41	1	Xf2103.D	DB-5MS 0.25(mm)
CCVIS 680-438264/4		06/21/2016 21:12	1	Xf2104.D	DB-5MS 0.25(mm)
ZZZZZ		06/21/2016 21:40	1		DB-5MS 0.25(mm)
ZZZZZ		06/21/2016 22:09	1		DB-5MS 0.25(mm)
ZZZZZ		06/21/2016 22:38	1		DB-5MS 0.25(mm)
ZZZZZ		06/21/2016 23:35	1		DB-5MS 0.25(mm)
240-65994-1 MSD		06/22/2016 00:04	1	Xf2110.D	DB-5MS 0.25(mm)
240-65994-2		06/22/2016 01:01	1	Xf2112.D	DB-5MS 0.25(mm)
240-65994-3		06/22/2016 01:30	1	Xf2113.D	DB-5MS 0.25(mm)
240-65994-4		06/22/2016 01:59	1	Xf2114.D	DB-5MS 0.25(mm)
240-65994-5		06/22/2016 02:27	1	Xf2115.D	DB-5MS 0.25(mm)
240-65994-6		06/22/2016 02:56	1	Xf2116.D	DB-5MS 0.25(mm)
240-65994-7		06/22/2016 03:25	1	Xf2117.D	DB-5MS 0.25(mm)
240-65994-8		06/22/2016 03:54	1	Xf2118.D	DB-5MS 0.25(mm)
240-65994-9		06/22/2016 04:22	1	Xf2119.D	DB-5MS 0.25(mm)
240-65994-10		06/22/2016 04:51	1	Xf2120.D	DB-5MS 0.25(mm)
240-65994-11		06/22/2016 05:20	1	Xf2121.D	DB-5MS 0.25(mm)
240-65996-1		06/22/2016 05:48	1	Xf2122.D	DB-5MS 0.25(mm)
240-65996-5		06/22/2016 06:17	1	Xf2123.D	DB-5MS 0.25(mm)
CCV 680-438264/24		06/22/2016 06:45	1	Xf2124.D	DB-5MS 0.25(mm)

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Savannah Job No.: 240-65994-1

SDG No.:

Batch Number: 437585 Batch Start Date: 06/16/16 13:29 Batch Analyst: Simmons, Richard B

Batch Method: 680 Batch End Date: 06/17/16 07:29

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	ReceivedpH	ResidualChloCheck
240-65994-E-1	MRC-SW5A1-061316	680, 680	T			504.4 mL	.5 mL	8 SU	N
240-65994-D-2	MRC-SW5A2-061316	680, 680	T			509.9 mL	.5 mL	8 SU	N
240-65994-E-3	MRC-SW5B-061316	680, 680	T	1548.5 g	510.9 g	1037.6 mL	1 mL	8 SU	N
240-65994-E-4	MRC-SW6A-061316	680, 680	T	1548.0 g	510.4 g	1037.6 mL	1 mL	8 SU	N
240-65994-E-5	MRC-SW6B-061316	680, 680	T	1552.1 g	509.7 g	1042.4 mL	1 mL	8 SU	N
240-65994-D-6	MRC-SW7A-061316	680, 680	T			501.9 mL	.5 mL	8 SU	N
240-65994-E-7	MRC-SW7B-061316	680, 680	T	1522.7 g	509.8 g	1012.9 mL	1 mL	8 SU	N
240-65994-D-8	MRC-SW8A-061316	680, 680	T	1551.0 g	511.6 g	1039.4 mL	1 mL	8 SU	N
240-65994-D-9	MRC-SW8B-061316	680, 680	T	1518.1 g	509.8 g	1008.3 mL	1 mL	8 SU	N
240-65994-D-10	MRC-SW9A-061316	680, 680	T	1550.6 g	511.0 g	1039.6 mL	1 mL	8 SU	N
240-65994-E-11	MRC-SW9B-061316	680, 680	T	1549.1 g	510.8 g	1038.3 mL	1 mL	8 SU	N
240-65996-G-1	MRC-SWFB-061316	680, 680	T	1523.7 g	512.4 g	1011.3 mL	1 mL	7 SU	N
240-65996-E-5	MRC-SWDUP2-061316	680, 680	T	1547.6 g	512.0 g	1035.6 mL	1 mL	8 SU	N
MB 680-437585/15		680, 680				1000 mL	1 mL	7 SU	N
LCS 680-437585/16		680, 680				1000 mL	1 mL	7 SU	N
240-65994-D-1 MS	MRC-SW5A1-061316	680, 680	T			501.4 mL	.5 mL	8 SU	N
240-65994-D-1 MSD	MRC-SW5A1-061316	680, 680	T	1029.3 g	510.6 g	518.7 mL	.5 mL	8 SU	N

Lab Sample ID	Client Sample ID	Method Chain	Basis	680wkSPIKE 00096	680wkSURR 00112	680wkSURR 00113			
240-65994-E-1	MRC-SW5A1-061316	680, 680	T		0.5 mL				
240-65994-D-2	MRC-SW5A2-061316	680, 680	T		0.5 mL				
240-65994-E-3	MRC-SW5B-061316	680, 680	T		1 mL				
240-65994-E-4	MRC-SW6A-061316	680, 680	T		1 mL				
240-65994-E-5	MRC-SW6B-061316	680, 680	T		1 mL				
240-65994-D-6	MRC-SW7A-061316	680, 680	T		0.5 mL				
240-65994-E-7	MRC-SW7B-061316	680, 680	T		1 mL				
240-65994-D-8	MRC-SW8A-061316	680, 680	T		1 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Savannah Job No.: 240-65994-1

SDG No.:

Batch Number: 437585 Batch Start Date: 06/16/16 13:29 Batch Analyst: Simmons, Richard B

Batch Method: 680 Batch End Date: 06/17/16 07:29

Lab Sample ID	Client Sample ID	Method Chain	Basis	680wkSPIKE 00096	680wkSURR 00112	680wkSURR 00113			
240-65994-D-9	MRC-SW8B-061316	680, 680	T		1 mL				
240-65994-D-10	MRC-SW9A-061316	680, 680	T		1 mL				
240-65994-E-11	MRC-SW9B-061316	680, 680	T		1 mL				
240-65996-G-1	MRC-SWFB-061316	680, 680	T		1 mL				
240-65996-E-5	MRC-SWDUP2-061316	680, 680	T		1 mL				
MB 680-437585/15		680, 680				1 mL			
LCS 680-437585/16		680, 680		1 mL		1 mL			
240-65994-D-1 MS	MRC-SW5A1-061316	680, 680	T	0.5 mL		0.5 mL			
240-65994-D-1 MSD	MRC-SW5A1-061316	680, 680	T	0.5 mL		0.5 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Savannah Job No.: 240-65994-1

