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August 21, 2018

VIA PRIVATE CARRIER

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

Subject: Transmittal of the Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation, Round 24 February 2018 Monitoring Report
Lockheed Martin Corporation; Middle River Complex
2323 Eastern Boulevard, Middle River, Baltimore County, Maryland

Dear Mr. Carroll:

For your review please find enclosed two hard copies with a CD of the above-referenced document. This document presents the data for the first round of indoor-air-quality and sub-slab-vapor monitoring for calendar year 2018 at Lockheed Martin's Middle River Complex in Middle River, Maryland.

If possible, we respectfully request to receive MDE's comments by October 3, 2018.

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

Sincerely,

Thomas D. Blackman
Project Lead, Environmental Remediation

cc: (via email without enclosure)
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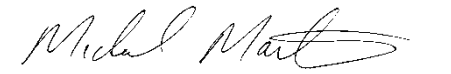
VAPOR-INTRUSION INVESTIGATION AND SUB-SLAB-DEPRESSURIZATION-SYSTEM OPERATION, ROUND 24 FEBRUARY 2018 MONITORING REPORT LOCKHEED MARTIN MIDDLE RIVER COMPLEX 2323 EASTERN BOULEVARD MIDDLE RIVER, MARYLAND

Prepared for:
Lockheed Martin Corporation

Prepared by:
Tetra Tech, Inc.

August 2018

Revision: 0



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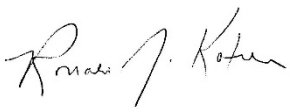

Ronald Kotun
Project Manager

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October 1, 2017 Through March 31, 2018,
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Buildings A and C,
Lockheed Martin Middle River Complex

ACRONYMS AND ABBREVIATIONS

AF	attenuation factor
ca	carcinogenic
CCTV	closed-circuit television
COC	chemical(s) of concern
DCA	dichloroethane
DCE	dichloroethene
DUP	duplicate
°F	degrees Fahrenheit
Freon 22	chlorodifluoromethane
GAC	granular activated-carbon
GC/MS	gas chromatograph/mass spectrometer
GC/PID	gas chromatograph/photoionization detector
HAPSITE	hazardous air pollutants on-site
HVAC	heating/ventilation/air conditioning
in. Hg	inch(es) of mercury
IA	indoor air
J	compound positively identified, but quantitation is estimated
lb(s)	pound(s)
lb(s)/day	pound(s) per day
lb(s)/month	pound(s) per month
Lockheed Martin	Lockheed Martin Corporation
MDE	Maryland Department of the Environment
µg/L	microgram(s) per liter
$\mu g/m^3$	microgram(s) per cubic meter
mph	mile(s) per hour
MPL	mechanical prototype laboratory
MRAS	MRA Systems, Inc.
MRC	Middle River Complex

MST	Mission Systems & Training
MTBE	methyl tertiary-butyl ether
nc	noncarcinogenic
ND	non-detect
OSHA	Occupational Safety and Health Administration
PCE	tetrachloroethene
PEL	permissible exposure limit
ppb	parts per billion
RMS	Rotary and Mission Systems
RSL	regional screening-level
SSD	sub-slab depressurization
SSDS	sub-slab-depressurization system
SV	sub-slab vapor
Tetra Tech	Tetra Tech, Inc.
TCA	trichloroethane
TCE	trichloroethene
TMB	trimethylbenzene
TO-15	Toxic Organic-15 analytical method
U	not detected
USEPA	United States Environmental Protection Agency
VC	vinyl chloride
VI	vapor intrusion
VMP	vapor monitoring point
VOC	volatile organic compound

SECTION 1
INTRODUCTION

Tetra Tech, Inc. (Tetra Tech) has prepared this report on behalf of Lockheed Martin Corporation (Lockheed Martin) to document the first round of indoor air (IA) and sub-slab vapor (SV) monitoring for calendar year 2018 at the Lockheed Martin Middle River Complex (MRC) in Middle River, Maryland. This report contains the Round 24 (February 2018) monitoring results for Buildings A, B, and C, and background sampling locations. This report also includes a status update of the two sub-slab-depressurization (SSD) vapor-intrusion-mitigation systems originally installed at the Middle River Complex in 2008: one beneath the Building A plating shop and the other beneath the southern portion of the Building C basement. This monitoring is part of an ongoing investigation to evaluate whether volatile organic compounds (VOCs) in sub-slab vapors (associated with soil and groundwater chemicals of concern [COC] at the site) might be moving into indoor air at Middle River Complex facilities. The first monitoring round for calendar year 2018 continues investigations previously described in the reports listed in Table 1-1.

This report is organized into the following sections:

- Section 2—Round 24 Indoor-Air-Quality and Vapor-Intrusion Investigation: Briefly summarizes previous investigations and interim measures and describes the sampling methodology used for the current investigation round.
- Section 3—Round 24 Results: Presents the results of the February 2018 investigation.
- Section 4—Sub-Slab-Depressurization-System Data Analysis: Summarizes the operation and monitoring of the sub-slab-depressurization (SSD)-systems in Buildings A and C for the reporting period from October 1 to March 31, 2018.
- Section 5—Conclusions and Recommendations: Presents conclusions based on the Round 24 sampling results.
- Section 6—References: Lists the references used in this report.

Tables, figures, and appendices are at the end of the report body following Section 6.

SECTION 2
ROUND 24 INDOOR-AIR-QUALITY AND VAPOR-INTRUSION INVESTIGATION

This section briefly summarizes previous investigations and interim measures and describes the sampling methodology used in the current investigation round.

2.1 PREVIOUS INVESTIGATIONS AND INTERIM MEASURES

The indoor air (IA) and sub-slab vapor (SV) investigation described herein was designed to evaluate whether volatile organic compounds (VOCs) associated with soil and groundwater contamination at the site might be moving into IA at Middle River Complex (MRC) facilities. Tetra Tech, Inc. (Tetra Tech) industrial hygienists chose the initial sampling locations for Buildings A, B, and C during a 2006 site reconnaissance. Additional sampling locations were selected during the program based on previous IA and SV monitoring results (Tetra Tech, 2017d).

Although IA results are predominantly less than risk-based screening levels after the first three rounds of sampling in February and December 2006 and April 2007 (with one trichloroethene [TCE] exceedance in 109 samples[1]), two sub-slab depressurization (SSD) vapor intrusion mitigation systems (one beneath the Building A plating shop and the other beneath the southern portion of the Building C basement) were originally installed at the MRC in 2008 (Tetra Tech, 2008d), based on elevated SV concentrations detected beneath the buildings. The Building A SSD system (SSDS) was expanded in 2010 (Tetra Tech, 2010c), in 2016 (Tetra Tech, 2016d), and again in 2017 (Tetra Tech, 2017g) after elevated SV concentrations were detected at additional locations.

[1]One TCE concentration (36 micrograms per cubic meter [µg/m^3]) out of 109 total samples (including duplicates) exceeded the screening level at the time of sampling (18 µg/m^3). The exceedance was observed in the duplicate sample of a field-duplicate pair; TCE was not detected in the corresponding parent sample. Since then, the screening level has been reduced to 8.8 µg/m^3; even so, that result would still have been the only exceedance.

A site-specific TCE screening-level of 35 µg/m^3 for indoor air has been derived for the Building A basement based on limited exposure potential in the basement. This screening level has received approval from the Maryland Department of the Environment (MDE) in July 2017. However, the site-specific screening level for the basement does not represent a final risk-based indoor air cleanup criterion.

The Building C SSDS was expanded in 2012 (Tetra Tech, 2012c) and 2013 (Tetra Tech, 2013c). Subsequent rounds of IA sampling support that contaminant concentrations in IA on the main floors resulting from vapor intrusion (VI) are being controlled by the SSDSs.

However, recent investigations in Building A and the Building A basement have identified elevated TCE concentrations in SV, water (groundwater and water in sumps), and in basement IA. Subsequent VI investigations in Building A and the Building A basement from 2014–2017 include:

(a.) portable gas-chromatograph/mass-spectrometer (GC/MS) surveys of IA and sub-slab air from within floor features (e.g., sumps, drains) (Tetra Tech, 2014b, 2016b)

(b.) installation of three portable air-filtration units in January 2015 in the Building A basement to mitigate TCE exceedances in indoor air (Tetra Tech, 2016d)

(c.) installation and sampling of additional Vapor Pin™ vapor monitoring points (VMPs), including seven in the eastern wall of Building A basement, two in the Building A basement floor, and one beneath the main floor of Building A (Tetra Tech, 2016b)

(d.) collection of air and water samples from select floor features (i.e., sumps, drains) in Building A basement (Tetra Tech, 2016b, 2016c)

(e.) a continuous air-monitoring survey of SV and breathing-zone indoor air locations in the Building A basement over two months (February 24 to April 21, 2017) (Tetra Tech, 2017b)

(f.) a test to see what effect covering select floor features (e.g., sumps, drains) that had exhibited the highest TCE concentrations had on IA concentrations in the basement (Tetra Tech, 2017b)

Elevated TCE concentrations detected in air within, and above, select floor features (e.g., sumps) in the Building A basement led to the installation, as an interim measure, of three additional air-purifying filters (for a total of six) in the basement in May 2017 to target floor features that have shown elevated TCE concentrations (Tetra Tech, 2018b). The continuous air-monitoring survey also identified significant sources of IA contamination in the basement at sumps associated with abandoned and/or removed heaters (Tetra Tech, 2017b). In addition to the new air-purifying filters, additional activities were completed in the summer of 2017 in Building A and its basement to address the elevated VOC results from several recent investigations. A closed-circuit television (CCTV) camera survey of floor features in the Building A basement, including the sumps in existing and former heating rooms, the air-duct network that runs behind the eastern basement

wall, the storm-drain line that runs north/south under the basement floor, and the smaller floor drains, was conducted to determine their condition, identify possible breaches, and better understand their direction and design.

In 2016 (Tetra Tech, 2016b) and March 2017 (Round 22), sampling location SV-175-A (Figure 2-2) on the Building A basement floor had the highest TCE concentrations (460,000 and 650,000 micrograms per cubic meter [µg/m^{3}], respectively). The maximum August 2017 (Round 23) SV TCE concentration (21,000 µg/m^{3}) was also detected at location SV-175-A. Location SV-175-A was removed from the sampling list and not sampled in February 2018 (Round 24) due to the consistently elevated TCE concentrations detected during previous sampling. High TCE SV concentrations were also noted at two locations in the eastern wall of the Building A basement during 2016 (Tetra Tech, 2016b), three locations in the eastern wall of the Building A basement in 2017 (in both the March [Round 22] and August [Round 23] sampling), and at two locations in the eastern wall of the Building A basement in February 2018 (Round 24). A pilot test evaluated the feasibility of extracting vapors from within the basement duct system at former heater room A-9/sump HRS5 (located immediately adjacent to SV-175-A, where the highest TCE concentrations have been detected historically) using the existing SSDS (Tetra Tech, 2018b). The pilot test was successful, HRS5 was left connected to the SSDS, and the system continues to extract vapor from this sealed sump.

Last, a FROG 4000™ gas-chromatograph/photoionization detector (GC/PID) survey of the main floor of Building A assessed whether TCE detected in indoor air near the basement sumps was migrating up through air ducts connected to the sumps, and through the floor air-vents, to the main floor of Building A. TCE detections ranging from 6.1 to 19.3 parts per billion (ppb) were recorded in samples collected from inside the vents and in indoor air above the vents; therefore, in September 2017 all floor air-vents on the main floor (regardless of screening results) were sealed using a vapor barrier and bolt-down steel plate to close off this exposure pathway and prevent migration of TCE vapor from the basement. A subsequent FROG 4000™ survey in October 2017 verified the integrity of the seals at the 42 air-vent locations and confirmed the absence of TCE in indoor air near the vents. No TCE was detected in any sample collected; all results were non-detect (ND) (Tetra Tech, 2018c).

The sampling plan for Round 24 was based on historical detections, information obtained during site reconnaissance, and a review of historical information and reports. IA and SV samples were collected from Buildings A, B, and C during Round 24 sampling. Relevant guidance from the United States Environmental Protection Agency [USEPA] (USEPA, 1996, 2004, 2012, and 2015) and the Maryland Department of the Environment [MDE] (MDE, 2006) was used to develop the investigation methodology.

2.2 INVESTIGATION PROCEDURES

IA and SV sampling within Buildings A, B, and C was done in accordance with the work plan (Tetra Tech, 2017d). Background outdoor air samples were collected from the same sampling locations as had been used for Round 23 (Figure 2-1). Not all existing monitoring points inside the subject buildings were sampled during Round 24. As in previous rounds, samples were selectively collected in or adjacent to areas where contaminants had been detected previously, or in areas where contaminants are currently suspected of being present.

TCE has been targeted as a primary chemical of concern (COC); it has a history of use at the site, has been detected in groundwater and soil gas, can be toxic to human health at low concentrations, and is mobile in the environment. Historical sampling locations and the sub-slab VMPs sampled in Buildings A, B, and C during this round are shown in Figures 2-2, 2-3, and 2-4, respectively. IA sampling locations were co-located with most of the monitored SV sampling locations to evaluate IA and any possible relationship between SV and IA.

Round 24 sampling was performed on February 20–21, 2018. Seventy-two samples (and eight duplicates) were collected using Summa® canisters as follows:

- four background ambient-air samples were collected at the same locations used in the previous round
- 35 IA samples (and four duplicates) from Buildings A, B, and C:
  - 15 IA samples (and two duplicates) from Building A
  - two IA samples from Building B
  - 18 IA samples (and two duplicates) from Building C

- 33 SV samples (and three duplicates) from Buildings A, B, and C:
  - 16 SV samples (and two duplicates) from Building A
  - two SV samples from Building B
  - 15 SV samples (and one duplicate) from Building C
- The "-A," "-B," and "-C" suffixes in the sampling location designations correspond with Buildings A, B, and C, respectively.

Before sampling, the tubing for each VMP was purged of atmospheric air, allowing SV to enter the probe and tubing. Purging was performed by attaching the sample tubing to a low-flow sampling pump set to an approximate flow rate of 200 cubic centimeters per minute to minimize the potential mobilization of SV that could bias the sample. One to three volumes (i.e., the volume of the sample probe and tube) were purged to ensure that collected samples were representative of SV conditions.

Each SV sample was collected over one hour and each IA sample was collected over a period of eight hours using preconditioned Summa® canisters to ensure subsurface equilibration and avoid high negative pressure that might mobilize SV and bias the results. These specially treated, stainless steel, one-liter canisters were equipped with in-line particulate filters and integral controllers to control the rate of filling during sampling. SV samples were collected through Teflon® tubing attached to the stainless-steel Vapor Pins® or vapor implants. Each sampling location was routinely inspected during the sampling period to ensure appropriate operation of sampling devices, sample integrity, and to document conditions within the area that might affect results.

Samples were collected by opening the valve on the canister, which allowed air to enter the canister at the rate set by the controller (one liter canister over a period of one hour [SV] and over a period of eight hours [IA]). Controllers were calibrated in the laboratory and shipped to the field with a sufficient flow rate that would maintain the necessary vacuum pressure in the Summa® canister for the one-hour and eight-hour sampling intervals. Samples were collected and analyzed for VOCs by TO-15. SV samples were collected in accordance with standard operating procedures developed by the USEPA Environmental Response Team for soil vapor sampling (USEPA, 1996), and methodologies developed by the USEPA Office of Research and Development (USEPA, 2004).

After sampling had been completed, each canister was closed and sent to an off-site laboratory (TestAmerica, Inc. in Knoxville, Tennessee) under proper chain of custody procedures. No issues (e.g., no faulty regulators or Summa® canisters) were encountered while sampling, and all samples had sufficient volume for analysis.

Five IA samples from Building C (144-C, 145-C, 146-C, 150-C, and 152-C) were collected in the machine shop of the Lockheed Martin Rotary and Mission Systems (RMS) (formerly the Lockheed Martin Mission Systems & Training [MST] mechanical prototype laboratory [MPL]). Monitoring continues in this area, because TCE was detected in IA at a concentration greater than its screening level during Round 15 (August 2013). The five sampling locations that provide data for possible worker-exposure areas within the MPL are:

- 144-C: machine shop area
- 145-C: cubicle area
- 146-C: kitchen area
- 150-C: kitchen area
- 152-C: machine shop area

Five SV samples (three in the eastern wall of the Building A basement [170-A, 171-A and 173-A], one in the Building A basement floor [174-A], and one beneath the main floor of Building A [168-A], were collected during Round 24 to target possible TCE sources, including a former underground storage tank and vapor degreasers associated with former plating shop operations.

The SSD systems in the Building C basement area and the Building A plating shop were shut down approximately 24 hours before sampling began. The SSD systems were restarted within one hour after sampling had been completed in Buildings A and C; this is consistent with previous monitoring episodes. The following observations were recorded during the February 2018 sampling:

- Mean outdoor ambient temperature during the sampling period was 54 degrees Fahrenheit (°F) on February 20, 2018 and 64°F on February 21, 2018. Barometric pressure decreased during the sampling period, from 30.39 inches of mercury (in. Hg) to 30.29 in. Hg. Wind direction on February 20 and February 21, 2018 was from the southeast, and average wind speed ranged from calm to 12 miles per hour (mph). Skies were mostly cloudy and overcast on February 20 and February 21, 2018.
- No precipitation (rain) was recorded on February 20 and February 21, 2018.

- Water was present in the flush-mounted vault (shallow subsurface groundwater accumulation) at sampling locations SV-076-A, SV-121-B, and SV-140B, so no samples could be collected. Alternate samples were collected at nearby locations SV-095-A, SV-101-B, and SV-100-B, respectively.

- IA and SV samples from 118-A were collected in the bond-layup room (Building A production floor), where a positive-pressure air-conditioning system was operating.

- Sampling location 015-A is in the former plating shop area (Building A production floor). After the sampling round in August 2015, the area had undergone construction and redevelopment. A new floor has been installed and this area is now an extension of the bond-layup room. IA and SV samples from 015-A were collected in this newly expanded bond-layup room (former plating shop), where a positive-pressure air-conditioning system was operating.