SDG No.:

Batch Number: 437585 Batch Start Date: 06/16/16 13:29 Batch Analyst: Simmons, Richard B

Batch Method: 680 Batch End Date: 06/17/16 07:29

Batch Notes	
Balance ID	23
Batch Comment	680 box M680-71
Concentration End Time	1059
Concentration Start Time	1012
Analyst ID - Concentration	CLP
Exchange Solvent ID	4526383
Exchange Solvent Name	Hexanes
Exchange Solvent Volume Used	10 mL
Extraction 1 End Time	0729
Extraction 1 Start Time	1329
pH Paper ID	4505419 4452485 4481609
Pipette ID	AA06G
Prep Solvent ID	4585720
Prep Solvent Name	MeCL2
Prep Solvent Volume Used	70 mL
Person's name who did the prep	RBS/CEW
Analyst ID - Reagent Drop Witness	CEW/RBS
Residual Chlorine Indicator ID	4577997
Analyst ID - Spike Analyst	RBS
Analyst ID - Spike Witness Analyst	CEW
Sufficient volume for MS/MSD?	Yes
Syringe ID	33814752
Vial ID	74552

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

SAMPLE IDENTIFICATION	MRC-SW6B-061316
COMPOUND	TRICHLOROETHENE
COMPOUND AREA	13232
INTERNAL STANDARD AMOUNT (ng)	10
DILUTION FACTOR	1
INTERNAL STANDARD AREA	968710
AVERAGE RRF	0.2761

13232 x 10 x 1 / 968710 x 0.2761 0.49 ug/L

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW6B-061316 | Lab Sample ID: 240-65994-5

Matrix: Water | Lab File ID: UXJ5614.D

Analysis Method: 8260C | Date Collected: 06/13/2016 12:52

Sample wt/vol: 5(mL) | Date Analyzed: 06/20/2016 14:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 235154 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	10	U	10	2.3
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.20
108-87-2	Methylcyclohexane	1.0	U	1.0	0.43
75-09-2	Methylene Chloride	1.0	U *	1.0	0.33
100-42-5	Styrene	1.0	U	1.0	0.45
127-18-4	Tetrachloroethene	1.0	U	1.0	0.31
108-88-3	Toluene	1.0	U	1.0	0.23
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.30
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.56
79-01-6	Trichloroethene	0.49	J	1.0	0.22
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.49
75-01-4	Vinyl chloride	1.0	U	1.0	0.29
1330-20-7	Xylenes, Total	2.0	U	2.0	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	110		80-120
1868-53-7	Dibromofluoromethane (Surr)	113		79-120
460-00-4	4-Bromofluorobenzene (Surr)	104		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	115		78-125

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160620-55569.b\UXJ5614.D
Lims ID: 240-65994-B-5
Client ID: MRC-SW6B-061316
Sample Type: Client
Inject. Date: 20-Jun-2016 14:43:30 ALS Bottle#: 14 Worklist Smp#: 42
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0055569-042
Misc. Info.: J60620A,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11

Method: \\ChromNA\Canton\ChromData\A3UX11\20160620-55569.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 21-Jun-2016 10:07:57 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK033

First Level Reviewer: evansle Date: 21-Jun-2016 09:55:14

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.115	5.115	0.000	99	968710	10.0	
* 2 Chlorobenzene-d5	117	7.777	7.777	0.000	85	656984	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.026	10.026	0.000	94	237604	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.547	4.547	0.000	97	290819	13.5	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.831	4.831	0.000	98	333773	13.8	
$ 6 Toluene-d8 (Surr)	98	6.476	6.476	0.000	92	1224701	13.1	
$ 7 4-Bromofluorobenzene (Surr	95	8.890	8.890	0.000	92	349842	12.4	
9 Dichlorodifluoromethane	85		1.506				ND	
10 Chloromethane	50		1.636				ND	
12 Vinyl chloride	62		1.731				ND	
15 Bromomethane	94		2.015				ND	
16 Chloroethane	64		2.110				ND	
18 Trichlorofluoromethane	101		2.311				ND	
21 1,1-Dichloroethene	96		2.737				ND	
22 1,1,2-Trichloro-1,2,2-trif	151		2.749				ND	
23 Acetone	43		2.760				ND	
26 Carbon disulfide	76		2.938				ND	
29 Methyl acetate	43		3.033				ND	
30 Methylene Chloride	84		3.115				ND	
33 Methyl tert-butyl ether	73		3.340				ND	
34 trans-1,2-Dichloroethene	96		3.352				ND	
36 1,1-Dichloroethane	63		3.683				ND	
41 cis-1,2-Dichloroethene	96		4.157				ND	
42 2-Butanone (MEK)	43		4.157				ND	
49 Chloroform	83		4.417				ND	
50 1,1,1-Trichloroethane	97		4.583				ND	
51 Cyclohexane	56		4.642				ND	
53 Carbon tetrachloride	117		4.725				ND	
55 Benzene	78		4.890				ND	
56 1,2-Dichloroethane	62		4.890				ND	
60 Trichloroethene	130	5.423	5.423	0.000	96	13232	0.4948	

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-65994-1 Analy Batch No.: 232366

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/28/2016 09:12 Calibration End Date: 05/28/2016 11:03 Calibration ID: 34632

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0062 0.0045	0.0059	0.0063	0.0071	0.0058	Ave		0.0060				14.3		20.0			
1,2-Dichloroethane	0.2981 0.2726	0.2707	0.2764	0.2862	0.2852	Ave		0.2815			0.1000	3.7		20.0			
Benzene	1.0915 1.0604	1.0274	1.0168	1.0745	1.0726	Ave		1.0572			0.5000	2.8		20.0			
n-Heptane	0.0767 0.0562	0.0637	0.0501	0.0519	0.0539	Ave		0.0587				17.0		20.0			
Trichloroethene	0.2904 0.2807	0.2627	0.2619	0.2746	0.2860	Ave		0.2761			0.1500	4.3		20.0			
Methylcyclohexane	0.3899 0.3159	0.3438	0.3048	0.3065	0.3225	Ave		0.3306			0.1000	9.8		20.0			
1,2-Dichloropropane	0.2636 0.2540	0.2477	0.2418	0.2504	0.2626	Ave		0.2533			0.1000	3.4		20.0			
Dibromomethane	0.1260 0.1258	0.1267	0.1228	0.1240	0.1303	Ave		0.1259				2.0		20.0			
1,4-Dioxane	0.0010 +++++	0.0013	0.0014	0.0016	0.0017	Lin1	-0.017	0.0017							0.9990		0.9900
Dichlorobromomethane	0.2938 0.3017	0.2907	0.2723	0.2880	0.3112	Ave		0.2929			0.1500	4.5		20.0			
2-Chloroethyl vinyl ether	0.1384 0.1445	0.1484	0.1416	0.1458	0.1535	Ave		0.1454				3.6		20.0			
cis-1,3-Dichloropropene	0.3776 0.4191	0.3788	0.3775	0.4025	0.4308	Ave		0.3977			0.1500	5.9		20.0			
4-Methyl-2-pentanone (MIBK)	0.1794 0.1579	0.1670	0.1634	0.1645	0.1729	Ave		0.1675			0.0500	4.5		20.0			
Toluene	1.6592 1.5713	1.5809	1.5586	1.6505	1.6591	Ave		1.6133			0.4000	3.0		20.0			
trans-1,3-Dichloropropene	0.4368 0.4929	0.4583	0.4669	0.5112	0.5324	Ave		0.4831			0.1000	7.4		20.0			
Ethyl methacrylate	0.4247 0.4021	0.4124	0.4087	0.4397	0.4428	Ave		0.4217				4.0		20.0			
1,1,2-Trichloroethane	0.2779 0.2701	0.2893	0.2905	0.2951	0.3013	Ave		0.2874			0.1000	4.0		20.0			
Tetrachloroethene	0.3260 0.2981	0.2891	0.2964	0.3117	0.3178	Ave		0.3065			0.1500	4.6		20.0			
1,3-Dichloropropane	0.5178 0.4955	0.5274	0.5141	0.5435	0.5440	Ave		0.5237				3.6		20.0			
2-Hexanone	0.1845 0.1578	0.1883	0.1732	0.1827	0.1815	Ave		0.1780			0.0500	6.2		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

SAMPLE IDENTIFICATION	MRC-SW1A-061316	
COMPOUND	1,4-dioxane	
COMPOUND AREA	2630	
INTERNAL STANDARD AMOUNT (ng)	0.5	
DILUTION FACTOR	1	
INTERNAL STANDARD AREA	340502	
AVERAGE RRF	0.5991	
2630 x 0.5 x 1 / 340502 x 0.5991	0.0064	ng
SAMPLE VOLUME (ml)	100	
VOLUME EXTRACT (ml)	2	
VOLUME INJECTED (µl)	1	
conversion	1000	
0.00644624438424636 x 2 / (100 x 1) x 1000	0.13	ug/L

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW1A-061316 | Lab Sample ID: 240-65996-2

Matrix: Water | Lab File ID: 20593_16.D

Analysis Method: 522 MOD | Date Collected: 06/13/2016 11:51

Extract. Method: 3535A | Date Extracted: 06/22/2016 18:02

Sample wt/vol: 100(mL) | Date Analyzed: 06/24/2016 23:45

Con. Extract Vol.: 2000(uL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 106221 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.13	J	0.20	0.057

CAS NO.	SURROGATE	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8 (Surr)	92		70-130

TestAmerica Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\CHS.i\20160624-20593.b\20593_16.D
Lims ID: 240-65996-D-2-A Lab Sample ID: 200-65996-2
Client ID: MRC-SW1A-061316
Sample Type: Client
Inject. Date: 24-Jun-2016 23:45:30 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 2.0 uL Dil. Factor: 1.0000
Sample Info: 200-0020593-016
Operator ID: jpd Instrument ID: CHS.i

Method: \\ChromNA\Burlington\ChromData\CHS.i\20160624-20593.b\522_MOD_2016.m
Limit Group: SV_522_Limits
Last Update: 27-Jun-2016 14:09:04 Calib Date: 01-Jun-2016 14:13:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\CHS.i\20160601-20247.b\20247_08.D

Column 1 : Rxi-5ms (0.25 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: maheseep Date: 27-Jun-2016 08:40:31

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ul	Flags
* 1 Tetrahydrofuran-d8	46	3.103	3.112	-0.009	87	340502	0.5000	
$ 2 1,4-Dioxane-d8 (Surr)	64	4.044	4.048	-0.004	100	35169	0.0922	
3 1,4-Dioxane	58	4.088	4.088	0.000	100	2630	0.006446	M
$ 4 BFB								

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

SV522ISi_00029 Amount Added: 4.00 Units: uL Run Reagent

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Burlington Job No.: 240-65994-1 Analy Batch No.: 105200

SDG No.:

Instrument ID: CHS.i GC Column: Rxi-5ms ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/01/2016 12:52 Calibration End Date: 06/01/2016 14:13 Calibration ID: 34839

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 200-105200/8	20247_08.D
Level 2	IC 200-105200/7	20247_07.D
Level 3	IC 200-105200/6	20247_06.D
Level 4	ICIS 200-105200/5	20247_05.D
Level 5	IC 200-105200/4	20247_04.D
Level 6	IC 200-105200/3	20247_03.D
Level 7	IC 200-105200/2	20247_02.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,4-Dioxane	0.5850 0.6358	0.6144 0.6477	0.5567	0.5785	0.5757	Ave		0.5991			0.0500	5.7		15.0			0.9900
1,4-Dioxane-d8 (Surr)	0.5502 0.5927	0.5478 0.5710	0.5635	0.5442	0.5514	Ave		0.5601				3.1		15.0			0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

SAMPLE IDENTIFICATION	MRC-SW6B-061316	
COMPOUND	Pentachlorobiphenyl	
COMPOUND AREA	591	
INTERNAL STANDARD AMOUNT (ng)	0.75	
DILUTION FACTOR	1	
INTERNAL STANDARD AREA	70730	
AVERAGE RRF	0.1668	
591 x 0.75 x 1 / 70730 x 0.1668	0.0376	ng/ml
SAMPLE VOLUME (ml)	1042.4	
VOLUME EXTRACT (ml)	1	
VOLUME INJECTED (µl)	1	
conversion	1000	
0.037570678647242 x 1 / (1042.4 x 1) x 1000	0.036	ug/L

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-65994-1

SDG No.:

Client Sample ID: MRC-SW6B-061316 | Lab Sample ID: 240-65994-5

Matrix: Water | Lab File ID: Xf2115.D

Analysis Method: 680 | Date Collected: 06/13/2016 12:52

Extract. Method: 680 | Date Extracted: 06/16/2016 13:29

Sample wt/vol: 1042.4(mL) | Date Analyzed: 06/22/2016 02:27

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438264 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.29	U *	0.29	0.029
26601-64-9	Hexachlorobiphenyl	0.19	U *	0.19	0.014
53742-07-7	Nonachlorobiphenyl	0.48	U *	0.48	0.047
55722-26-4	Octachlorobiphenyl	0.29	U *	0.29	0.036
27323-18-8	Monochlorobiphenyl	0.096	U *	0.096	0.0054
2051-24-3	DCB Decachlorobiphenyl	0.48	U *	0.48	0.067
25512-42-9	Dichlorobiphenyl	0.096	U *	0.096	0.0052
25429-29-2	Pentachlorobiphenyl	0.036	J *	0.19	0.013
26914-33-0	Tetrachlorobiphenyl	0.19	U *	0.19	0.012
25323-68-6	Trichlorobiphenyl	0.096	U *	0.096	0.0062

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	71	*	25-113

TestAmerica Savannah
Target Compound Quantitation Report

Data File: \\ChromNA\Savannah\ChromData\CMSX\20160621-30741.b\Xf2115.D
Lims ID: 240-65994-E-5-A
Client ID: MRC-SW6B-061316
Sample Type: Client
Inject. Date: 22-Jun-2016 02:27:30 ALS Bottle#: 14 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 240-65994-E-5-A
Misc. Info.: 680-0030741-015
Operator ID: Instrument ID: CMSX

Method: \\ChromNA\Savannah\ChromData\CMSX\20160621-30741.b\680_CMSX.m
Limit Group: 680
Last Update: 24-Jun-2016 10:24:07 Calib Date: 24-Apr-2016 17:35:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Savannah\ChromData\CMSX\20160424-29094.b\Xd2408.D

Column 1 : Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: davisn Date: 22-Jun-2016 11:05:26

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/ml	Flags
* 5 Phenanthrene-d10	188	11.010	11.010	0.0	98	70730	0.7500	s
A 27 Total Pentachlorobiphenyls	326	14.771	12.923	-16.619	0	591	0.0376	
* 15 Chrysene-d12	240	17.177	17.177	0.0	100	55487	0.7500	s
$ 22 Decachlorobiphenyl-13C12	510	20.334	20.334	0.0	42	5217	1.77	

QC Flag Legend

Processing Flags
s - Failed ISTD Recovery Test

Reagents:

SM-680istd_00036 Amount Added: 30.00 Units: uL Run Reagent

Report Date: 24-Jun-2016 10:24:24 Chrom Revision: 2.2 20-Apr-2016 13:59:46
Data File: \\ChromNA\Savannah\ChromData\CMSX\20160621-30741.b\Xf2115.D

WorkSheet Quantitation Report

Sig	RT	Lower RT	Upper RT	Q	Response	On-Col Amt ug/ml	Ratio Range	Ratio	Flags
* 5 Phenanthrene-d10									s
188	11.010	11.010	0.0	98	70730	0.7500			
189	11.010	11.010	0.0		10911		5.9- 7.5	6.5	
A 27 Total Pentachlorobiphenyls									
326	12.949	12.923	-16.619	29	591	0.0376			
324	12.931				394		1.4- 1.8	1.5	
254	12.966				1343		41.9- 121.9	0.3	
* 15 Chrysene-d12									s
240	17.177	17.177	0.0	100	55487	0.7500			
241	17.177	17.177	0.0		11035		4.3- 5.9	5.0	
$ 22 Decachlorobiphenyl-13C12									
510	20.334	20.334	0.0	42	5217	1.77			
512	20.334	20.355	-0.021		4359		0.9- 1.3	1.2	

QC Flag Legend

Processing Flags

s - Failed ISTD Recovery Test

Reagents:

SM-680istd_00036 Amount Added: 30.00 Units: uL Run Reagent

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-65994-1 Analy Batch No.: 430367

SDG No.:

Instrument ID: CMSX GC Column: DB-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/24/2016 15:41 Calibration End Date: 04/24/2016 17:35 Calibration ID: 45292

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-430367/28	Xd2408.D
Level 2	IC 680-430367/27	Xd2407.D
Level 3	ICISAV 680-430367/4	Xd2404.D
Level 4	IC 680-430367/26	Xd2406.D
Level 5	IC 680-430367/25	Xd2405.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochlorobiphenyl	0.9409	0.9877	0.9866	1.0018	1.0386	Ave		0.9911				3.5		20.0			
Dichlorobiphenyl	0.6430	0.6782	0.6962	0.6962	0.7337	Ave		0.6895				4.8		20.0			
Trichlorobiphenyl	0.4097	0.4114	0.4253	0.4324	0.4604	Ave		0.4278				4.8		20.0			
PCB-104			0.2443			Ave		0.2443						30.0			
Tetrachlorobiphenyl	0.2470	0.2621	0.2562	0.2680	0.2810	Ave		0.2629				4.9		20.0			
Pentachlorobiphenyl	0.1465	0.1582	0.1680	0.1763	0.1852	Ave		0.1668				9.1		20.0			
PCB-77			0.3640			Ave		0.3640						30.0			
Hexachlorobiphenyl	0.1338	0.1411	0.1498	0.1546	0.1625	Ave		0.1484				7.6		20.0			
Heptachlorobiphenyl	0.1015	0.1109	0.1179	0.1228	0.1323	Ave		0.1171				10.0		20.0			
Octachlorobiphenyl	0.0938	0.1067	0.1105	0.1195	0.1284	Ave		0.1118				11.7		20.0			
PCB-208			0.0500			Ave		0.0500						30.0			
Nonachlorobiphenyl			0.0409			Ave		0.0380				14.1		20.0			
DCB Decachlorobiphenyl	0.0297	0.0366	0.0390	0.0413	0.0437	Ave		0.0380				14.1		20.0			
Decachlorobiphenyl-13C12	0.0248	0.0311	0.0307	0.0339	0.0354	Ave		0.0312				13.1		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

MRC SW
WATER DATA
240-65994-1

FRACTION	CHEMICAL	MRC-SW6A-061316	UNITS	MRC-SWDUP2-061316	RPD	D
OV	TRICHLOROETHENE	0.26 J	UG/L	0.25 J	3.92	0.01

Current RPD Quality Control Limit: 30 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