- Sampling locations 018-A, 093-A, 116-A, and 138-A were collected in the Building A basement. Select samples from the basement were added to the sampling program due to the ongoing TCE VI investigation. These include three additional locations in the eastern wall (170-A, 171-A, and 173-A) and one in the floor (174-A).

- The air-purifying units in the Building A basement were operating when samples were collected.

- The sample from 168-A was collected near the location of a former vapor degreaser on the main floor of Building A. Nearby construction (breaking up the floor with a jackhammer) was underway during sampling; however, floor to ceiling plastic sheeting isolated the construction area.

- A large industrial fan was operating near the sampling location 076-A during sampling.

- IA and SV samples at 001-C and 004-C were collected approximately 70 feet from a bay door to the outside that was opened intermittently.

- Samples IA-144-C through IA-146-C, IA-150-C, and IA-152-C were collected in a positive-pressure, air-conditioned room (the RMS MPL machine shop).

- Building A is a one-story building, except for a basement corridor under an open-air loading dock on its western side. Roof vents approximately 50 feet above the work floor were open in Building A during Round 24 sampling. The large doors at the loading docks on the western side of the building were also open to allow carts, forklifts, personnel, and equipment to pass. Increased ventilation associated with open doors and roof vents might have affected concentrations in samples collected on the first floor of Building A. No personnel or other activities were observed in the Building A basement.

- The bay doors across the southern end of Building B were closed during sampling. The automatic bay door at the southeastern corner of Building B was opened and closed quickly

to allow carts and equipment to pass. The opening of the bay door might affect concentrations in samples collected from the southernmost sampling locations (IA-100-B and IA-101-B). Open roof vents were also observed in Building B during sampling.

- The Building C basement is generally accessed via two automatic rolling doors on its eastern and southern sides. These doors open and close quickly to allow carts and forklifts to pass. The automatic rolling door approximately 40 feet east of sampling location 141-C was opened and closed intermittently during the day. The bay doors at the southern and southeastern sides of the Building C basement were open during the sampling period. This might have influenced IA concentrations in the samples collected from locations 001-C and 004-C.

- The most personnel and greatest activity were observed at the MRC in Building B, in locations from the thrust-reverser assembly area in the southern portion of the building to the machining area in its central portion. Less activity was observed in Building A, where activity was generally focused in the expanded bond-layup room (former plating shop area) and autoclave areas, and in the parts and assembly areas. No activity was observed in the southern portion of Building C. Light activity (three people) was observed in the machine shop area in Building C basement.

- The southern end of the Building C basement is now vacant, having been cleared of workstations and equipment by MRA Systems, Inc. (MRAS). Some materials are being temporarily stored in this area.

- The pressure gauges on most Summa® canisters responded instantaneously upon opening the valve by dropping to between -26 and -30 in. Hg. Three pressure gauges (SV-075-A, IA-018-A, and IA-141-C) had beginning pressures of -24 in. Hg. The readings on pressure gauges of most Summa® canisters were between 0 and -4 in. Hg when sampling was complete. The pressure gauge for IA-018-A showed an end pressure of -20 in. Hg and the pressure gauge for IA-126-C showed an end pressure of -6.5 in. Hg. Despite these varied pressure readings, all regulators operated properly, and adequate volumes for analysis were collected in all Summa® canisters. Pressure readings for each Summa® canister are recorded on the chain of custody forms (Appendix A).

Samples were analyzed for the current target-compound list, last amended on February 12, 2012:

- 1,1,1-trichloroethane (1,1,1-TCA)
- 1,1,2-trichloroethane (1,1,2-TCA)
- 1,1-dichloroethane (1,1-DCA)
- 1,1-dichloroethene (1,1-DCE)
- 1,2,3-trimethylbenzene (1,2,3-TMB)
- 1,2,4-trichlorobenzene
- 1,2,4-trimethylbenzene (1,2,4-TMB)
- *cis*-1,2-dichloroethene (*cis*-1,2-DCE)
- dichlorodifluoromethane
- ethylbenzene
- methylene chloride
- methyl-tertiary-butyl ether (MTBE)
- naphthalene
- tetrachloroethene (PCE)

- 1,2-dichloroethane (1,2-DCA)
- 1,3,5-trimethylbenzene (1,3,5-TMB)
- benzene
- carbon tetrachloride
- chlorodifluoromethane (Freon 22)
- chloroform
- toluene
- *trans*-1,2-dichloroethene (*trans*-1,2-DCE)
- trichloroethene (TCE)
- vinyl chloride (VC)
- xylenes (total)

All samples collected during Round 24 were submitted to TestAmerica in Knoxville, Tennessee for analysis via GC/MS using cryogenic concentration (as described in Sections 9 and 10 of USEPA Method [Toxic Organic-15] TO-15 [USEPA, 1999]). This method was used because of its low detection limit (in the parts-per-billion by volume range), and because it can quantify all VOCs of concern. TestAmerica is certified in USEPA Method TO-15 analysis and meets all quality assurance/quality control requirements specified in the TO-15 methodology.

All samples were stored at ambient temperatures and shipped to the laboratory via overnight carrier. All samples were submitted and analyzed within the method's specified 30-day holding time. All appropriate chain of custody documentation was completed for each sample (see Appendix A). A table listing TestAmerica's method detection limits is in Appendix B; Appendix C contains the laboratory analytical reports. Data-validation reports and supporting documentation are in Appendix D.

Validated analytical data were qualified in accordance with USEPA *National Functional Guidelines for Organic Superfund Methods Data Review* (USEPA, 2017a). Attaching data qualifiers to analytical results signifies a quality-control noncompliance. During Round 24, the following data qualifiers were applied to data after validation if applicable:

- *J*—indicates an estimated result below the reporting limit or an estimated result greater than the reporting limit with a quality control nonconformance.
- *U*—indicates the chemical was not detected at the numerical detection limit (i.e., the sample-specific quantitation limit).
- UJ—indicates the chemical was not detected at the (estimated) numerical detection limit (i.e., the sample-specific quantitation limit).

No results were rejected during data validation.

SECTION 3
ROUND 24 RESULTS

All analytical results for indoor air (IA) and background (ambient air) samples were compared to screening levels for industrial air; these levels are based on United States Environmental Protection Agency (USEPA) *Regional Screening Levels (RSLs) for Chemical Contaminants at Superfund Sites* (USEPA, 2017b). Screening the chemicals of concern (COC) uses the lower of the carcinogenic (*ca*) or noncarcinogenic (*nc*) values. Carcinogenic values are based on a 1×10^{-5} (i.e., a one-in-100,000 probability) excess cancer-risk, whereas the noncarcinogenic values are based on a hazard quotient of 1 (i.e., the "no adverse effect" level).

These risk benchmarks were selected in accordance with Maryland Department of the Environment (MDE) requirements. Analytical results were also compared to federal Occupational Safety and Health Administration (OSHA) permissible exposure limits (PELs). Alternate values, such as the "Threshold Limit Values" published by the American Council of Governmental Industrial Hygienists, were used for chemicals without published permissible exposure limits.

Sub-slab vapor (SV) sampling results were compared to SV screening values derived in accordance with the methods discussed in USEPA's *OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Sources to Indoor Air* (USEPA, 2015), and were calculated by dividing indoor-air (IA) screening levels by a conservative attenuation factor (AF) of 0.03. The AF represents the adjustment applied to IA screening levels to account for concentration reductions due to diffusive, advective, and/or other attenuating mechanisms as vapor migrates from the sub-slab to IA. Simply stated, SV is expected to dilute upon movement into IA; the AF is the ratio of the IA concentration to its SV concentration under a conservative vapor-intrusion (VI) scenario. The recommended AF in the 2015 USEPA guidance results in higher SV screening values than those used for sampling rounds before August 2012, when an earlier USEPA AF of 0.1 was used. USEPA further acknowledges that applying the AF of 0.03 to industrial buildings is conservative (i.e., more protective of human health and the environment), because the

value was developed based on residential VI studies and does not account for industrial buildings that generally have thicker building slabs and stronger heating/ventilation/air-conditioning (HVAC) systems than residential homes.

3.1 ROUND 24 DATA ANALYSIS

The sampling-round designation (R24) is not included when identifying samples or sampling locations in the following text or tables, because all data discussed in this section are from Round 24. For example, an IA sample collected from vapor monitoring point (VMP) 076 (e.g., sample IA-076-A-R24) is referred to as "076-A." If comparisons are made to specific samples from previous sampling rounds, they will be identified as such in the text or by using the round-designation suffix (e.g., R06 for Round 6).

Descriptive statistics for Round 24 IA and SV samples are shown in Tables 3-1 and 3-2, respectively. Summary statistics for trichloroethene (TCE) and naphthalene in IA over time are shown in Tables 3-3 and 3-4, respectively. Figures 3-1, 3-2, and 3-3 show Round 24 exceedances in Buildings A, B, and C, respectively. The following chemicals were detected in Round 24 IA and/or SV samples at concentrations exceeding their respective MDE industrial risk-management benchmarks:

- IA—naphthalene
- SV—1,1-dichloroethane (1,1-DCA), naphthalene, TCE, and vinyl chloride (VC)

Building A—Tables 3-5 and 3-6 present the Building A IA and SV results, respectively. Locations with exceedances are shown in Figure 3-1. Naphthalene in IA exceeded its screening level (3.6 micrograms per cubic meter [µg/m^3]) at location 018-A (in the basement), with concentrations of 5.7 µg/m^3 and 4.8 µg/m^3 in the parent and duplicate samples, respectively. Note that location 018-A is within the radius of influence of the SSDS, as shown in Figure 3-1, indicating that the presence of naphthalene in IA is likely due to IA sources. Naphthalene was detected in three of 16 Building A SV samples, at locations 075-A (84 µg/m^3), 081-A (4.8*J* µg/m^3), and 116-A (1.4*J* µg/m^3), but at concentrations less than the SV screening level (120 µg/m^3). No other IA concentrations exceeded screening levels during Round 24.

TCE has periodically been detected in IA in the Building A basement at concentrations greater than its IA screening level (8.8 µg/m^3), beginning with Round 15, but has not exceeded the Building A basement-specific screening level of 35 µg/m^3 that MDE approved in 2017. The basement screening-level was developed to account for reduced exposure potential in the basement, as compared to the main floor of Building A. Access to the basement is controlled by management and signage. TCE was detected in IA at all four Round 24 Building A basement sampling locations (018-A, 093-A, 138-A, and 174-A), but at concentrations less than its screening level (2.1 and 2.5 µg/m^3 [parent and duplicate samples], 3.4 µg/m^3, 2.2 µg/m^3, and 2.7 µg/m^3, respectively). This is the second sampling round since vapor extraction began at the HRS5 sump. This sump has been identified as the primary contributor of TCE impacts to indoor air in the Building A basement. Vapor is now being extracted there continuously under normal SSDS operating conditions; however, per sampling protocol, the SSDS was temporarily shut down for approximately 24 hours before starting IA and SV sampling and restarted immediately after sampling had been completed. Likewise, Round 24 TCE concentrations in first-floor Building A IA samples did not exceed screening levels.

SV TCE exceeded its screening level (293 µg/m^3) at five locations (118-A, 136-A, 168-A, 171-A, and 173-A) in the central portion of Building A within or near the radii of influence of the SSD systems. TCE SV exceedances were also observed at two of the same locations (118-A and 136-A) during several recent sampling rounds (e.g., Rounds 18 through 23). Round 24 SV concentrations at locations 118-A and 136-A are similar to SV concentrations detected at these locations during Round 23. TCE concentrations at SV 118-A in Rounds 19, 20, 21, 22, 23, and 24 (900 µg/m^3, 2,300 µg/m^3, 890 µg/m^3, 2,000 µg/m^3, 690 µg/m^3, and 1,500 µg/m^3) are all considerably less by approximately one order of magnitude (i.e., a power of 10) than the concentration detected at this location in Round 18 (13,100 µg/m^3). TCE concentrations at SV 136-A in Rounds 21, 22, 23, and 24 (850 µg/m^3, 300 µg/m^3, 790 µg/m^3, and 380 µg/m^3, respectively) have decreased by a factor of approximately 100 since the SSDS was expanded to this location in 2016, after a reported TCE-vapor concentration of 35,000 µg/m^3 during Round 20. Sampling location 168-A was added in Round 22. SV TCE concentrations at this location exceeded the screening level in Rounds 22 through 24 (22,000 µg/m^3, 8,300 and 7,900 µg/m^3 for original and duplicate, and 1,300 µg/m^3), respectively, but notably decreased over time.

Sampling locations 171-A, and 173-A were added in Round 22. Sampling locations 171-A and 171-3 are in the eastern wall of the Building A basement. SV TCE concentrations at these locations exceeded the screening level in Rounds 22 through 24. SV TCE concentrations did not exceed the screening level at locations 170-A and 174-A during Round 24 sampling, but exceedances were detected there during Rounds 22 and 23; these locations were also added in Round 22 in the Building A basement. No other SV concentrations exceeded screening levels during Round 24.

SV detections of ethylbenzene (6,300 µg/m^3) and total xylenes (19,000 µg/m^3) at location 139-A during Round 23 (the previous round) exceeded their respective screening levels (1,633 µg/m^3 and 14,667 µg/m^3). Round 23 SV detections of ethylbenzene and total xylenes at the remaining SV locations in Building A were at least two orders of magnitude less than the concentrations detected at 139-A. SV concentrations of ethylbenzene and total xylenes at location 139-A have not exceeded their respective screening levels during recent sampling rounds before Round 23 (e.g., Rounds 20 through 22); however, historical exceedances of these VOCs have been noted in Building A, with the most recent occurring in Round 11 for both ethylbenzene and total xylenes (at location 107-A, which was sampled for SV during Rounds 10 through 13). Per the work plan, location 139-A was not sampled during Round 24 because of the lack of exceedances during Rounds 20 through 22. All SV detections of ethylbenzene and total xylenes were less than their screening levels during Round 24, including those at nearby location 079-A, the closest location to 139-A that was sampled during Round 24.

Building B—Tables 3-7 and 3-8 present Building B IA and SV results, respectively. No IA or SV exceedances were noted in Building B during Round 24. Sampling locations within Building B are shown in Figure 3-2. Similarly, no exceedances were noted in Building B IA or SV samples during Rounds 19 through 23. During Round 18, only one slight exceedance of naphthalene was noted in Building B IA, and this concentration only marginally exceeds its screening level. No exceedances were noted in Building B IA or in SV samples during Round 17.

Building C—Tables 3-9 and 3-10 present Building C IA and SV results, respectively. No IA exceedances were detected in Round 24 samples. TCE was not detected in any IA samples. TCE exceedances in SV were noted for five locations (Figure 3-3): 060-C (400 µg/m^3), 102-C (1,500 µg/m^3), 126-C (540 µg/m^3), 133-C (2,000 µg/m^3), and 141-C (310 µg/m^3). The SV

TCE concentrations at 102-C and 126-C also exceeded the screening level during Rounds 22 and 23. SV TCE exceedances were detected at locations 001-C and 113-C during Round 21, but not during Rounds 22 through 24. SV TCE exceedances at location 152-C were noted during Rounds 22 and 23, but not during Round 24.

A VC exceedance (2,700 µg/m^3) above its screening level (933 µg/m^3) was also detected at 126-C. VC exceedances were also noted in SV at location 126-C during Round 18 (1,310 µg/m^3), Round 19 (16,000 µg/m^3), Round 20 (3,100 µg/m^3), Round 21 (5,000 µg/m^3), Round 22 (2,600*J* µg/m^3), and Round 23 (3,300 µg/m^3). The locations of TCE SV exceedances in Building C during Round 24 are sporadic, and do not follow an observable spatial pattern. However, VC exceedances in SV have consistently been observed at location 126-C during recent sampling rounds (i.e., in Rounds 12–24). In addition to the screening level exceedances discussed above, SV exceedances of 1,1-DCA (5,600 µg/m^3) and naphthalene (180*J* µg/m^3) were also detected at 102-C during Round 24 (screening levels are 2,567 and 120 µg/m^3, respectively). These exceedances are similar to those noted at location 102-C (5,900 µg/m^3 for 1,1-DCA, and 180 µg/m^3 for naphthalene) during Round 23. SV exceedances of 1,1-DCA (3,900 µg/m^3) and naphthalene (310 µg/m^3) at 102-C also occurred during Round 22, but not during Round 21.

During Round 24, IA and SV concentrations of tetrachloroethene (PCE) did not exceed screening levels. During Round 18, an IA exceedance of PCE was detected (870 µg/m^3, as compared to its IA screening level of 180 µg/m^3) in a resample (collected because the TCE concentration approached but did not exceed the screening level in the parent sample), but that was not the case in the parent sample collected at location 149-C during Round 18. Before Round 18, PCE had never been detected in IA or SV in Building C. Additionally, IA and SV concentrations of PCE detected in Rounds 19 through 23 did not exceed screening levels. In most SV samples collected over the course of these investigations from locations at and near location 149-C, concentrations of PCE are typically below detection limits. The preponderance of evidence suggests that the elevated PCE concentration at location 149-C during Round 18 is anomalous, and possibly attributable to some IA source rather than to VI.

3.2 BACKGROUND AMBIENT-AIR SAMPLES

Outdoor-air-quality (i.e., background) samples provide baseline concentrations for COC that can be compared to interior concentrations. Comparison to background indicates whether chemicals detected in IA are more likely associated with an exterior (i.e., background) or interior source (e.g., chemicals used in the workplace, or with past spills of chemicals absorbed to above-slab building materials, or sub-slab sources). Analytical results for Round 24 ambient (background) air samples are shown in Table 3-11. Figure 2-1 shows the background sampling locations used for Round 24; these locations are sufficiently far from site operations to avoid any possible site influence.

Table 3-12 lists chemicals detected in background samples and compares IA concentrations to the maximum detected background concentration. Nearly all chemicals detected in background samples were also detected in IA samples; the only exception is 1,1-DCA, which was detected in ambient air but not in indoor air. All background concentrations are below their respective screening criteria. Table 3-12 evaluates whether chemical concentrations detected in IA are possibly due to interior sources, or if they simply reflect background conditions, using the following logic:

- When IA concentrations are equal to or less than background concentrations, IA concentrations likely reflect background conditions.
- When IA concentrations are greater than background concentrations and/or sub-slab concentrations, other interior sources are possibly contributing to IA concentrations.
- The presence of chlorinated degradation-products in IA samples (at concentrations less than those detected in SV samples), but not in background samples, suggests that sub-slab sources might contribute to these IA concentrations.

In Round 24, only IA concentrations of naphthalene at location 018-A (in both parent and duplicate samples) exceed the MDE risk-management benchmark. This location is within the Building A SSDS radius of influence, indicating that the presence of naphthalene in IA is likely due to IA sources. Naphthalene was not detected in background samples, and only one of its SV concentrations, detected in Building C and not Building A, is greater than the VI screening level.

Round 24 IA concentrations of other COC exceeding their respective screening levels in SV samples (i.e., 1,1-DCA, TCE, and VC) were either not detected, or were less than their screening levels. Naphthalene and VC were not detected in background samples, indicating that any concentrations of these chemicals detected in IA are likely not attributable to background. 1,1-DCA and TCE were detected in background samples at maximum concentrations of 3.2 µg/m^3 and 0.72 µg/m^3, respectively. The maximum IA concentration of TCE was 3.4 µg/m^3, and five of seven TCE concentrations detected in IA exceed the maximum background concentration of TCE, indicating that SV and other interior sources are possibly contributing to TCE IA results. 1,1-DCA was not detected in any IA sample, indicating IA concentrations were not influenced by background concentrations.

The IA concentrations for all remaining SV contaminants are less than screening levels; their IA concentrations span a range above and below background concentrations. As presented in Table 3-12, chemicals with most of their indoor air detections below background (carbon tetrachloride, chloroform, dichlorodifluoromethane, 1,1-DCE, ethylbenzene, methylene chloride, toluene, and total xylenes) are likely influenced by ambient background contaminant sources. The remaining IA contaminants might be due to IA sources, and/or ambient background conditions; in any case, all remaining IA contaminants are below screening levels in Round 24.

SECTION 4
SUB-SLAB-DEPRESSURIZATION-SYSTEM DATA ANALYSIS

This section summarizes the operation and monitoring of the sub-slab-depressurization (SSD) systems (SSDS) in Buildings A and C for the reporting period from October 1, 2017 to March 31, 2018. A detailed account of these activities is in the April 24, 2018, remedial action progress report (Appendix E). The location and layout of the SSD systems, and associated sub-slab-vapor (SV) extraction points and vapor monitoring points (VMPs), are shown in Figures 1, 2, and 4 of Appendix E. This section discusses SV sampling results, extraction points, system influent, vacuum influence, and SSDS performance.

4.1 SUB-SLAB-VAPOR MONITORING POINTS

Tables 4-1 and 4-2 summarize the concentrations of target volatile organic compounds (VOCs) detected at SV monitoring points to date in the Building A lay-up room (former plating shop on the main floor), basement, and eastern area (on main floor), and in the Building C basement, respectively.

4.1.1 Building A

SV samples collected to date near the Building A SSDS are listed in Table 4-3. VMPs 015-A and 018-A (on the main floor of Building A); 078-A, 079-A and 136-A (on the eastern area of Building A); and 093-A and 116-A (in the basement of Building A) were sampled in February 2018 (see Figure 2 in Appendix E). VMPs 015-A (on the main floor of Building A) and 018-A (in the basement) have been scoped to be sampled regularly as part of the facility-wide semiannual sub-slab and indoor-air monitoring program (see Figure 2 in Appendix E). However, VMP 018-A has not been sampled since February 2014, because water regularly collects in its flush-mounted vault.

Both 015-A and 018-A are within the measured SSDS radius of influence. The highest sub-slab SV trichloroethene (TCE) concentrations were detected at VMPs 015-A, 018-A, 079-A, and 136-A, before and after the SSDS began operation, are shown in Table 4-4. The concentrations detected at these VMPs in February 2018 are one to three orders of magnitude (i.e., 10 to 1,000 times) lower than the concentrations detected before the Building A SSDS began operation.

While a significant decline has been observed at 015-A, overall TCE concentrations continue to fluctuate over time. For example, TCE was detected at an estimated 2.3 micrograms per cubic meter ($\mu g/m^3$) in February 2017, at 51.5 $\mu g/m^3$ in August 2017, and at 6.3 $\mu g/m^3$ in February 2018 (Figure 4-1). VOC-impacted groundwater likely provides a continuing source of VOCs in soil vapor at 015-A. Similar fluctuations have also occurred at 018-A, between August 2011 and February 2014. Sub-slab vapor concentrations of TCE vary with rainfall, based on results from the continuous air-monitoring study, changes in water levels, and changes in barometric pressure.

VMPs 079-A and 136-A are near extraction points installed during the system expansion completed in April 2016. The February 2018 results show that these locations have had more than a 90% decrease in total VOCs since the SSDS was expanded. Figure 4-2 shows that the August 2017 results at these two points are higher than both the February 2017 and February 2018 results, due to what appears to be seasonal fluctuation.

VMP 168-A is near the system extraction point SSD-39-A, installed during the third-phase of system expansion completed in July 2017. This location showed VOC concentration decreases in February 2018 (1,300 $\mu g/m^3$ TCE) as compared to August 2017 (8,100 $\mu g/m^3$ TCE) and February 2017 (22,000 $\mu g/m^3$ TCE, detected before third-phase expansion). Concentrations observed after SSDS startup were generally lower than concentrations detected before the system began operation. VOC reductions at 018-A (in the basement) might be more limited than those experienced at main floor VMPs, because the shallow groundwater table (typically less than one foot below the basement slab) possibly impedes vapor flow.

4.1.2 Building C

SV samples collected to date near the Building C SSD system are listed in Table 4-5. These points are within 100 feet of the Building C SSD-system extraction points in the basement; most[2] are within the vacuum influence of SSD-system operations. VMPs 001-C, SSD-4-C (in the southern basement area) and 060-C, 088-C, 113-C, 126-C, 133-C, 141-C, 149-C, 152-C, 153-C, and 155-C (in the mid-basement area) were sampled in February 2018 (see Figure 4 in Appendix E).

The highest TCE concentrations were observed at VMPs near the SSD system before it began operation. The most recent concentrations (sampled during SSD system operation) are summarized in Table 4-6. The February 2018 TCE concentrations are lower than the concentrations measured before SSD-system startup. Compared to the concentrations measured in the previous semiannual event (August 2017), VMPs 001-C, SSD-4-C, 113-C, 126-C, 149-C, 153-C, and 155-C have similar TCE concentrations; TCE at location 152-C is lower than the concentration detected during the last semiannual event (210 µg/m^3 compared to 1,400 µg/m^3; see Table 4-2 and Figure 4-3), whereas 133-C and 141-C have higher TCE concentrations than the most recent sampling events in September 2014 and August 2015, respectively.

Concentrations of vinyl chloride (VC) observed at 126-C have also decreased since the SSD-system expansion (see Figure 4-4), but, as shown on Figure 4-4, VC concentrations in sub-slab vapor at 126-C have varied over time (the VC concentrations in August 2017 and February 2018 were 3,300 µg/m^3 and 2,700 µg/m^3). The reason for these fluctuations is difficult to determine, but might possibly be due to seasonal fluctuation (see 2015, 2016, 2017, and 2018 results in Figure 4-4). VC has not been detected in SSDS influent samples or in groundwater samples collected in March 2017 from a nearby well pair (MW-88A/B).

4.2 SUB-SLAB-VAPOR EXTRACTION POINTS

The Building A and Building C sub-slab-vapor extraction points are not sampled as part of the semiannual monitoring program, because the combined influent for the Building A system is sampled monthly, and the Building C system is sampled every two months. Figure 2 in Appendix E shows the Building A extraction points (North, South, Basement North, and Basement South),

[2]Locations 001-C, SSD-4-C, 060-C, 113-C, 127-C, 133-C, 135-C, 149-C, 152-C, 153-C, 155-C, and 156-C

horizontal extraction laterals, extraction pipe from basement sump HRS-5, and vertical extraction points in Building A (SSD-34-A, SSD-35-A, SSD-36-A, SSD-37-A, SSD-38-A, and SSD-39-A). Figure 4 in Appendix E shows the vertical extraction points in Building C: SSD-21-C, SSD-23-C, SSD-26-C, SSD-27-C, SSD-28-C, SSD-29-C, SSD-30-C, SSD-31-C, SSD-32-C, SSD-33-C, and SSD-34-C.

4.3 VACUUM INFLUENCE

Induced vacuum levels over time for sub-slab VMPs in the targeted areas are shown on the following figures in Appendix E: Figure 6 (Building A lay-up room and basement), Figure 7 (Building A eastern area), Figure 8 (Building C southern basement area), and Figure 9 (Building C mid-basement area). Representative vacuum measurements from the March 20, 2018 monitoring are indicated on plan views on Figures 10, 11, 12, and 13 of Appendix E. Vacuum influence associated with SSDS VMPs is checked biweekly. The target vacuum is 0.01 inches of water column or greater. As indicated in the April 2018 progress report (Appendix E), extraction trenches near the Building A lay-up room induce a vacuum equal to or greater than 0.01-inches water column over an approximately 5,900-square-foot area; this area encompasses all SV monitoring points that had elevated VOC concentrations before system startup. The trenches in the Building A basement induce a vacuum over an approximately 2,500-square-foot area that encompasses the four VMPs used to measure the SSDS induced vacuum in the basement. The extraction wells in the eastern area of Building A induce a vacuum over an approximately 6,100-square-foot-area, and encompass nine of 17 VMPs used to measure the SSDS induced vacuum in that area. Extraction point SSD-39-A in the western area of Building A is inducing vacuum at one of two nearby VMPs; the associated area of induced vacuum influence is approximately 1,100 square feet.

The Building C basement wells induce vacuum influence over an approximately 4,900-square-foot area in the southern end of the basement, whereas the extraction wells in the mid-basement area induce vacuum influence over an approximately 28,000-square-foot area. In the mid-basement, 13 of 20 monitoring points are within the target area shown to have vacuum influence. Vacuum influence has not been observed at the northern end of the mid-basement area; possible reasons include high groundwater levels, subsurface preferential pathways, short-circuiting, and/or

blockages. However, total VOC concentrations at VMP 126-C (outside the area of demonstrated vacuum influence) have decreased by more than 85% since the system was expanded in May 2013.

4.4 INFLUENT-VAPOR SAMPLES

Influent-vapor samples are collected monthly to monitor the Building A SSDS operation, and once every two months to monitor the Building C SSDS operation. VOC concentrations at the granular activated-carbon (GAC) influent, midpoint (after the lead drum), and effluent (after the second drum) points are monitored to determine when the midpoint concentration reaches 50% of the influent; when the 50% breakthrough is reached, or at Tetra Tech's discretion with concurrence from Lockheed Martin Corporation (Lockheed Martin), the lead GAC drum is changed out. These samples also allow monitoring of influent-concentration trends over time. Samples were collected directly from all three sampling ports of both SSD systems by connecting a clean one-liter Summa® canister (batch certified) to the Teflon® tubing of each sampling port and opening the valve for approximately one minute. The samples were submitted to TestAmerica Laboratories, Inc. (TestAmerica) in Knoxville, Tennessee for VOC analysis using United States Environmental Protection Agency (USEPA) Toxic Organic Method (TO-15).

Tables 4-7A and 4-7B summarize the influent-vapor concentrations of target VOCs in samples over time (from system startup in March 2008 through March 2018). These results are displayed graphically on Figures 14 and 15 in Appendix E. Tables 4-7A and 4-7B provide average influent concentrations for the current (October 2017–March 2018) and previous (April-September 2017) reporting periods. The six-month average-influent (total) VOC concentrations in Building A and Building C during the current reporting period (1,616 µg/m^3 for Building A and 76 µg/m^3 for Building C) are similar to those observed during the previous semiannual reporting period (1,565 µg/m^3 for Building A and 81 µg/m^3 for Building C). Overall, influent VOC concentrations for both SSD-systems have been relatively stable or slowly decreasing since 2009 (see Figures 14 and 15 in Appendix E).

The goal of the SSD systems is to maintain a negative pressure below the slab (relative to the room space), thus minimizing VOC migration from the sub-slab soil into indoor air. VOC-mass removal occurs while vapor is drawn out to maintain the vacuum. VOC removal rates for SSDS influent-mass in Building A range from 0.04 to 0.06 pounds per day (lbs/day); these rates are practically

the same as the removal rates observed in the previous semiannual reporting period (0.04–0.07 lbs/day).

The Building A system has removed nine pounds (lbs) of VOCs during this reporting period, 9.3 lbs in the previous reporting period, and 170 lbs since system startup in March 2008. The VOC removal rate in Building C during the current reporting period was also the same as the rate during the previous semiannual reporting period, approximately 0.001 pounds per month (lbs/month). The Building C SSDS has removed 0.23 lbs of VOCs this reporting period, 0.24 lbs in the previous reporting period, and 11.8 lbs since system startup in March 2008.

4.5 SYSTEM PERFORMANCE

In general, flow rates and induced vacuums for the SSD systems are performing as designed, except for a lack of induced vacuum near SSD-136-A in the eastern area of Building A, and near SSD-29-C and SSD-34-C in the northern portion of the mid-basement area of Building C. We will continue to monitor system-induced vacuum performance; however, some localized areas are likely to remain not amenable to induced vacuum, due to the heterogeneous structure of subsurface soil and water accumulation in the subsurface of old structures. The induced-vacuum influence of the Building A system is at least 0.05 inches water column over 5,900 square-feet on the main floor (encompassing the lay-up room), 2,500 square-feet in the basement, and 7,100 square-feet in the northern and eastern areas. The induced-vacuum influence of the Building C SSDS is at least 0.05 inches water column and extends over an approximately 4,900 square-foot area in the southern basement and over approximately 31,000 square-feet in the mid-basement area.

SECTION 5
CONCLUSIONS

5.1 CONCLUSIONS

Tetra Tech, Inc. (Tetra Tech) has completed Round 24 of vapor-intrusion (VI) monitoring (the first of two scheduled in 2018) in Buildings A, B, and C at the Middle River Complex (MRC) (owned by LMC Properties, Inc.) in Middle River, Maryland. This ongoing investigation seeks to evaluate whether volatile organic compounds (VOCs) in sub-slab vapor (associated with soil and groundwater chemicals of concern [COC] at the site) might be moving into indoor air (IA) at the Middle River Complex facilities. The data set is composed of indoor-air and sub-slab-vapor (SV) samples collected in February 2018. Ambient air samples were also collected at four outdoor background locations around the perimeter of the Middle River Complex. All data were validated to ensure compliance with analytical method requirements.

Indoor air (IA) data were compared to risk-based screening levels for industrial air set at the 1×10^{-5} (i.e., one-in-100,000 probability) risk level for carcinogens, or at a hazard quotient of 1 for noncarcinogens (as published in the United States Environmental Protection Agency [USEPA] *Regional Screening Levels for Chemical Contaminants at Superfund Sites* [USEPA, 2017b]). For samples collected in the Building A basement only, indoor air levels of trichloroethene (TCE) were compared to a Maryland Department of the Environment-approved basement-specific screening level of 35 micrograms per cubic meter ($\mu g/m^3$), based on the limited exposure potential for workers entering the basement. Indoor air samples were also compared to federal Occupational Safety and Health Administration (OSHA) permissible exposure limits (PELs). Alternate values, such as the "Threshold Limit Values" published by the American Council of Governmental Industrial Hygienists, were used for chemicals without published permissible exposure limits. SV data were compared to screening values derived using methods described in *OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Sources to*

Indoor Air (USEPA, 2015) by applying an attenuation factor of 0.03 to the indoor-air screening-values.

Historically, trichloroethene and naphthalene have been the prevalent contaminants of concern in indoor air at this site; however, in Round 24, trichloroethene was not detected in indoor air in Buildings B or C but was detected below its screening level in indoor air in Building A (see plan view in Figure 5-1). The reduced trichloroethene indoor air concentrations in the Building A basement are attributable to sealing and extracting vapors from basement sump HRS5; this sump was connected to the Building A sub-slab-depressurization system in June 2017. Trichloroethene was detected in seven of 35 indoor air samples collected during Round 24.

Naphthalene was detected in indoor air at a concentration above its screening level at one location in Building A (018-A), in both the parent and duplicate sample. This location is within the system's radius of influence, indicating that these detections likely derive from indoor sources. Location 018-A was the sole naphthalene detection in indoor air in Round 24; it was not detected in indoor air in Buildings B or C.

5.1.1 Building A

Basement

- Trichloroethene was detected in indoor air at all four Building A basement sampling locations, but at concentrations less than its basement-specific screening level (35 µg/m^3), derived to account for reduced potential exposure in the basement, and less than the industrial worker screening level (8.8 µg/m^3). Historical indoor-air trichloroethene concentrations in the Building A basement have never exceeded the basement-specific screening level, but have exceeded the industrial screening level. Trichloroethene was detected in vapor samples collected from the basement wall at locations 171-A and 173-A at concentrations greater than the sub-slab-vapor screening level. Direct measurement of air above the sumps and of air trapped in the covered sumps indicates that the sumps and drains in the Building A basement are the sources of the trichloroethene.

- Naphthalene was detected in indoor air at Building A basement sampling location 018-A (5.7 µg/m^3) at a level marginally greater than its screening level (3.6 µg/m^3). However, it was only detected in one basement sub-slab vapor sampling location (116-A) at a concentration of 1.4*J* µg/m^3, less than its screening level of 120 µg/m^3. The low-level sub-slab vapor concentration of naphthalene and its absence in ambient air samples suggest that it is likely due to indoor air sources.