APPENDIX C—CHEMICAL-RESULTS DATA TABLES

Cow Pen Creek/Dark Head Cove Surface Waters
June 2016
Full Appendix

LOCATION	MRC-SW1A		MRC-SW2A		MRC-SW5A1	MRC-SW5A2
SAMPLE ID	MRC-SW1A-061316	MRC-SW2A-061316	MRC-SW2A-061316-AVG	MRC-SW2A-061316-D	MRC-SW5A1-061316	MRC-SW5A2-061316
SAMPLE DATE	20160613	20160613	20160613	20160613	20160613	20160613
VOLATILES (UG/L)						
1,1,1-TRICHLOROETHANE	0.44 U	0.44 U	0.44 U	NA	0.44 U	0.44 U
1,1,2,2-TETRACHLOROETHANE	0.22 U	0.22 U	0.22 U	NA	0.22 U	0.22 U
1,1,2-TRICHLOROETHANE	0.24 U	0.24 U	0.24 U	NA	0.24 U	0.24 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.45 U	0.45 U	0.45 U	NA	0.45 U	0.45 U
1,1-DICHLOROETHANE	0.3 U	0.3 U	0.3 U	NA	0.3 U	0.3 U
1,1-DICHLOROETHENE	0.45 U	0.45 U	0.45 U	NA	0.45 U	0.45 U
1,2,4-TRICHLOROBENZENE	0.32 U	0.32 U	0.32 U	NA	0.32 U	0.32 U
1,2-DIBROMO-3-CHLOROPROPANE	0.82 UJ	0.82 UJ	0.82 UJ	NA	0.82 UJ	0.82 UJ
1,2-DIBROMOETHANE	0.32 U	0.32 U	0.32 U	NA	0.32 U	0.32 U
1,2-DICHLOROBENZENE	0.25 U	0.25 U	0.25 U	NA	0.25 U	0.25 U
1,2-DICHLOROETHANE	0.23 U	0.23 U	0.23 U	NA	0.23 U	0.23 U
1,2-DICHLOROPROPANE	0.25 U	0.25 U	0.25 U	NA	0.25 U	0.25 U
1,3-DICHLOROBENZENE	0.19 U	0.19 U	0.19 U	NA	0.19 U	0.19 U
1,4-DICHLOROBENZENE	0.27 U	0.27 U	0.27 U	NA	0.27 U	0.27 U
2-BUTANONE	0.53 U	0.53 U	0.53 U	NA	0.53 U	0.53 U
2-HEXANONE	0.48 U	0.48 U	0.48 U	NA	0.48 U	0.48 U
4-METHYL-2-PENTANONE	0.99 U	0.99 U	0.99 U	NA	0.99 U	0.99 U
ACETONE	0.94 U	0.94 U	0.94 U	NA	0.94 U	0.94 U
BENZENE	0.35 U	0.35 U	0.35 U	NA	0.35 U	0.35 U
BROMODICHLOROMETHANE	0.29 U	0.29 U	0.29 U	NA	0.29 U	0.29 U
BROMOFORM	0.56 U	0.56 U	0.56 U	NA	0.56 U	0.56 U
BROMOMETHANE	0.44 U	0.44 U	0.44 U	NA	0.44 UJ	0.44 UJ
CARBON DISULFIDE	0.38 U	0.38 U	0.38 U	NA	0.38 U	0.38 U
CARBON TETRACHLORIDE	0.43 U	0.43 U	0.43 U	NA	0.43 U	0.43 U
CHLOROBENZENE	0.25 U	0.25 U	0.25 U	NA	0.25 U	0.25 U
CHLORODIBROMOMETHANE	0.43 U	0.43 U	0.43 U	NA	0.43 U	0.43 U
CHLOROETHANE	0.32 U	0.32 U	0.32 U	NA	0.32 U	0.32 U
CHLOROFORM	0.25 U	0.25 U	0.25 U	NA	0.25 U	0.25 U
CHLOROMETHANE	0.44 UJ	0.44 UJ	0.44 UJ	NA	0.44 UJ	0.44 UJ
CIS-1,2-DICHLOROETHENE	0.26 U	0.26 U	0.26 U	NA	0.26 U	0.26 U
CIS-1,3-DICHLOROPROPENE	0.46 U	0.46 U	0.46 U	NA	0.46 U	0.46 U
CYCLOHEXANE	0.45 U	0.45 U	0.45 U	NA	0.45 U	0.45 U
DICHLORODIFLUOROMETHANE	0.32 UJ	0.32 UJ	0.32 UJ	NA	0.32 UJ	0.32 UJ
ETHYLBENZENE	0.25 U	0.25 U	0.25 U	NA	0.25 U	0.25 U
ISOPROPYLBENZENE	0.35 U	0.35 U	0.35 U	NA	0.35 U	0.35 U
METHYL ACETATE	2.3 U	2.3 U	2.3 U	NA	2.3 U	2.3 U
METHYL CYCLOHEXANE	0.43 U	0.43 U	0.43 U	NA	0.43 U	0.43 U
METHYL TERT-BUTYL ETHER	0.2 U	0.2 U	0.2 U	NA	0.2 U	0.2 U
METHYLENE CHLORIDE	0.33 U	0.33 U	0.33 U	NA	0.33 U	0.33 U
STYRENE	0.45 U	0.45 U	0.45 U	NA	0.45 U	0.45 U
TETRACHLOROETHENE	0.31 U	0.31 U	0.31 U	NA	0.31 U	0.31 U
TOLUENE	0.23 U	0.23 U	0.23 U	NA	0.23 U	0.23 U
TOTAL XYLENES	0.52 U	0.52 U	0.52 U	NA	0.52 U	0.52 U
TRANS-1,2-DICHLOROETHENE	0.3 U	0.3 U	0.3 U	NA	0.3 U	0.3 U
TRANS-1,3-DICHLOROPROPENE	0.56 U	0.56 U	0.56 U	NA	0.56 U	0.56 U
TRICHLOROETHENE	0.22 U	0.22 U	0.22 U	NA	0.22 U	0.22 U
TRICHLOROFLUOROMETHANE	0.49 UJ	0.49 UJ	0.49 UJ	NA	0.49 UJ	0.49 UJ
VINYL CHLORIDE	0.29 U	0.29 U	0.29 U	NA	0.29 U	0.29 U
SEMIVOLATILES (UG/L)						
1,4-DIOXANE	0.13 J	0.16 J	0.14	0.12 J	NA	NA
PCBS (UG/L)						
DECACHLOROBIPHENYL	NA	NA	NA	NA	0.069 U	0.069 U
DICHLOROBIPHENYLS	NA	NA	NA	NA	0.0054 U	0.0053 U
HEPTACHLOROBIPHENYLS	NA	NA	NA	NA	0.03 U	0.029 U
HEXACHLOROBIPHENYLS	NA	NA	NA	NA	0.015 U	0.015 U
MONOCHLOROBIPHENYLS	NA	NA	NA	NA	0.0056 U	0.0055 U
NONACHLOROBIPHENYLS	NA	NA	NA	NA	0.049 U	0.048 U
OCTACHLOROBIPHENYLS	NA	NA	NA	NA	0.038 U	0.037 U
PENTACHLOROBIPHENYLS	NA	NA	NA	NA	0.014 U	0.014 U
TETRACHLOROBIPHENYLS	NA	NA	NA	NA	0.013 U	0.013 U
TRICHLOROBIPHENYLS	NA	NA	NA	NA	0.0064 U	0.0064 U