Main floor

- Trichloroethene was detected in sub-slab vapor at locations 118-A (1500 µg/m^3), 136-A (380 µg/m^3), and 168-A (1300 µg/m^3) at concentrations greater than the screening level (293 µg/m^3). These sampling locations are within or near the radii of influence of the sub-slab depressurization systems. Indoor air concentrations of trichloroethene on the main floor of Building A were all less than the screening level.

The sub-slab-depressurization system in Building A appears to be operating as designed and appears to be effectively mitigating sub-slab-vapor intrusion from known source areas of sub-slab-vapor contamination, in concert with the indoor-air filtration units and control of vapor emissions from the sumps. Contaminants are constantly removed from soil vapor during system operation, and indoor air concentrations in the main part of Building A (excluding the basement) rarely exceed screening values. Filter cartridges are changed-out quarterly; no other maintenance is required.

Although basement occupancy is restricted and screening levels related to restricted occupancy are not exceeded, this area will continue to be monitored as the sub-slab-depressurization system continues to operate. Figures 5-2A, 5-2B, and 5-2C display the Round 24 sub-slab-vapor and indoor-air exceedances from the basement and first-floor sampling locations in Building A. Direct measurement of air above the sumps and of air trapped in the covered sumps indicates that the sumps and drains in the Building A basement are the trichloroethene sources.

5.1.2 Building B

No exceedances were noted in the Building B indoor air or sub-slab-vapor samples during Round 24. The most recent exceedance of the indoor air screening level was during Round 18 (February 2015).

5.1.3 Building C

Trichloroethene was not detected in any indoor air samples collected from Building C during Round 24. However, sub-slab vapor exceedances of trichloroethene were detected at five locations in Building C during Round 24, with concentrations of these exceedances ranging from 310 µg/m^3 to 2,000 µg/m^3. The Round 24 exceedances in sub-slab vapor are consistent with those observed in other recent sampling rounds (e.g., Rounds 21 through 23).

Vinyl chloride was detected in sub-slab vapor at location 126-C at a concentration (2,700 µg/m^3) greater than its screening level (933 µg/m^3). Concentrations of vinyl chloride in sub-slab vapor at 126-C have decreased since the sub-slab depressurization system expansion, but have fluctuated over time. Vinyl chloride has not been detected in groundwater near 126-C, nor in indoor air, despite the presence of trichloroethene in groundwater at concentrations up to 1,500 micrograms per liter (µg/L).

Sub-slab-vapor concentrations of 1,1-dichloroethane (5,600 µg/m^3) and naphthalene (180*J* µg/m^3) also exceeded their screening levels (2,567 and 120 µg/m^3, respectively) at location 102-C during Round 24. Sub-slab-vapor concentrations of 1,1-dichloroethane and naphthalene exceeded their screening levels at location 102-C during other recent sampling rounds (e.g., Rounds 17, 18, 20, 22, and 23). In general, sub-slab-vapor concentrations of volatile organic compounds have decreased in the southern basement area (SSD-4-C) of Building C since system startup in March 2008. Vapor monitoring points (060-C, 088-C, 113-C, 126-C, 133-C, and 135-C) in the mid-basement area also show lower concentrations, as compared to results before system expansion in May 2013.

The absence of any exceedances of indoor air screening levels for any compound suggests that vapor intrusion is likely not occurring. The sub-slab-depressurization system in Building C appears to be operating as designed, and appears to be effectively mitigating sub-slab-vapor intrusion from known source areas of sub-slab-vapor contamination. Figures 5-3A and 5-3B show sub-slab-vapor and indoor-air concentrations of 1,1-dichororethane, naphthalene, trichloroethene, and vinyl chloride in Building C.

SECTION 6
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FIGURES

Figure 2-1 Indoor Air Background Sampling Locations, Round 24, February 2018

Figure 2-2 Indoor Air and Sub-Slab-Vapor Monitoring Locations for Building A, Round 24, February 2018

Figure 2-3 Indoor Air and Sub-Slab-Vapor Monitoring Locations for Building B, Round 24, February 2018

Figure 2-4 Indoor Air and Sub-Slab-Vapor Monitoring Locations for Building C, Round 24, February 2018

Figure 3-1 Round 24 Indoor Air and Sub-Slab-Vapor Sampling Results Greater than Screening Levels, Building A

Figure 3-2 Round 24 Indoor Air and Sub-Slab-Vapor Sampling Results Greater than Screening Levels, Building B

Figure 3-3 Round 24 Indoor Air and Sub-Slab-Vapor Sampling Results Greater than Screening Levels, Building C

Figure 4-1 Sub-Slab-Vapor VOC Concentrations at 015-A, Building A

Figure 4-2 Sub-Slab-Vapor VOC Concentrations at 018-A, Building A

Figure 4-3 Sub-Slab-Vapor TCE Concentrations at Monitoring Points near SSD System, Building C

Figure 4-4 Sub-Slab-Vapor Vinyl Chloride Concentrations at 126-C, Building C

Figure 5-1 Trichloroethene Sampling Results, Round 24, Buildings A, B, and C

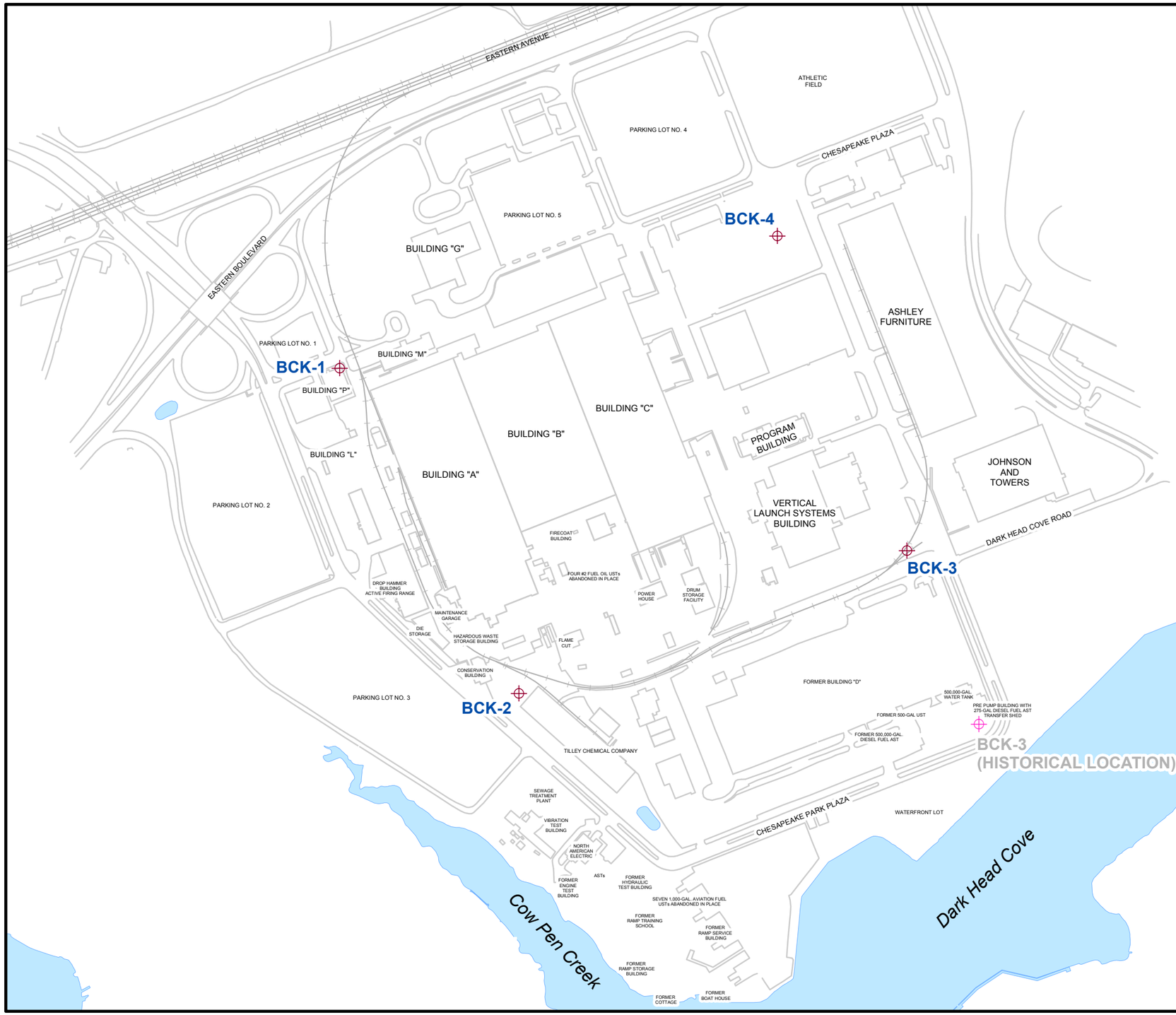
Figure 5-2A Concentrations of Select Chemicals from Round 24, Building A—Sub-Slab Vapor

Figure 5-2B Concentrations of Select Chemicals from Round 24, Building A—Indoor Air, Basement

Figure 5-2C Concentrations of Select Chemicals from Round 24, Building A—Indoor Air, First Floor

Figure 5-3A Concentrations of Select Chemicals from Round 24, Building C—Sub-Slab Vapor

Figure 5-3B Concentrations of Select Chemicals from Round 24, Building C—Indoor Air, Basement



MARTIN STATE AIRPORT

FIGURE 2-1

INDOOR AIR BACKGROUND SAMPLING LOCATIONS
ROUND 24, FEBRUARY 2018

LEGEND

- BACKGROUND SAMPLING LOCATION
- HISTORICAL BACKGROUND SAMPLING LOCATION
- SURFACE WATER

IAQ - indoor air quality
BCK-3 moved due to discovery of TCE UST adjacent to historic sample location.

Lockheed Martin Middle River Complex
Middle River, Maryland

0 200 400 Feet

N

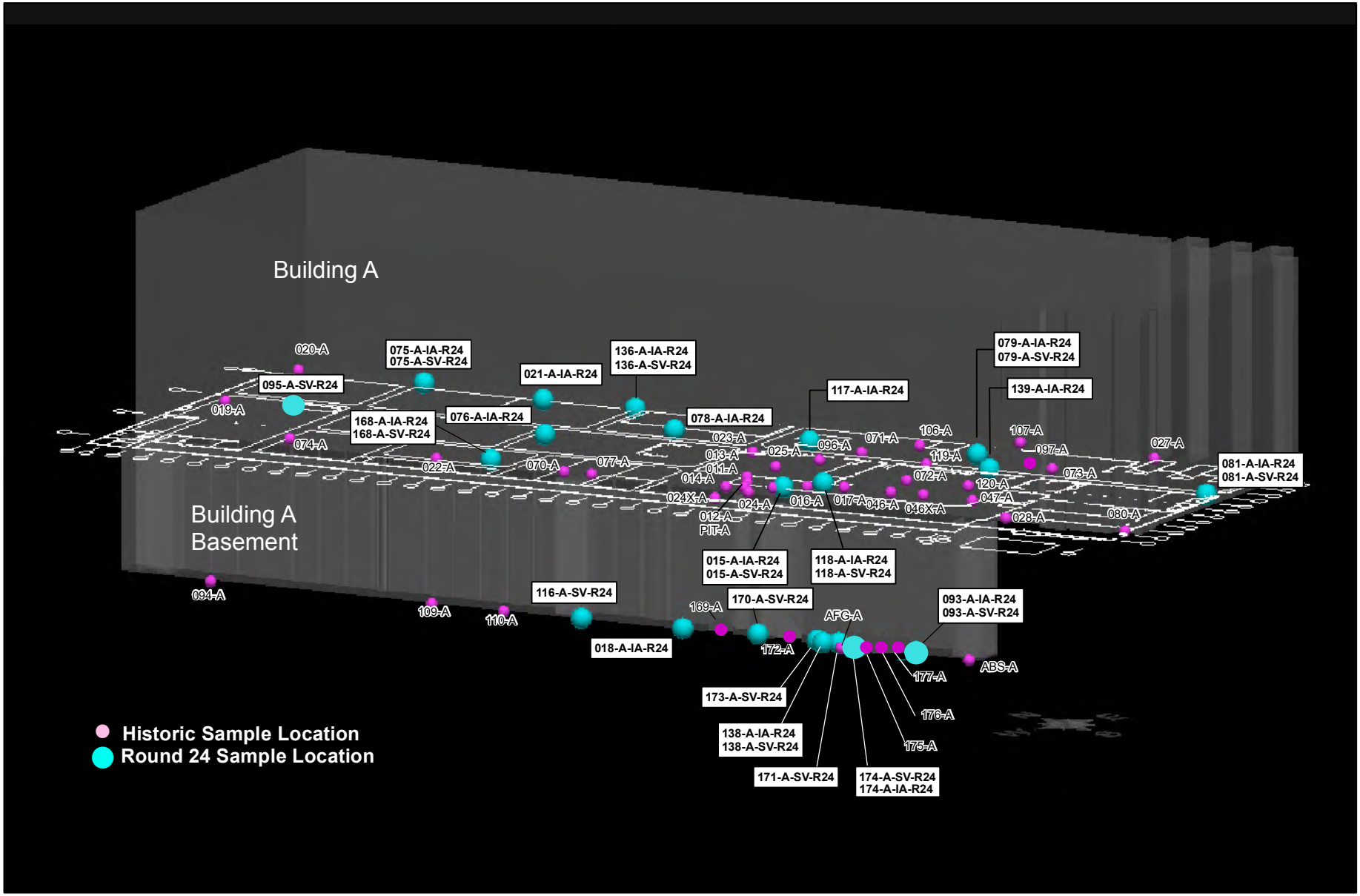
DATE MODIFIED: 06/15/18

CREATED BY: JEE

TETRA TECH

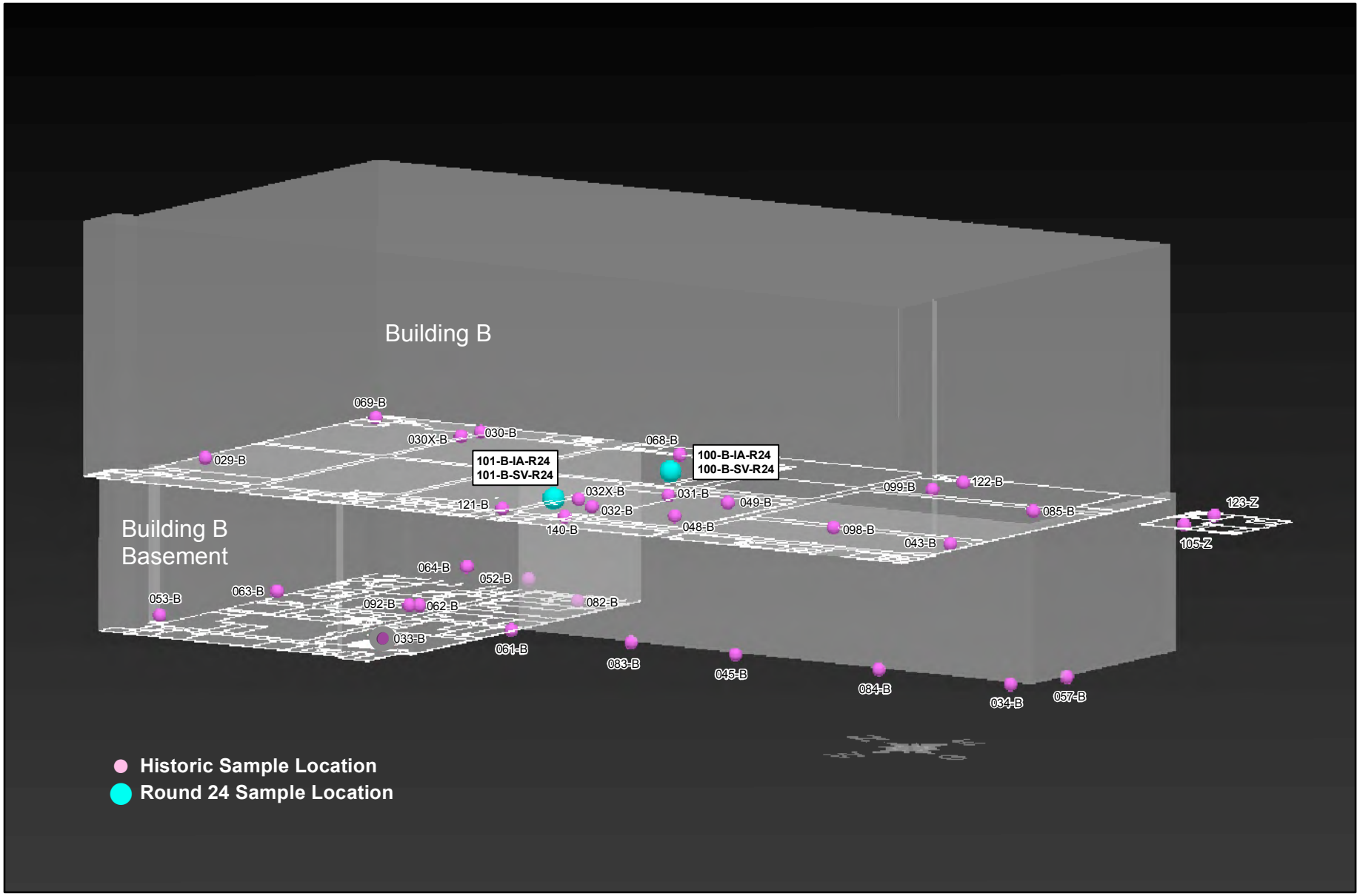
Map Document: (P:\GIS\Middle_River\MapDocs\MXD\iaq_background_samples_rnd24.mxd)
06/15/18 JEE

Figure 2-2
Indoor Air and Sub-Slab Vapor Monitoring Locations
for Building A, Round 24, February 2018