Cow Pen Creek/Dark Head Cove Surface Waters
June 2016
Full Appendix

LOCATION	MRC-SW5B		MRC-SW6A		MRC-SW6B	MRC-SW7A
SAMPLE ID	MRC-SW5B-061316	MRC-SW6A-061316	MRC-SW6A-061316-AVG	MRC-SW6A-061316-D	MRC-SW6B-061316	MRC-SW7A-061316
SAMPLE DATE	20160613	20160613	20160613	20160613	20160613	20160613
VOLATILES (UG/L)						
1,1,1-TRICHLOROETHANE	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
1,1,2,2-TETRACHLOROETHANE	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,1,2-TRICHLOROETHANE	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U
1,1-DICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1-DICHLOROETHENE	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U
1,2,4-TRICHLOROBENZENE	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
1,2-DIBROMO-3-CHLOROPROPANE	0.82 UJ	0.82 UJ	0.82 U	0.82 UJ	0.82 UJ	0.82 UJ
1,2-DIBROMOETHANE	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
1,2-DICHLOROBENZENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2-DICHLOROETHANE	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
1,2-DICHLOROPROPANE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,3-DICHLOROBENZENE	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,4-DICHLOROBENZENE	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
2-BUTANONE	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U
2-HEXANONE	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
4-METHYL-2-PENTANONE	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U
ACETONE	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U
BENZENE	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
BROMODICHLOROMETHANE	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U
BROMOFORM	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U
BROMOMETHANE	0.44 UJ	0.44 UJ	0.44 U	0.44 U	0.44 UJ	0.44 UJ
CARBON DISULFIDE	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
CARBON TETRACHLORIDE	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U
CHLOROBENZENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
CHLORODIBROMOMETHANE	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U
CHLOROETHANE	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
CHLOROFORM	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
CHLOROMETHANE	0.44 UJ	0.44 UJ	0.44 U	0.44 UJ	0.44 UJ	0.44 UJ
CIS-1,2-DICHLOROETHENE	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
CIS-1,3-DICHLOROPROPENE	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U
CYCLOHEXANE	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U
DICHLORODIFLUOROMETHANE	0.32 UJ	0.32 UJ	0.32 U	0.32 UJ	0.32 UJ	0.32 UJ
ETHYLBENZENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
ISOPROPYLBENZENE	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
METHYL ACETATE	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U
METHYL CYCLOHEXANE	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U
METHYL TERT-BUTYL ETHER	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
METHYLENE CHLORIDE	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
STYRENE	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U
TETRACHLOROETHENE	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
TOLUENE	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
TOTAL XYLENES	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U
TRANS-1,2-DICHLOROETHENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TRANS-1,3-DICHLOROPROPENE	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U
TRICHLOROETHENE	0.22 U	0.26 J	0.255	0.25 J	0.49 J	0.22 U
TRICHLOROFLUOROMETHANE	0.49 UJ	0.49 UJ	0.49 U	0.49 UJ	0.49 UJ	0.49 UJ
VINYL CHLORIDE	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U
SEMIVOLATILES (UG/L)						
1,4-DIOXANE	NA	NA	NA	NA	NA	NA
PCBS (UG/L)						
DECACHLOROBIPHENYL	0.067 U	0.067 U	0.0675 U	0.068 U	0.067 U	0.07 U
DICHLOROBIPHENYLS	0.0052 U	0.0052 U	0.0052 U	0.0052 U	0.0052 U	0.0054 U
HEPTACHLOROBIPHENYLS	0.029 U	0.029 U	0.029 U	0.029 U	0.029 U	0.03 U
HEXACHLOROBIPHENYLS	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.015 U
MONOCHLOROBIPHENYLS	0.0054 U	0.0054 U	0.0054 U	0.0054 U	0.0054 U	0.0056 U
NONACHLOROBIPHENYLS	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.049 U
OCTACHLOROBIPHENYLS	0.037 U	0.037 U	0.037 U	0.037 U	0.036 U	0.038 U
PENTACHLOROBIPHENYLS	0.013 U	0.013 U	0.0135 U	0.014 U	0.036 J	0.014 U
TETRACHLOROBIPHENYLS	0.013 U	0.013 U	0.013 U	0.013 U	0.012 U	0.013 U
TRICHLOROBIPHENYLS	0.0063 U	0.0063 U	0.0063 U	0.0063 U	0.0062 U	0.0065 U