NOR: G:\GIS_files\Lockheed_MRC\GIS\MXD\bldg_a_rnd24.mxd MC

Figure 2-3
Indoor Air and Sub-Slab Vapor Monitoring Locations
for Building B, Round 24, February 2018



NOR: G:\GIS_files\Lockheed_MRC\GIS\MXD\bldg_b_rnd23.mxd MC

Figure 2-4
Indoor Air and Sub-Slab Vapor Monitoring Locations
for Building C, Round 24, February 2018

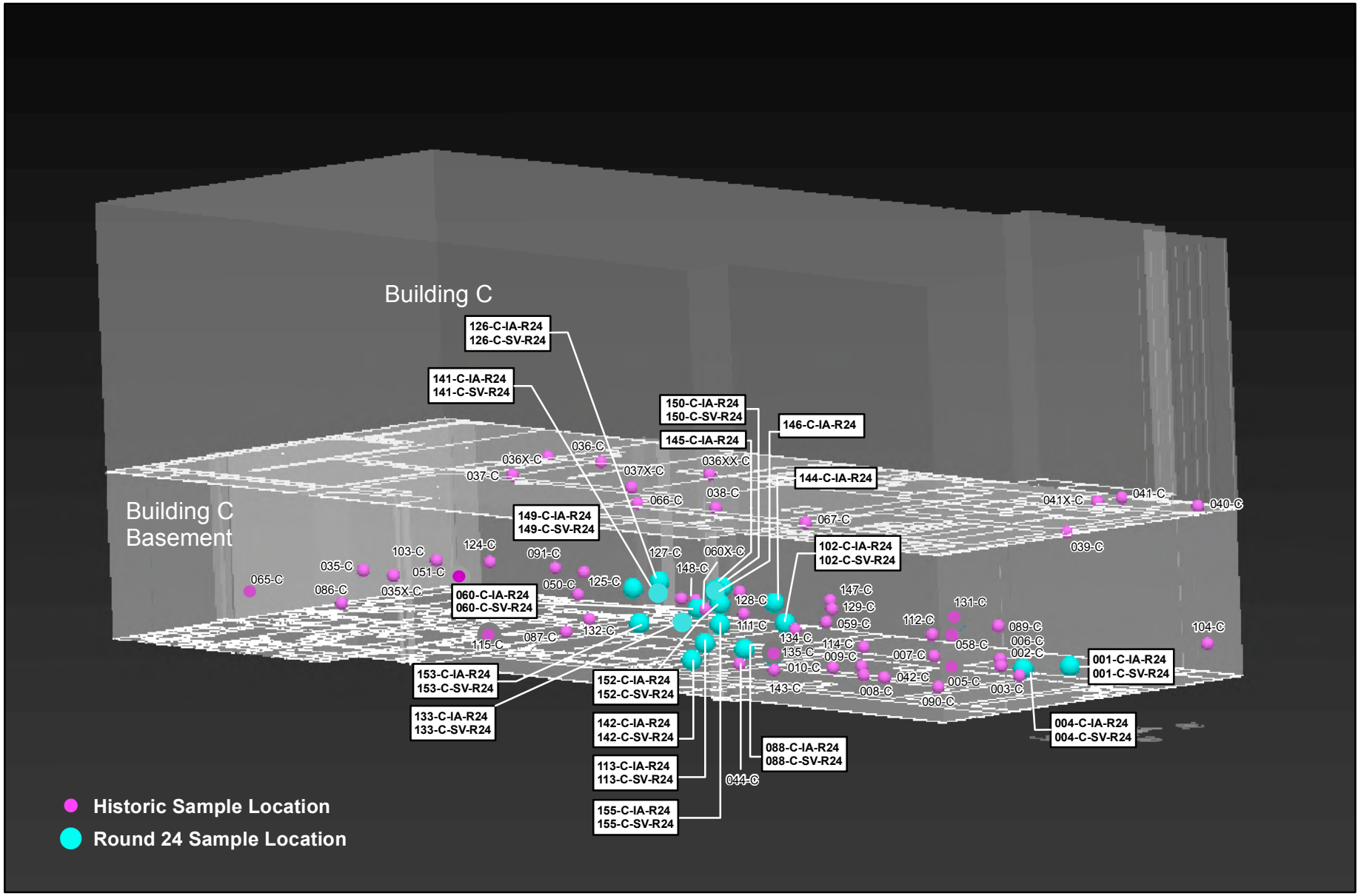


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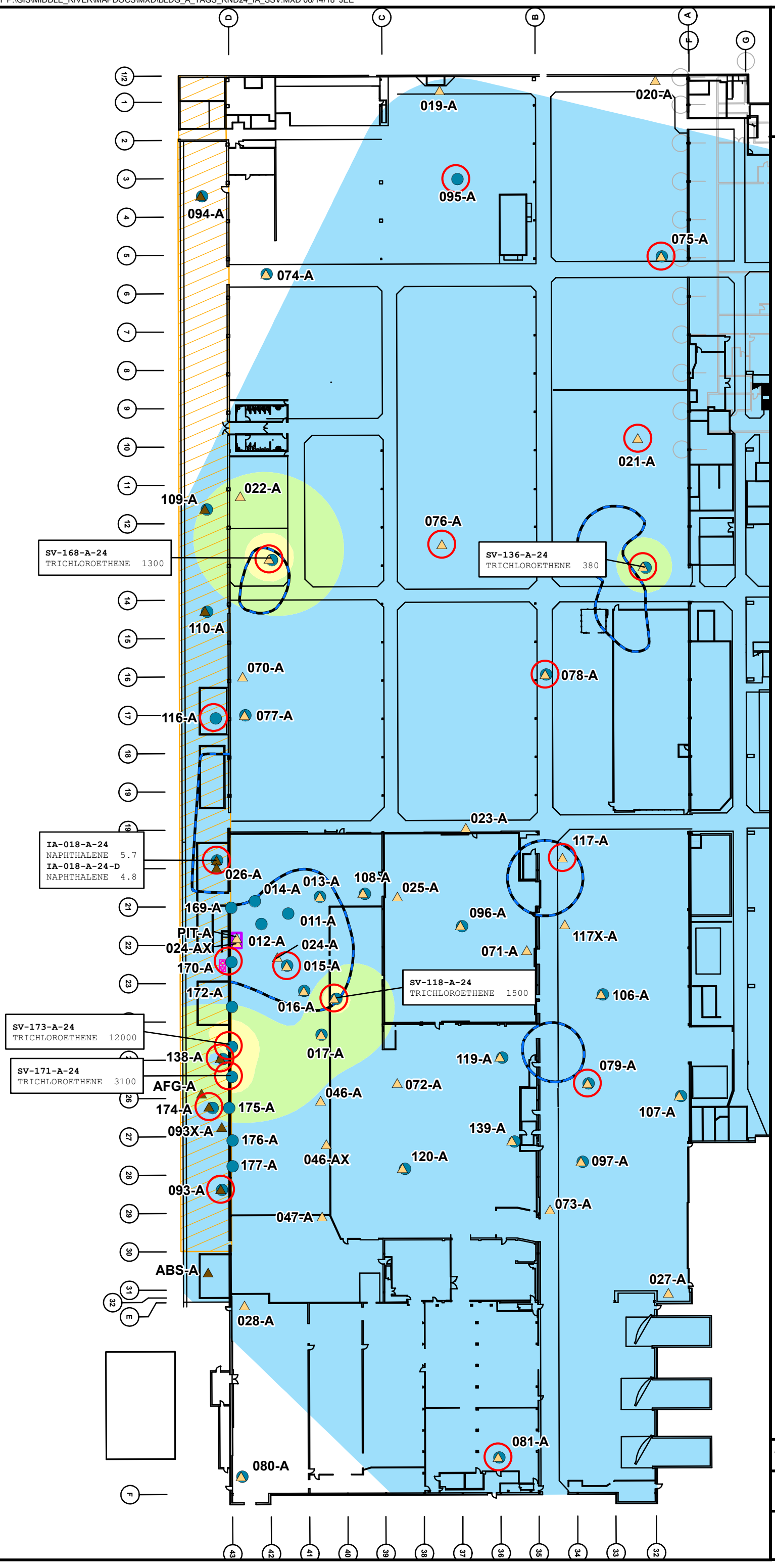
FIGURE 3-1

ROUND 24
INDOOR AIR AND SUB-SLAB SAMPLING RESULTS GREATER THAN SCREENING LEVELS
BUILDING A



Legend

- IAQ, 1st Floor
- IAQ, Basement
- SV
- Round 24 Sampling Locations
- SSD Radius of Influence
- Buildings A, B and C
- Building A Basement
- Building B and C Basement
- Excavation Area
- SSD Treatment Unit

All results in microgram(s) per cubic meter ($\mu g/m^3$).

X - moved from original location once.

Screening Levels Exceeded

Chemical	Indoor Air	Soil Vapor
Naphthalene	3.6	NA
Trichloroethene	NA	293

NA – Not applicable

DUP - Duplicate Sample
IAQ - Indoor Air Quality
SSD - Sub-slab Depressurization
SV - Soil Vapor
TCE - Trichloroethene

February 2018 Sub-Slab Vapor TCE Concentration

10000 ug/m3
1000 ug/m3
293 ug/m3
0.1 ug/m3

N

0 32 64 Feet

Lockheed Martin Middle River Complex
Middle River, Maryland

DATE MODIFIED: 08/14/18
CREATED BY: JEE

TETRA TECH

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FIGURE 3-2

ROUND 24 INDOOR AIR AND SUB-SLAB VAPOR SAMPLING RESULTS GREATER THAN SCREENING LEVELS BUILDING B

A E G GA GB GC GD GE GF GG GH GJ GK GL GM H J K L

053-B
029-B
063-B
069-B
064-B
030-BX
030-B
092-B
062-B
052-B
033-B
061-B
082-B
068-B
121-B
101-B
083-B
100-B
032-BX
032-B
140-B
031-B
045-B
048-B
049-B
099-B
122-B
084-B
098-B
085-B
034-B
057-B
043-B
105-Z
123-Z

Legend

- IAQ, 1st Floor
- IAQ, Basement
- SV
- Round 24 Sampling Locations
- Buildings A, B and C
- Building B and C Basement
- Tunnel

X - moved from original location once.

IAQ - Indoor Air Quality
SSD - Sub-slab Depressurization
SV - Soil Vapor
TCE - Trichloroethene

February 2018 Sub-Slab Vapor TCE Concentration

- 10000 ug/m3
- 1000 ug/m3
- 293 ug/m3
- 0.1 ug/m3

N

0 32 64 Feet

Lockheed Martin Middle River Complex
Middle River, Maryland

DATE MODIFIED:	CREATED BY:
05/02/18	JEE

TETRA TECH

PGH P:\GIS\MIDDLE_RIVER\MAPDOCS\MXD\BLDG_C_TAGS_RND24_IA_SSV.MXD 08/13/18 JEE

FIGURE 3-3

ROUND 24
INDOOR AIR AND SUB-SLAB
SAMPLING RESULTS
GREATER THAN
SCREENING LEVELS
BUILDING C

065-C
035-C
103-C
035-CX
124-C
051-C
086-C
091-C
125-C
036-CX
050-C
149-C
037-C
036-C
150-C
145-C
151-C
127-C
146-C
132-C
148-C
128-C
115-C
152-C
087-C
060-CX
037-CX
036-CXX
153-C
144-C
111-C
147-C
154-C
156-C
155-C
066-C
129-C
113-C
059-C
038-C
134-C
157-C
158-C
130-C
088-C
142-C
131-C
135-C
044-C
112-C
114-C
089-C
159-C
067-C
058-C
143-C
010-C
009-C
007-C
008-C
041-C
041-CX
005-C
006-C
042-C
002-C
004-C
040-C
090-C
003-C
001-C
039-C
104-C

SV-126-C-24
TRICHLOROETHENE 540
VINYL CHLORIDE 2700

SV-141-C-24
TRICHLOROETHENE 310

SV-060-C-24
TRICHLOROETHENE 400

SV-133-C-24
TRICHLOROETHENE 2000

SV-102-C-24
1,1-DICHLOROETHANE 5600
NAPHTHALENE 180 J
TRICHLOROETHENE 1500

Legend

- IAQ, 1st Floor
- IAQ, Basement
- SV
- Round 24 Sampling Locations
- SSD Radius of Influence
- Buildings A, B and C
- Building B and C Basement
- Tunnel
- SSD Treatment Unit

All results in microgram(s) per cubic meter (µg/m^3).

X - moved from original location once.

Screening Levels Exceeded

Chemical	Indoor Air	Soil Vapor
1,1-Dichloroethane	NA	2567
Naphthalene	NA	120
Trichloroethene	NA	293
Vinyl Chloride	NA	933

NA – Not applicable

IAQ - Indoor Air Quality
J = Estimated Value
SSD - Sub-slab Depressurization
SV - Soil Vapor
TCE - Trichloroethene

February 2018 Sub-Slab Vapor TCE Concentration

10000 ug/m3
1000 ug/m3
293 ug/m3
0.1 ug/m3

N

0 32 64 Feet

Lockheed Martin Middle River Complex
Middle River, Maryland

DATE MODIFIED: 08/13/18
CREATED BY: JEE

TETRA TECH

Figure 4-1
Sub-Slab Vapor VOC Concentrations at 015-A, Building A
Lockheed Martin Corporation, Middle River Complex
Middle River, Maryland

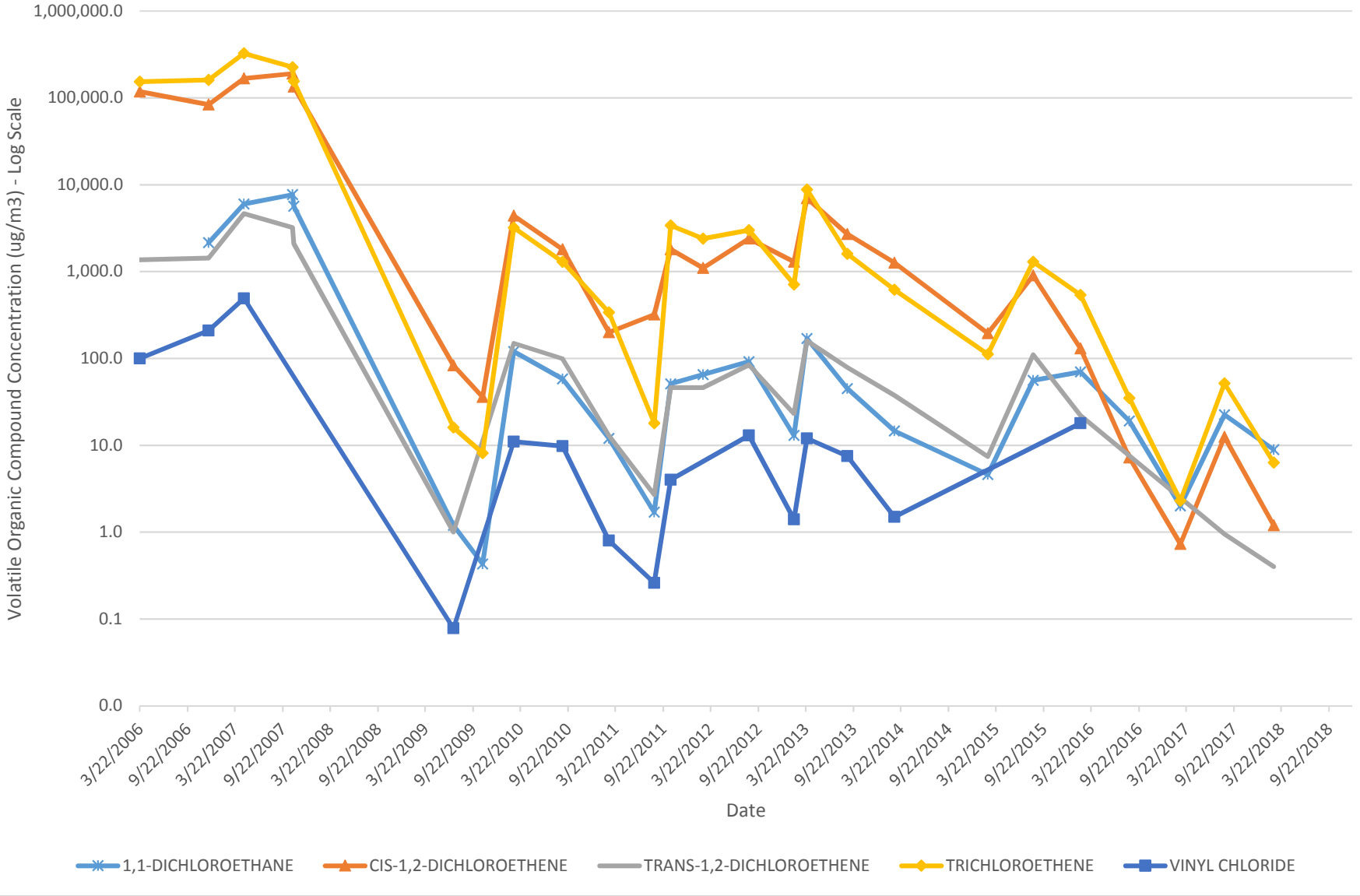


Figure 4-2
Sub-Slab Vapor TCE Concentrations at Monitoring Points Near SSD-System, Building A
Lockheed Martin Corporation, Middle River Complex
Middle River, Maryland