Cow Pen Creek/Dark Head Cove Surface Waters
June 2016
Full Appendix

LOCATION	MRC-SW7B	MRC-SW8A	MRC-SW8B	MRC-SW9A	MRC-SW9B
SAMPLE ID	MRC-SW7B-061316	MRC-SW8A-061316	MRC-SW8B-061316	MRC-SW9A-061316	MRC-SW9B-061316
SAMPLE DATE	20160613	20160613	20160613	20160613	20160613
VOLATILES (UG/L)					
1,1,1-TRICHLOROETHANE	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
1,1,2,2-TETRACHLOROETHANE	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,1,2-TRICHLOROETHANE	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U
1,1-DICHLOROETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1-DICHLOROETHENE	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U
1,2,4-TRICHLOROBENZENE	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
1,2-DIBROMO-3-CHLOROPROPANE	0.82 UJ	0.82 UJ	0.82 UJ	0.82 UJ	0.82 UJ
1,2-DIBROMOETHANE	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
1,2-DICHLOROBENZENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2-DICHLOROETHANE	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
1,2-DICHLOROPROPANE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,3-DICHLOROBENZENE	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,4-DICHLOROBENZENE	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
2-BUTANONE	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U
2-HEXANONE	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
4-METHYL-2-PENTANONE	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U
ACETONE	2.2 J	0.94 U	0.94 U	0.94 U	0.94 U
BENZENE	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
BROMODICHLOROMETHANE	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U
BROMOFORM	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U
BROMOMETHANE	0.44 UJ	0.44 UJ	0.44 UJ	0.44 UJ	0.44 UJ
CARBON DISULFIDE	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
CARBON TETRACHLORIDE	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U
CHLOROBENZENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
CHLORODIBROMOMETHANE	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U
CHLOROETHANE	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
CHLOROFORM	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
CHLOROMETHANE	1.1	0.44 UJ	0.44 UJ	0.44 UJ	0.44 UJ
CIS-1,2-DICHLOROETHENE	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
CIS-1,3-DICHLOROPROPENE	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U
CYCLOHEXANE	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U
DICHLORODIFLUOROMETHANE	0.32 UJ	0.32 UJ	0.32 UJ	0.32 UJ	0.32 UJ
ETHYLBENZENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
ISOPROPYLBENZENE	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
METHYL ACETATE	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U
METHYL CYCLOHEXANE	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U
METHYL TERT-BUTYL ETHER	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
METHYLENE CHLORIDE	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
STYRENE	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U
TETRACHLOROETHENE	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
TOLUENE	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
TOTAL XYLENES	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U
TRANS-1,2-DICHLOROETHENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
TRANS-1,3-DICHLOROPROPENE	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U
TRICHLOROETHENE	0.22 U	0.48 J	0.42 J	0.22 U	0.22 U
TRICHLOROFLUOROMETHANE	0.49 UJ	0.49 UJ	0.49 UJ	0.49 UJ	0.49 UJ
VINYL CHLORIDE	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U
SEMIVOLATILES (UG/L)					
1,4-DIOXANE	NA	NA	NA	NA	NA
PCBS (UG/L)					
DECACHLOROBIPHENYL	0.069 U	0.067 U	0.069 U	0.067 U	0.067 U
DICHLOROBIPHENYLS	0.0053 U	0.0052 U	0.0054 U	0.0052 U	0.0052 U
HEPTACHLOROBIPHENYLS	0.03 U	0.029 U	0.03 U	0.029 U	0.029 U
HEXACHLOROBIPHENYLS	0.015 U	0.014 U	0.015 U	0.014 U	0.014 U
MONOCHLOROBIPHENYLS	0.0055 U	0.0054 U	0.0056 U	0.0054 U	0.0054 U
NONACHLOROBIPHENYLS	0.048 U	0.047 U	0.049 U	0.047 U	0.047 U
OCTACHLOROBIPHENYLS	0.038 U	0.037 U	0.038 U	0.037 U	0.037 U
PENTACHLOROBIPHENYLS	0.014 U	0.013 U	0.014 U	0.013 U	0.013 U
TETRACHLOROBIPHENYLS	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
TRICHLOROBIPHENYLS	0.0064 U	0.0063 U	0.0064 U	0.0063 U	0.0063 U

Table C-2

Primary VOC and 1,4-Dioxane Results for Surface Water Samples, 2012-2016
Cow Pen Creek and Dark Head Cove
Lockheed Martin Middle River Complex, Middle River, Maryland
Page 1 of 2

Location/Date	Trichloroethene (µg/L)	cis-1,2-Dichloroethene (µg/L)	Vinyl chloride (µg/L)	1,4-Dioxane (µg/L)
Cow Pen Creek				
SW1A				
2016 (June)	--	--	--	0.13 J
2015 (June)	--	--	--	0.13
2014 (June)	--	--	--	0.235 J
2013 (June)	0.33 J	--	--	--
2012 (June)	--	--	--	NA
SW2A				
2016 (June)	--	--	--	0.16 J
2015 (June)	--	--	--	0.13
2014 (June)	--	--	--	0.156 J
2013 (June)	--	--	--	--
2012 (June)	--	--	--	NA
Dark Head Cove				
SW5A1				
2016 (June)	--	--	--	NA
2015 (June)	--	--	--	NA
2014 (June)	--	--	--	NA
2013 (June)	1.1	0.17 J	--	NA
2012 (June)	0.17 J	--	--	NA
SW5A2				
2016 (June)	--	--	--	NA
2015 (June)	0.42J	--	--	NA
2014 (June)	0.3 J	--	--	NA
2013 (June)	1.9	0.26 J	--	NA
2012 (June)	0.19 J	--	--	NA
SW5B				
2016 (June)	--	--	--	NA
2015 (June)	--	--	--	NA
2014 (June)	--	--	--	NA
2013 (June)	1.5	0.35 J	--	NA
2012 (June)	0.19 J	--	--	NA
SW6A				
2016 (June)	0.26 J	--	--	NA
2015 (June)	--	--	--	NA
2014 (June)	0.52 J	--	--	NA
2013 (June)	0.46 J	--	--	NA
2012 (June)	0.55 J	--	--	NA
SW6B				
2016 (June)	0.49J	--	--	NA
2015 (June)	--	--	--	NA
2014 (June)	0.39 J	--	--	NA
2013 (June)	0.81 J	--	--	NA
2012 (June)	0.63 J	--	--	NA
SW7A				
2016 (June)	--	--	--	NA
2015 (June)	--	--	--	NA
2014 (June)	0.44 J	--	--	NA
2013 (June)	0.7 J	--	--	NA
2012 (June)	--	--	--	NA
SW7B				
2016 (June)	--	--	--	NA
2015 (June)	--	--	--	NA
2014 (June)	0.49 J	--	--	NA
2013 (June)	0.51 J	--	--	NA
2012 (June)	0.32 J	--	--	NA
SW8A				
2016 (June)	0.48 J	--	--	NA
2015 (June)	--	--	--	NA
2014 (June)	0.54 J	--	--	NA
2013 (June)	0.65 J	--	--	NA
2012 (June)	0.66 J	--	--	NA
SW8B				
2016 (June)	0.42 J	--	--	NA
2015 (June)	--	--	--	NA
2014 (June)	0.47 J	--	--	NA
2013 (June)	0.65 J	--	--	NA
2012 (June)	0.82 J	--	--	NA

Table C-2

Primary VOC and 1,4-Dioxane Results for Surface Water Samples, 2012-2016
Cow Pen Creek and Dark Head Cove
Lockheed Martin Middle River Complex, Middle River, Maryland

Location/Date	Trichloroethene (µg/L)	cis-1,2-Dichloroethene (µg/L)	Vinyl chloride (µg/L)	1,4-Dioxane (µg/L)
SW9A				
2016 (June)	--	--	--	NA
2015 (June)	--	--	--	NA
2014 (June)	0.45 J	--	--	NA
2013 (June)	0.62 J	--	--	NA
2012 (June)	0.33 J	--	--	NA
SW9B				
2016 (June)	--	--	--	NA
2015 (June)	--	--	--	NA
2014 (June)	0.47 J	--	--	NA
2013 (June)	0.35 J	--	--	NA
2012 (June)	0.34 J	--	--	NA