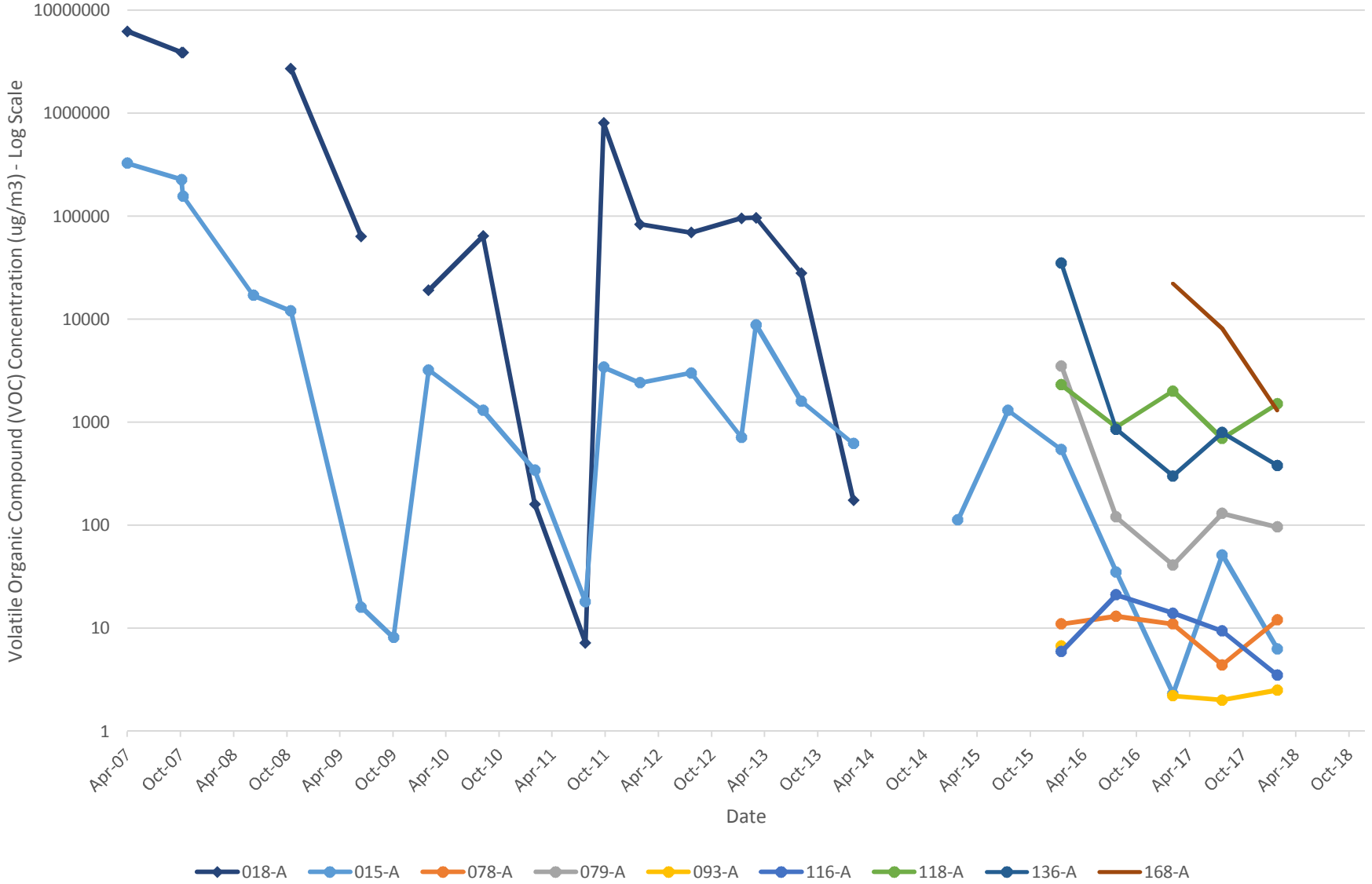


Figure 4-3
Sub-Slab Vapor TCE Concentrations at Monitoring Points Near SSD-System, Building C
Lockheed Martin Corporation, Middle River Complex
Middle River, Maryland

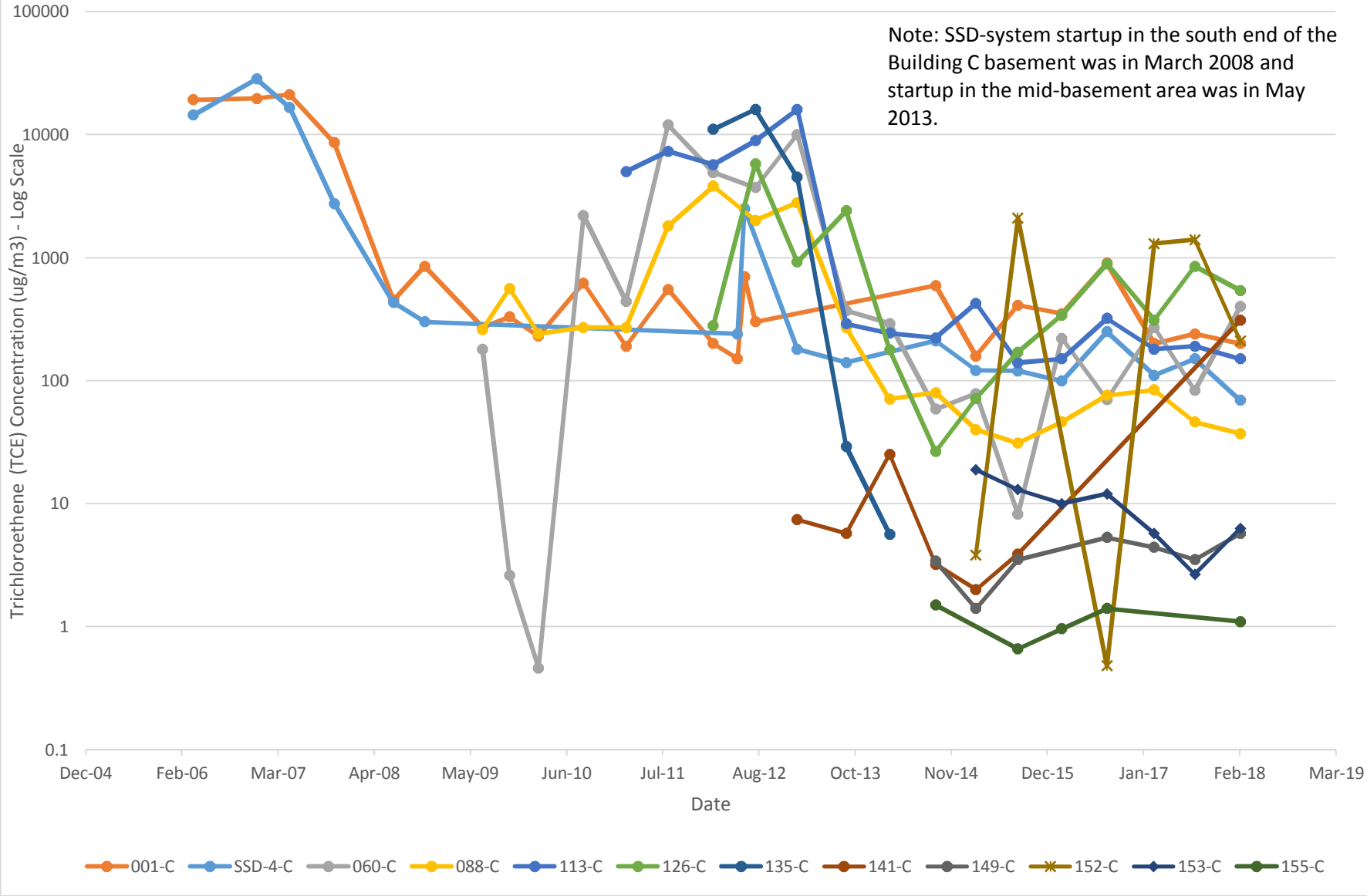
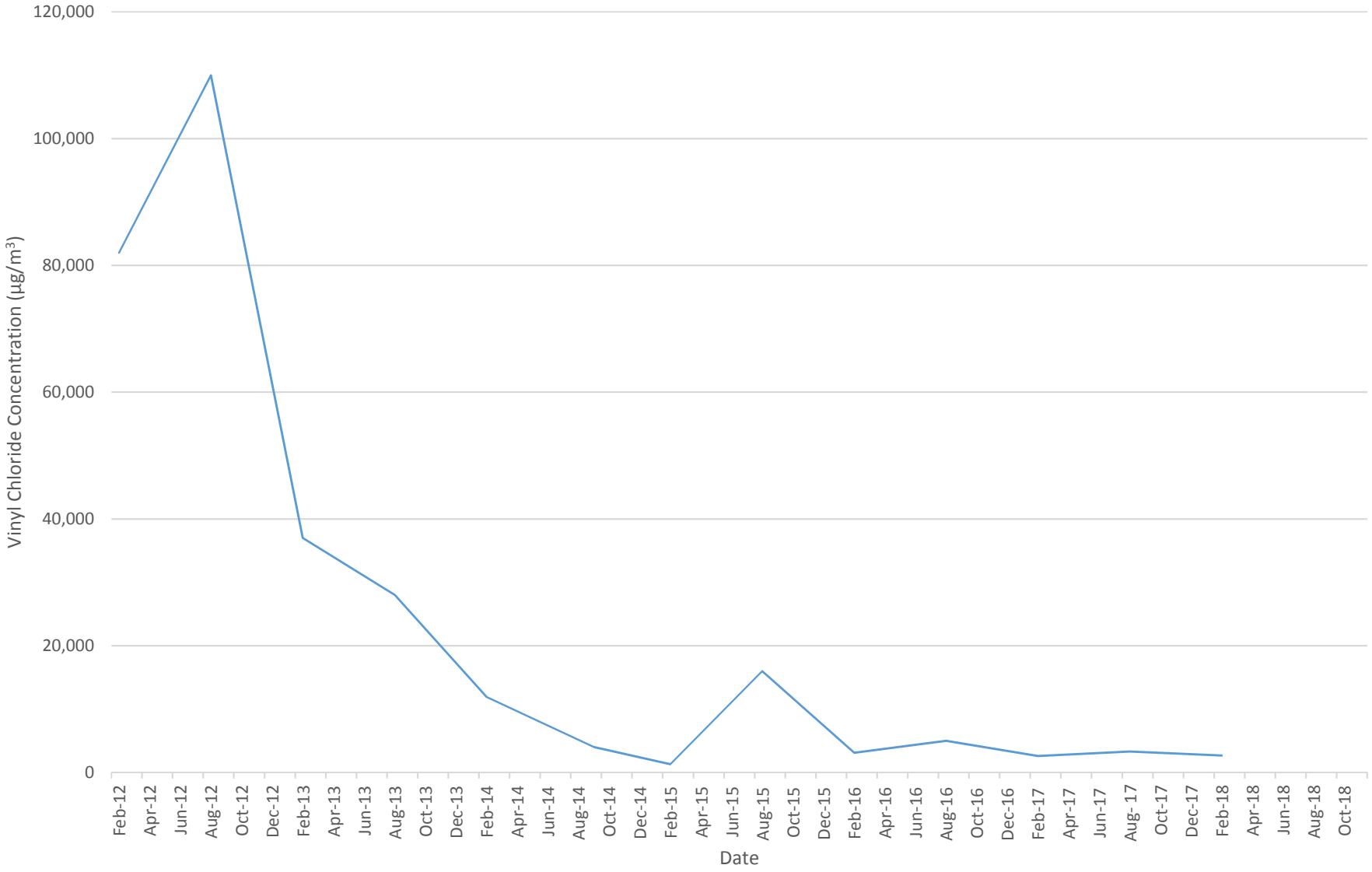


Figure 4-4
Sub-Slab Vapor Vinyl Chloride Concentrations at 126-C, Building C
Lockheed Martin Corporation, Middle River Complex
Middle River, Maryland



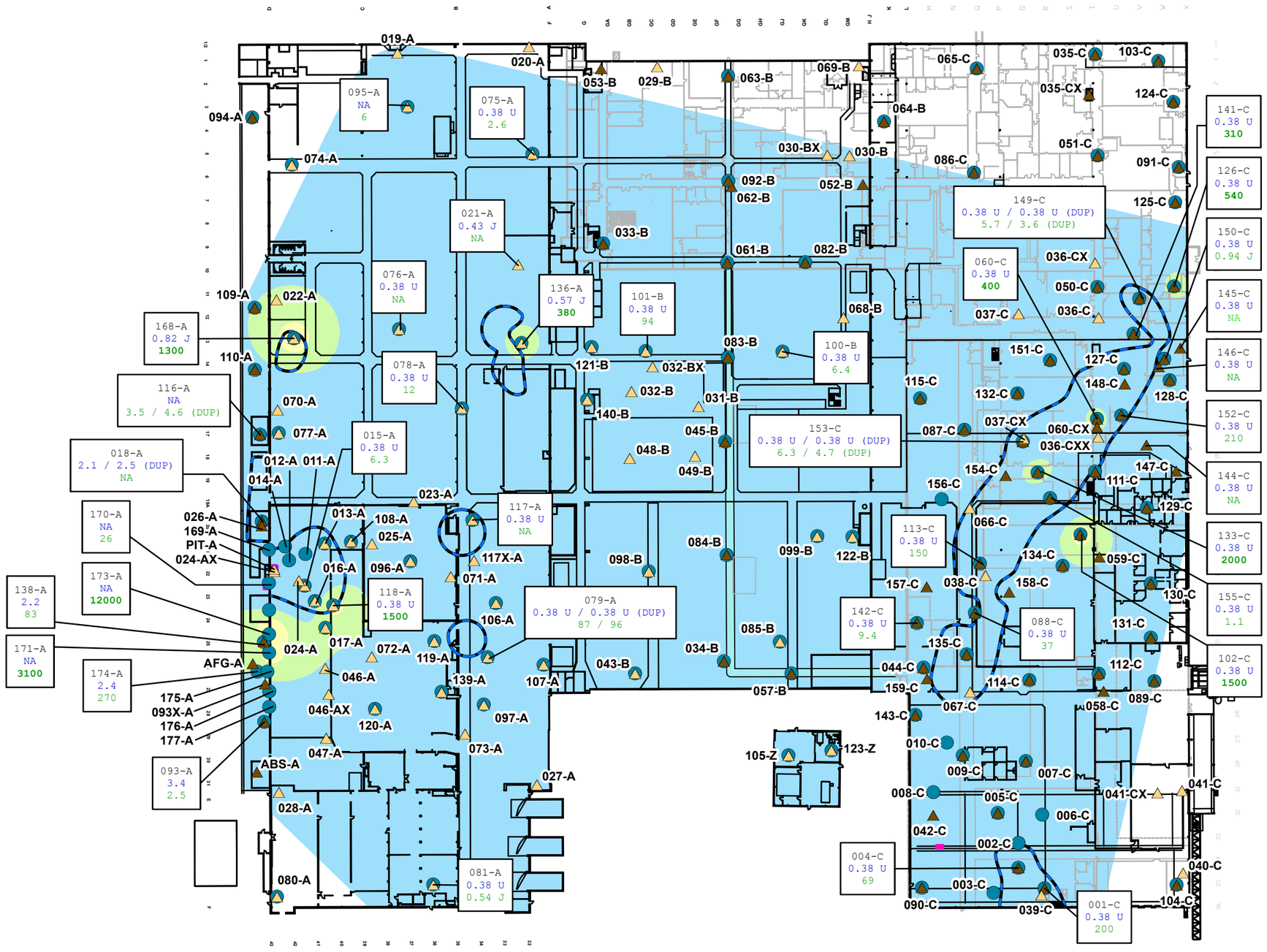


FIGURE 5-1

TRICHLOROETHENE SAMPLING RESULTS
ROUND 24
BUILDINGS A, B AND C

Legend

- IAQ, 1st Floor
- IAQ, Basement
- SV
- SSD Treatment Unit
- SSD Radius of Influence
- Buildings A, B and C
- Building B and C Basement

N/A
N/A — Indicates no indoor air results were collected.
Indicates no soil vapor results were collected.

All units in µg/m^3.
All location IDs begin with "AIR-."

DUP - Duplicate sample.
X - moved from original location once.
XX - moved from original location twice.
Indoor air quality results shown in blue type.
Soil vapor results shown in green type.
Exceedances labeled in **bold** print.

Screening Levels

Indoor Air	Soil Vapor
8.8	293

February 2018 Sub-Slab Vapor
TCE Concentration

- 10000 ug/m3
- 1000 ug/m3
- 293 ug/m3
- 0.1 ug/m3

Lockheed Martin Middle River Complex
Middle River, Maryland

0 60 120 Feet

DATE MODIFIED: 08/14/18

CREATED BY: JEE

TETRA TECH

Map Document: (P:\GIS\Middle_River\MapDocs\MXD\bldg_abc_tce_tags_rnd24_1117.mxd)
08/14/18 -- JEE

Figure 5-2A
Concentrations of Select Chemicals from Round 24 - Building A - Sub-Slab Vapor

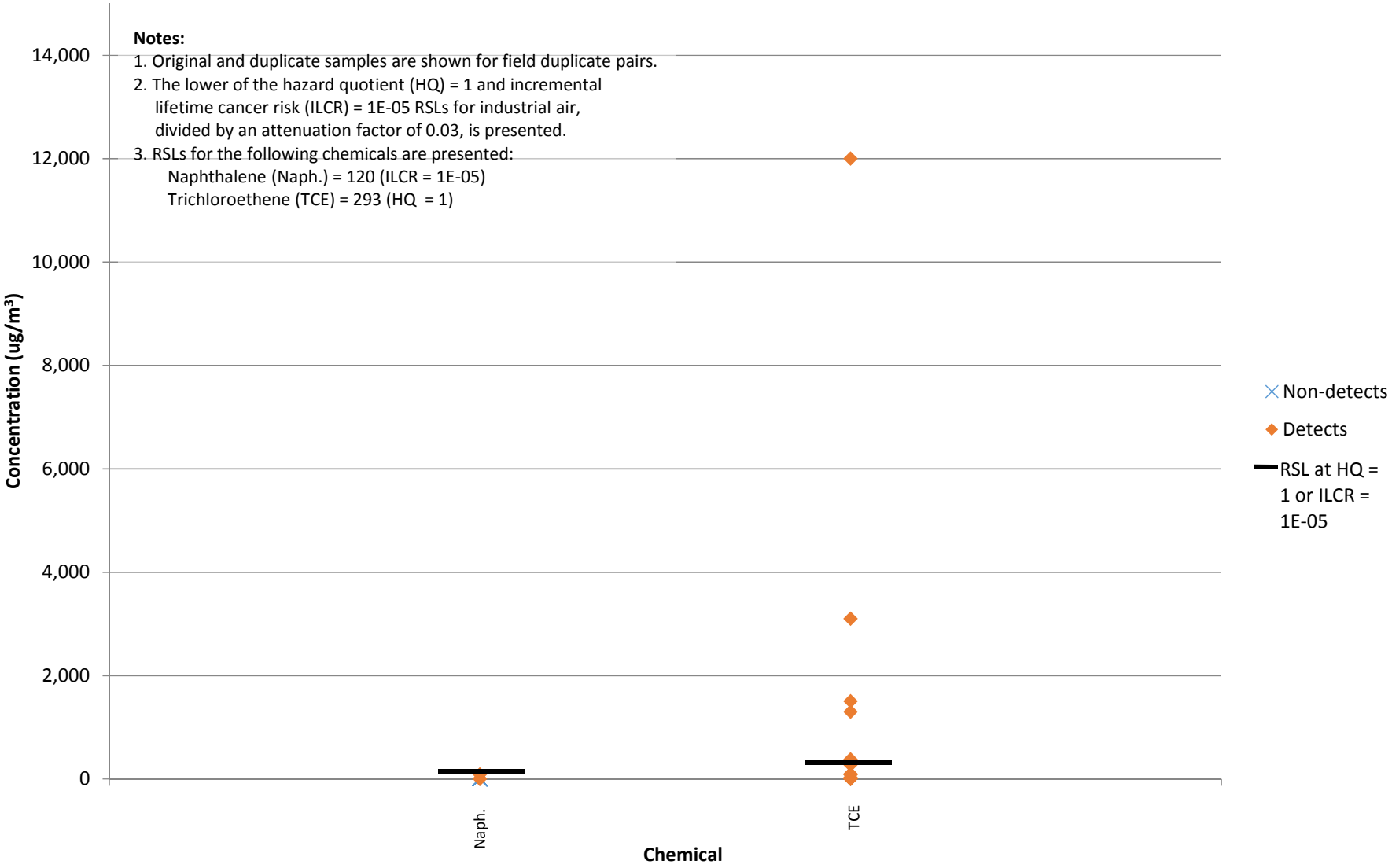


Figure 5-2B
Concentrations of Select Chemicals from Round 24 - Building A - Indoor Air - Basement

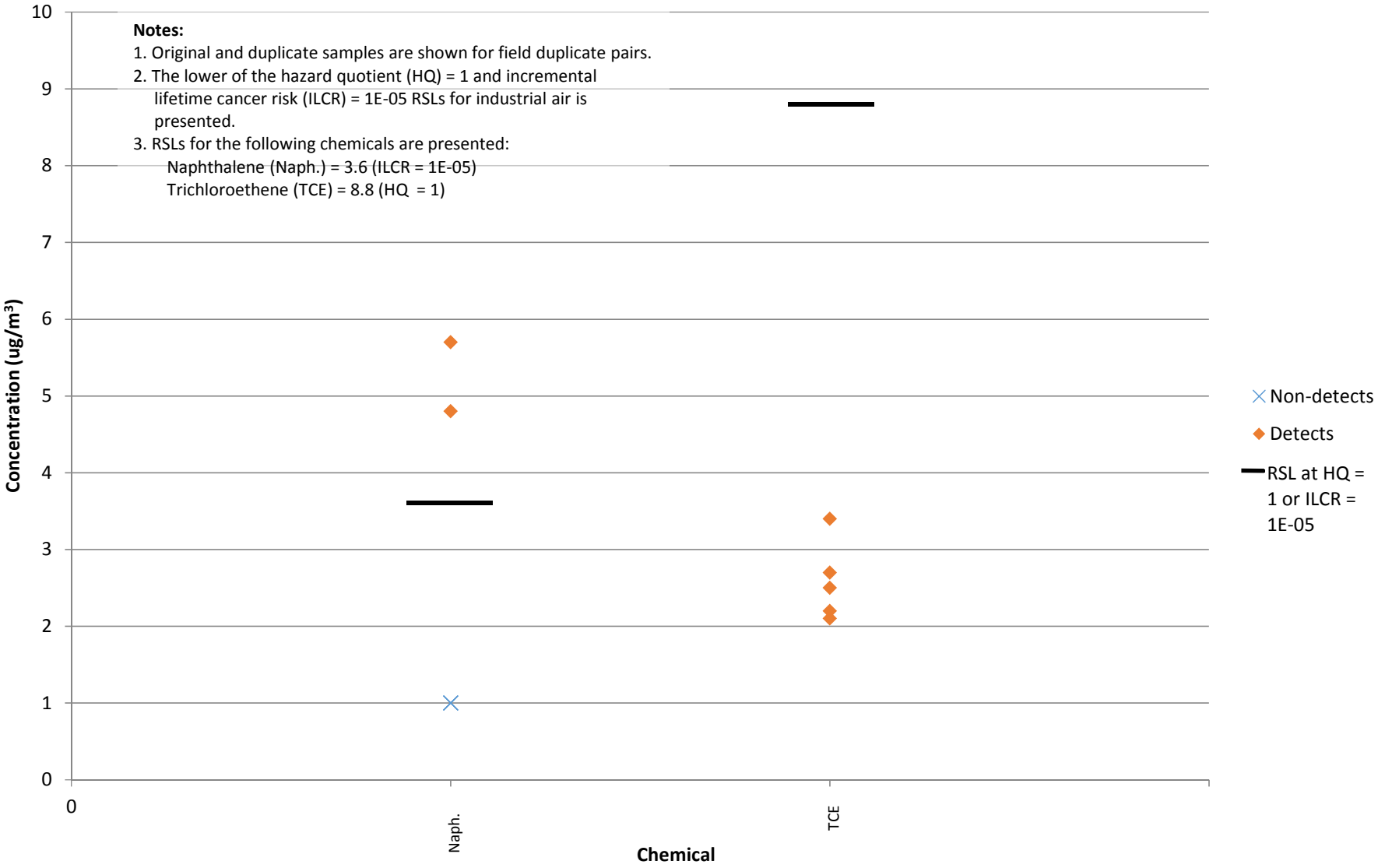


Figure 5-2C
Concentrations of Select Chemicals from Round 24 - Building A - Indoor Air - First Floor

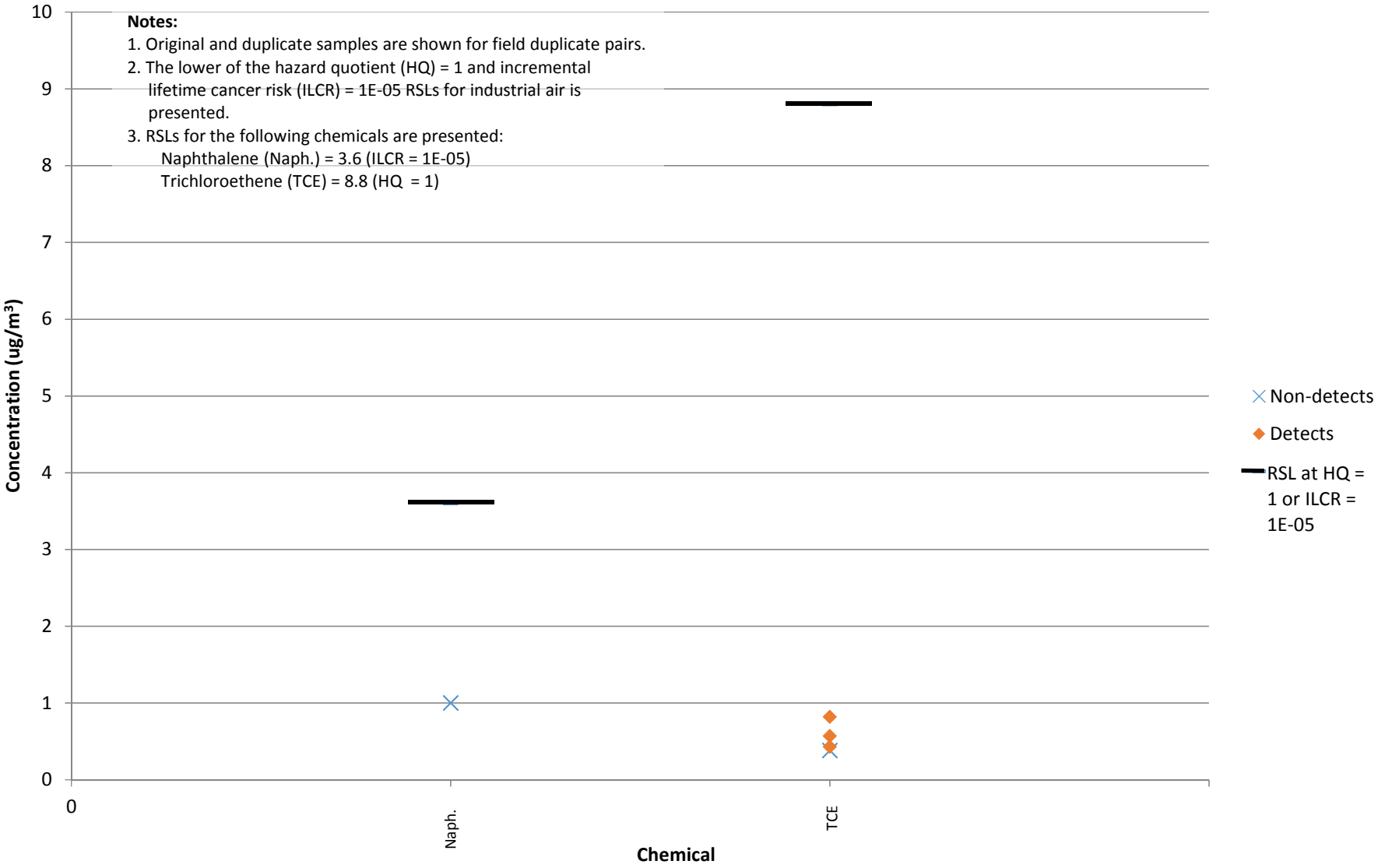


Figure 5-3A
Concentrations of Select Chemicals from Round 24 - Building C - Sub-Slab Vapor

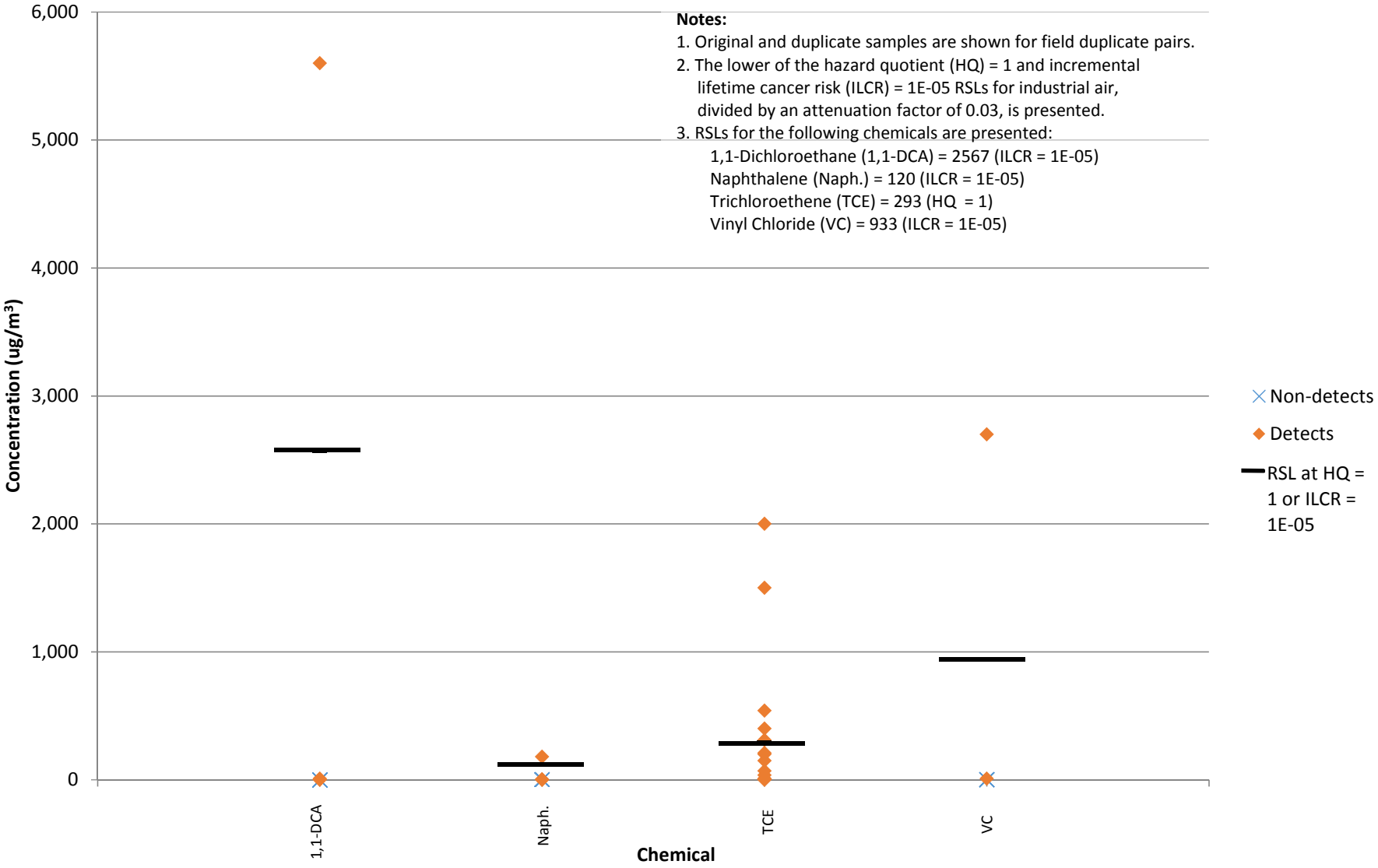
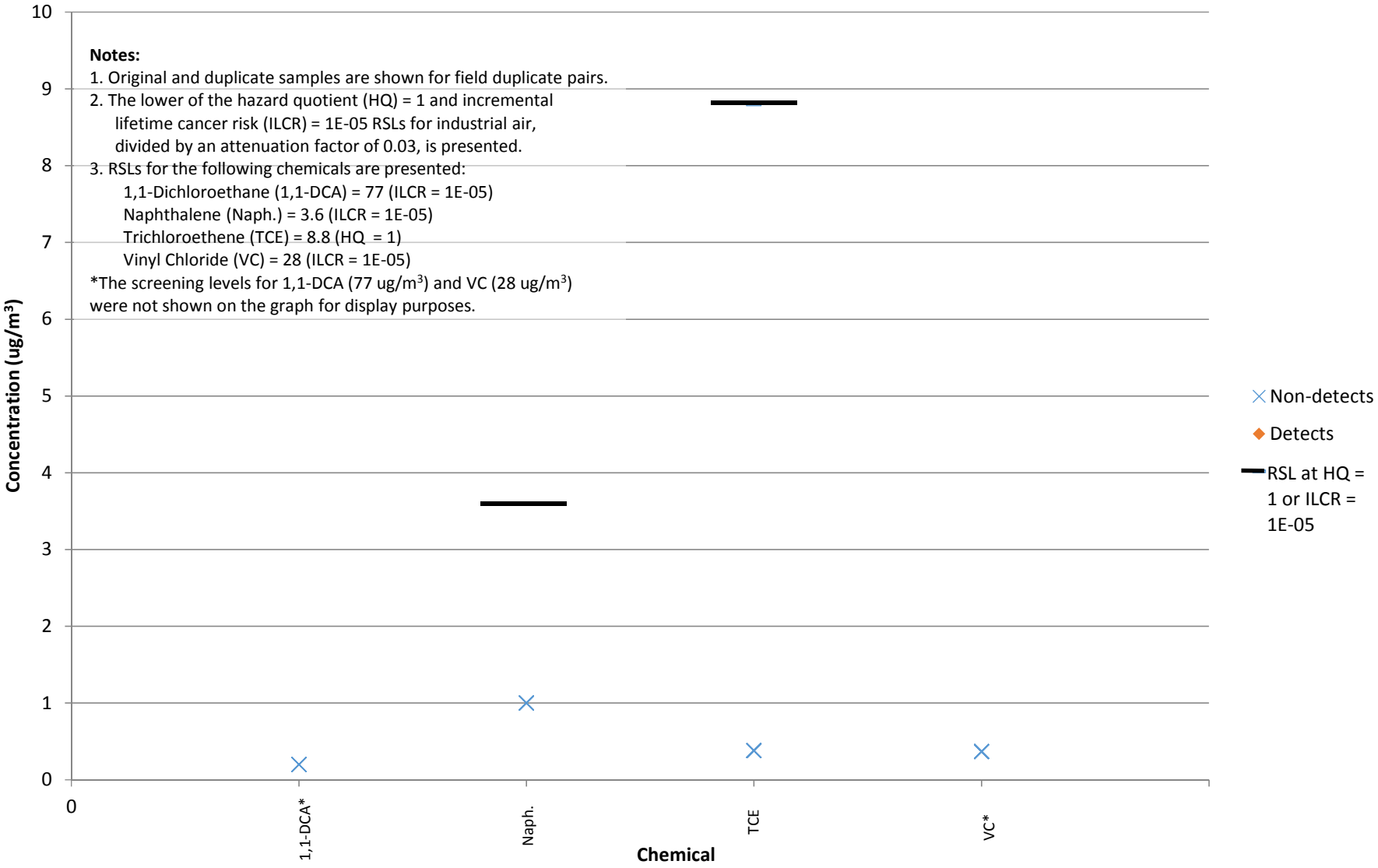


Figure 5-3B
Concentrations of Select Chemicals from Round 24 - Building C - Indoor Air - Basement