-- not detected
NA - not analyzed
J - estimated concentration
VOC - volatile organic compound
µg/L - micrograms per liter

APPENDIX D—RISK ESTIMATES FOR RECREATIONAL SWIMMING IN DARK HEAD COVE

CDM Smith

Memorandum

To: *Michael Martin, P.G. Tetra Tech*

From: Edmund Crouch

Edmund Crouch

Date: *November 18, 2014*

Subject: *Risk estimates for recreational swimming in Dark Head Cove*

As requested, we have evaluated risk estimates for recreational contact with water containing dissolved PCBs in the water column at Dark Head Cove. These risk estimates are conservative, in that they address the activity associated with the greatest level of exposure — that is, swimming — and make very conservative exposure assumptions for exposure time, duration and contact rates in the absence of site-specific measurements. In particular, we assume:

- The measurements represent dissolved PCBs in the water column (*i.e.,* the samples include no contaminated sediment). The samples were not filtered and the total PCB values reported may include some component of suspended sediment that would result in an overestimation of dissolved PCB concentrations.
- The measurements are representative of the water in Dark Head Cove where recreational swimming might occur. The samples were collected off the Middle River Complex outfalls where the concentrations would be expected to be the highest in the cove.
- The recreational swimmer is in the water for 4 hours/day, 70 days/year, for 6 years as a child and 20 years as an adult.
- The tetrachlorobiphenyls and pentachlorobiphenyls detected have an ingestion carcinogenic potency equal to the highest current estimate for the most carcinogenic tested PCB mixture. Other cancer potency values are available which would result in lower estimated potential risk.
- The tetrachlorobiphenyls and pentachlorobiphenyls detected have an ingestion reference dose (RfD) equal to that of Aroclor 1254, the lowest among PCB mixtures that have assigned RfDs.
- Cancer potency and RfD are the same for dermal exposure as for ingestion exposure.

The recreational activity exposure assumptions of 4 hours/day and 70 days/year were initially introduced in the January 2006 *Revised Human Risk Assessment for Martin State Airport* prepared for Lockheed Martin by Tetra Tech. In the subsequent April 2006 report *Surface Water and Sediment Sampling Report Lockheed Martin Middle River Complex* prepared by Tetra Tech, the 70

day/year exposure frequency assumption was used for swimming exposures, but with a 2 hours/day exposure time. It is important to note for a recreational swimming exposure scenario, adjusting the exposure time from four hours to two hours does not reduce the cancer or noncancer risk by a factor of two. For ingestion of surface water, the risk estimate scales linearly with the daily exposure time; while for dermal contact with surface water, the risk estimate is a sub-linear function of the daily exposure time. In other words, for dermal exposure absorption continues even after the exposure time in the water has ended.

With the stated site-specific exposure assumptions, and using other default exposure assumptions from the Regional Screening Level (RSL) table (EPA 2014a), together with the dermal exposure methodology described in the Risk Assessment Guidance for Superfund, Volume 1E, and the estimated 95 percent upper confidence limit (95% UCL) of the mean of the measurements as exposure point concentrations, the lifetime risk estimates are:

Incidental water ingestion	1.7×10^{-8}
Dermal absorption	4.9×10^{-6}

with highest hazard quotients (for children)

Incidental water ingestion	0.003
Dermal absorption	0.47

The calculations documenting these estimates are included in the accompanying workbook *Dark Head Cove Swimming PCBs.xlsx*, which also contains references for the values of all parameters used.

Modifying the daily exposure period to 2 hours/day halves the incidental water ingestion lifetime risk estimate and reduces the dermal absorption estimate to 3.2×10^{-6}, with similar effects on the hazard quotients (0.0014 and 0.30).

There are considerable uncertainties in these estimates that have been resolved in a conservative direction. As noted, the samples were not filtered, allowing potential incorporation of contaminated sediment, which would not contribute to dermal absorption — the dermal absorption calculation assumes dissolved PCBs. Two observations support the likelihood of sediment incorporation in the samples — the lack of detection of the more soluble (lower chlorinated) homologs, and the analysis of sample MRC-SW8B. This sample as originally tested contained a higher total PCB content than any other sample; but those results were rejected because of low recovery of the spike surrogates. Re-extraction and re-analysis of the sample produced non-detect results, suggesting that the first extraction included contaminated sediment (that may also have contributed to the low surrogate recovery) that was missing from the second.

The default ingestion rate of 50 ml/hour assumed for both children and adults as presented in EPA's RSL Risk-Based Concentration Table Equations for a recreational user exposed to surface water may be a conservative assumption for this evaluation. The Exposure Factors Handbook (EPA 2011) recommends a swimming water ingestion rate of 50 ml/hour for children under 18, but a

value of 21 ml/hour for adults which likely contributes to an overestimation of risk for the adult population swimming in Dark Head Cove. Further, the 50 ml/hour value is based on mean ingestion rates derived from swimming pool studies, while results from seawater ingestion studies indicate lower mean values for children (31 ml/hour), men (27 ml/hour and women (18 ml/hour) (EPA 2011). Dark Head Cove averages approximately 2% salt content, closer to seawater than the fresh water of swimming pools. Therefore, the use of the EPA default surface water ingestion rate likely overestimates ingestion risk.

There are additional uncertainties related to dermal risk estimates. In general, chemical specific permeability coefficients (Kp) are used to estimate dermal absorption of a chemical from water. A Kp is a predicted value obtained from a regression equation using a chemical-specific octanol-water coefficient (Kow) and molecular weight (MW). However, for some chemicals, the Kow value or the MW may be too high or too low (outside the effective prediction domain) and the estimated Kp using the regression is uncertain. For PCBs, both the Kow and MW values are high outside of effective prediction domain resulting in an uncertain predicted Kp value that is combined with a theoretical correction factor (EPA 2004).

The assignment of the highest (most conservative) carcinogenic and noncarcinogenic toxicity values measured for any PCB mixtures for the combinations of PCB homologs measured here (where only tetrachlorobiphenyls and pentachlorobiphenyls were detected) likely overestimates risk calculations

Even with the use of conservative assumptions, the resultant risk estimates lie below the MDE threshold of 1×10^{-5} lifetime increased cancer risk and hazard quotient of 1.0, and within the EPA's range 1×10^{-6} to 1×10^{-4} and hazard quotient of 1.0, indicating no significant risk from exposures due to swimming in Dark Head Cove.

References

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