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Lockheed Martin Middle River Complex,
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Indoor-Air-Quality Investigation of Buildings A, B, C, and the (Vertical-Launch System) VLS (Facility), Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2007)
Indoor-Air-Quality Investigation Round 3, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2008a)
Indoor-Air-Quality Investigation 2008 Summary Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2008b)
November 2008 Sub-Slab Sampling Report, Sub-Slab-Depressurization Systems, Buildings A and C, Lockheed Martin Corporation Middle River Complex, Middle River, Maryland (Tetra Tech, 2008c)
SSD-System Installation Report for Project # EESHBDF-00897_R642, Sub-Slab Depressurization Systems Installation, Sub-Surface Vapor Intrusion Mitigation, Buildings A and C, Middle River Complex, Middle River, Maryland (Tetra Tech, 2008d)
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System Startup Summary Report for the Sub-Slab Depressurization System First-Phase Expansion—Building A, Middle River Complex, Middle River, Maryland (Tetra Tech, 2010c)
Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation August 2010 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2011a)
Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation February 2011 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2011b)
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Vapor-Intrusion Management Plan, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2012b)
Construction Documentation for EESHJAC_20052_R642, Sub-Slab Depressurization System First-Phase Expansion—Building C, Middle River Complex, Middle River, Maryland (Tetra Tech, 2012c)
Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation August 2012 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2013a)
Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation February 2013 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2013b)

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Construction Documentation: Sub-Slab Depressurization System Second-Phase Expansion—Building C, Middle River Complex, Middle River, Maryland (Tetra Tech, 2013c)
Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation August 2013 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2014a)
Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation February 2014 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2014b)
Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation September 2014 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2015a)
Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation February 2015 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2015b)
Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation August 2015 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2015c)
Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation February 2016 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2016a)
Block I Building A and Building A Basement Vapor-Intrusion Investigation Report, Lockheed Martin Middle River Complex, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2016b)
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Block I Building A Basement Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2017b)
Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation March 2017 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2017c)

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Lockheed Martin Middle River Complex,
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Construction Report, Sub-Slab Depressurization System, Third-Phase Expansion—Building A, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard, Middle River, Maryland (Tetra Tech, 2017g)
Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation August 2017 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2018a)
Block I Building A and Building A Basement Investigation Report—Summer 2017, Middle River Complex, Middle River, Maryland (Tetra Tech, 2018b)
Block I Building A Floor Air-Vent Sealing and Survey Report Middle River Complex, Middle River, Maryland (Tetra Tech, 2018c)

TABLE 3-1

DESCRIPTIVE STATISTICS OF INDOOR AIR QUALITY RESULTS, ALL BUILDINGS, FEBRUARY 2018
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Parameter	Frequency of detection[1]	Minimum detected value[1]	Maximum detected value[1]	Location with maximum detected value	Sample with maximum detected value	Minimum non-detect value[2]	Maximum non-detect value[2]	Average of detected values[1]	Average of all values[1] [3]	Standard deviation[1] [3]	Average of detected background values	Maximum background value	Number of detects above maximum background value[1][4]	Adjusted USEPA RSL for industrial air[5]	Number of samples above adjusted industrial RSL[1][4]
Volatile Organic Compounds (µg/m^3)															
BENZENE	34/35	0.38 J	10 J	IA-079-A	IA-079-A-24-D	0.37	0.37	0.72	0.71	0.81	0.47	**0.53**	22	16 ca	0
CARBON TETRACHLORIDE	23/35	0.47 J	0.98 J	IA-093-A	IA-093-A-24	0.47	0.47	0.54	0.44	0.20	0.51	**0.54**	4	20 ca	0
CHLORODIFLUOROMETHANE	35/35	1.3 J	67	IA-145-C	IA-145-C-24	-	-	9.6	9.6	17.7	1.3	**1.4**	29	220,000 nc	0
CHLOROFORM	8/35	0.41 J	1.2 J	IA-018-A	IA-018-A-24-D	0.37	0.37	0.58	0.28	0.20	0.74	**0.92**	1	5.3 ca	0
DICHLORODIFLUOROMETHANE	35/35	1.4 J	3	IA-149-C	IA-149-C-24-D	-	-	2.0	2.0	0.36	2.8	3.4	0	440 nc	0
1,1-DICHLOROETHENE	4/35	0.37 J	0.8 J	IA-018-A	IA-018-A-24-D	0.28	0.28	0.51	0.18	0.13	0.28	1.6	0	880 nc	0
CIS-1,2-DICHLOROETHENE	1/35	0.5 J	0.5 J	IA-093-A	IA-093-A-24	0.48	0.48	0.50	0.25	0.044	--	ND	1	NA	NA
ETHYLBENZENE	25/35	0.59 J	3.4	IA-079-A	IA-079-A-24-D	0.59	0.59	1.1	0.88	0.59	0.59	**1.8**	3	49 ca	0
METHYLENE CHLORIDE	33/35	2.4 J	14	IA-081-A	IA-081-A-24	2.3	2.3	4.0	3.9	2.0	3.3	**3.8**	15	2,600 nc	0
NAPHTHALENE	1/35	4.8	5.7	IA-018-A	IA-018-A-24	1	1	5.3	0.64	0.80	--	ND	1	3.6 ca	1
TETRACHLOROETHENE	9/35	0.55 J	3.7	IA-168-A	IA-168-A-24	0.54	0.54	1.7	0.65	0.89	0.58	**0.58**	8	180 nc	0
TOLUENE	24/35	2.3	70	IA-101-B	IA-101-B-24	2.3	2.3	20.8	14.7	19.7	15.0	**15**	11	22,000 nc	0
1,1,1-TRICHLOROETHANE	8/35	0.33 J	0.79 J	IA-093-A	IA-093-A-24	0.33	0.71	0.52	0.25	0.16	--	ND	8	22,000 nc	0
TRICHLOROETHENE	7/35	0.43 J	3.4	IA-093-A	IA-093-A-24	0.38	0.38	1.8	0.51	0.81	0.72	**0.72**	5	8.8 nc	0
1,2,4-TRIMETHYLBENZENE	23/35	0.62 J	2.1	IA-079-A	IA-079-A-24-D	0.61	0.61	1.2	0.89	0.52	--	ND	23	260 nc	0
TOTAL XYLENES	32/35	1.2 J	14 J	IA-079-A	IA-079-A-24-D	0.52	0.52	5.0	4.6	2.8	5.4	**8.9**	3	440 nc	0

A shaded maximum background value indicates that the maximum detected value from the site data exceeds the maximum background value.

A bolded chemical name indicates that its concentration exceeds background and the industrial air RSL based on an HQ of 0.1 or an ILCR of 1×10^{-6} (i.e., one-tenth of screening value listed).

A bolded/shaded chemical name indicates that its concentration exceeds background and the industrial air RSL based on an HQ of 1 or an ILCR of 1×10^{-5} (i.e., the screening value presented).

Footnotes:

1 - Sample and duplicate are considered two separate samples when determining the minimum and maximum concentrations but are considered one sample when determining frequency of detection, average, standard deviation, and the number of samples exceeding screening criteria.

2 - Values presented are sample-specific quantitation limits.

3 - One-half the detection limit was used to represent non-detected results in calculating the average of all results and the standard deviation.

4 - Exceedance counts are based on detected results only.

5 - USEPA Regional Screening Levels (RSLs) for Chemical Contaminants at Superfund Sites, November 2017. RSLs for carcinogens were adjusted to be based on a lifetime cancer risk of 1E-05. RSLs for noncarcinogens were not adjusted and represent a hazard quotient (HQ) of 1.

6 - Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL).

Definitions:

ca = screening value based on 1×10^{-5} carcinogenic risk

HQ - hazard quotient

ILCR - incremental lifetime cancer risk

J - estimated value

µg/m^3 - micrograms per cubic meter

N = National Institute for Occupational Safety and Health Recommended Exposure Limit

NA - not applicable/not available

nc = noncarcinogenic screening values based on noncarcinogenic hazard quotient = 1

ND - not detected

OSHA - Occupational Safety and Health Administration

PEL - permissable exposure limit

RSL - regional screening level

USEPA - United States Environmental Protection Agency

TABLE 3-2

DESCRIPTIVE STATISTICS OF SUB-SLAB VAPOR RESULTS, ALL BUILDINGS, FEBRUARY 2018
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Parameter	Frequency of detection[1]	Minimum detected value[1]	Maximum detected value[1]	Location with maximum detected value	Sample with maximum detected value	Minimum non-detect value[2]	Maximum non-detect value[2]	Average of detected values[1]	Average of all values[1][3]	Standard deviation[1][3]	Adjusted USEPA RSL for industrial air [value divided by 0.03[4]]	Number of samples above adjusted industrial RSL[1][5]
Volatile Organic Compounds (µg/m^3)												
BENZENE	22/33	0.37 J	210	SV-126-C	SV-126-C-24	0.37	1.8	10.6	7.1	36.4	533 ca	0
CARBON TETRACHLORIDE	22/33	0.48 J	3.8	SV-101-B	SV-101-B-24	0.47	2.4	0.98	0.77	0.84	667 ca	0
CHLORODIFLUOROMETHANE	33/33	1 J	51	SV-150-C	SV-150-C-24	-	-	5.0	5.0	9.2	7,333,333 nc	0
CHLOROFORM	27/33	0.37 J	52	SV-102-C	SV-102-C-24	0.37	0.37	5.5	4.5	9.3	177 ca	0
DICHLORODIFLUOROMETHANE	33/33	1.9 J	7.7	SV-101-B	SV-101-B-24	-	-	3.0	3.0	1.0	14,667 nc	0
1,1-DICHLOROETHANE	14/33	0.38 J	5,600	SV-102-C	SV-102-C-24	0.2	0.4	412	175	974	2,567 ca	1
1,2-DICHLOROETHANE	2/33	0.52 J	1 J	SV-173-A	SV-173-A-24	0.38	1.9	1	0	0	157 ca	0
1,1-DICHLOROETHENE	15/33	0.34 J	2,400	SV-102-C	SV-102-C-24	0.28	0.56	371	169	480	29,333 nc	0
CIS-1,2-DICHLOROETHENE	20/33	0.66 J	310	SV-173-A	SV-173-A-24	0.48	0.48	51.9	32	75	NA	NA
TRANS-1,2-DICHLOROETHENE	12/33	0.49 J	30	SV-126-C	SV-126-C-24	0.4	2	6.9	2.6	6.1	NA	NA
ETHYLBENZENE	19/33	0.71 J	790	SV-102-C	SV-102-C-24	0.59	2.9	44	26	137	1,633 ca	0
METHYLENE CHLORIDE	20/33	2.4 J	14 J	SV-168-A	SV-168-A-24	2.8	5.8	4.0	3.2	2.2	86,667 nc	0
NAPHTHALENE	9/33	1.1 J	180 J	SV-102-C	SV-102-C-24	1	5.2	31.3	9.0	33.9	120 ca	1
TETRACHLOROETHENE	26/33	0.62 J	58	SV-101-B	SV-101-B-24	0.54	1.1	14.0	11.1	13.9	6,000 nc	0
TOLUENE	17/33	2.3	51	SV-102-C	SV-102-C-24	2.3	11	11.2	6.5	11.8	733,333 nc	0
1,1,1-TRICHLOROETHANE	18/33	0.33 J	3,800	SV-102-C	SV-102-C-24	0.33	2	228	124	661	733,333 nc	0
1,1,2-TRICHLOROETHANE	1/33	0.7 J	1 J	SV-173-A	SV-173-A-24	0.57	2.9	1	0	0	29 nc	0
TRICHLOROETHENE	33/33	0.54 J	12,000	SV-173-A	SV-173-A-24	-	-	737	737	2140	293 nc	10
1,2,3-TRIMETHYLBENZENE	6/33	1.5 J	880	SV-081-A	SV-081-A-24	0.84	4.2	156	29	153	8,667 nc	0
1,2,4-TRIMETHYLBENZENE	23/33	0.62 J	94	SV-075-A	SV-075-A-24	0.61	3.1	9.6	6.8	19.7	8,667 nc	0
1,3,5-TRIMETHYLBENZENE	10/33	0.69 J	220	SV-081-A	SV-081-A-24	0.64	3.2	29.7	9.3	38.9	8,667 nc	0
VINYL CHLORIDE	5/33	0.37 J	2,700	SV-126-C	SV-126-C-24	0.37	1.9	542	82	470	933 ca	1
TOTAL XYLENES	26/33	1.3 J	2,600	SV-102-C	SV-102-C-24	0.52	2.6	115	90	451	14,667 nc	0

A bolded chemical name indicates that its concentration exceeds the industrial air RSL divided by 0.03 based on an HQ of 0.1 or an ILCR of 1×10^{-6} (i.e., one-tenth the screening value presented).

A bolded/shaded chemical name indicates that its concentration exceeds the industrial air RSL divided by 0.03 based on an HQ of 1 or an ILCR of 1×10^{-5} (i.e., the screening value presented).

Footnotes:

1 - Sample and duplicate are considered as two separate samples when determining the minimum and maximum concentrations, but are considered one sample when determining frequency of detection, average, standard deviation, and the number of samples exceeding criteria.

2 - Values presented are sample-specific quantitation limits.

3 - One-half the detection limit was used to represent non-detected results in calculating the average of all results and the standard deviation.

4 - Screening values derived in accordance with Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (November 2002). Screening values are equal to United States Environmental Protection Agency (USEPA) Industrial Air Screening Values divided by an attenuation factor 0.03, and correspond to a target cancer risk level of 1.0E-05 or a hazard quotient (HQ) of 1.

5 - Exceedance counts are based on detected results only.

Definitions:

-- = no criterion available
ca = screening value based on carcinogenic effects
HQ = hazard quotient
ILCR = incremental lifetime cancer risk
J = estimated value
NA = not available
nc = screening value based on noncarcinogenic effects
RSL = regional screening level

TABLE 3-3

SUMMARY STATISTICS FOR TRICHLOROETHENE CONCENTRATIONS IN INDOOR AIR
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Building level or background	Dataset	Minimum detected value[1]	Maximum detected value[1]	Minimum non-detect value[1][2]	Maximum non-detect value[1][2]	Average of all values[3][4]	Average of detected values[3]	Frequency of detection[1]	Number of detections > 8.8 µg/m^3 [5][6]	95% UCL[3]
Basement	All Buildings 2006-February 2018	0.077 J	36 [7]	0.075	20	1.1	1.9	270/578	14	1.4
	All Buildings February 2018	2.1	3.4	0.38	0.38	0.64	2.7	4/22	0	1.2
	Building A 2006-February 2018	0.15 J	26.2	0.36	0.96	3.7	4.0	80/85	10	5.4
	Building A February 2018	2.1	3.4	-	-	2.7	2.7	4/4	0	NA[8]
	Building B 2006-February 2018	0.078 J	2.5	0.075	2.7	0.60	0.68	55/80	0	0.69
	Building B February 2018	-	-	-	-	-	-	-	-	-
	Building C 2006-February 2018	0.077 J	36 [7]	0.075	20	0.63	1.3	135/413	4	0.89
	Building C February 2018	-	-	0.38	0.38	-	-	0/18	0	NA[9]
First Floor[10]	All Buildings 2006-February 2018	0.081 J	34	0.075	12	1.1	1.7	180/386	5	1.5
	All Buildings February 2018	0.43 J	0.82 J	0.38	0.38	0.29	0.61	3/13	0	0.51
	Building A 2006-February 2018	0.086 J	34	0.075	12	1.2	1.9	135/275	5	1.8
	Building A February 2018	0.43 J	0.82 J	0.38	0.38	0.30	0.61	3/11	0	0.53
	Building B 2006-February 2018	0.081 J	5.1	0.075	11	0.78	0.85	38/89	0	0.60
	Building B February 2018	-	-	0.38	0.38	-	-	0/2	0	NA[8]
	Building C 2006-August 2008	0.5 J	7.2	0.21	2.7	1.0	2.3	7/22	0	2.1
Background	2006-February 2018	0.48 J	11.9	0.075	2.7	0.62	2.8	11/86	1	0.28
	February 2018	0.72 J	0.72 J	0.38	0.38	0.32	-	1/4	0	NA[8]

All results are in µg/m^3.

(1) The original sample and duplicate are considered as two separate samples when determining the minimum and maximum concentration and as one sample when determining the frequency of detection.

(2) Values presented are sample-specific quantitation limits.

(3) The average of the original sample and duplicate is used for determining the average of all values, average of detected values, and 95% UCL.

(4) One-half the detection limit was used to represent non-detected results in calculating the average of all results.

(5) Value is the non-carcinogenic industrial air regional screening level corresponding to HQ = 1 (USEPA, November 2017).

(6) Field duplicate pair samples are counted as one sample in determining the number of samples exceeding the screening level. The field duplicate pair is considered to exceed the screening level if either the original or duplicate sample is greater than the screening level.

(7) The maximum detected concentration of 36 µg/m^3 was detected in a duplicate sample, and the corresponding original sample concentration of 0.75 µg/m^3 is considerably less than the maximum concentration. Resampling at the same location found concentrations that were closer to the original sample concentration.

(8) There are less than five samples; therefore, a UCL is not presented.

(9) There are less than three detections; therefore, a UCL is not presented.

(10) There are no trichloroethene results for the Building C first floor from the February 2018 sampling event.

Definitions:

HQ - hazard quotient

J - estimated value

µg/m^3 - micrograms per cubic meter

NA - not applicable/not available

UCL - upper confidence limit

USEPA - United States Environmental Protection Agency

TABLE 3-4

SUMMARY STATISTICS FOR NAPHTHALENE CONCENTRATIONS IN INDOOR AIR
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Building level or background	Dataset	Minimum detected value[1]	Maximum detected value[1]	Minimum non-detect value[1][2]	Maximum non-detect value[1][2]	Average of all values[3][4]	Average of detected values[3]	Frequency of detection[1]	Number of detections > 3.6 µg/m^3 [5][6]	95% UCL[3]
Basement	All Buildings 2006-February 2018	0.2 J	15	0.19	96.7	1.5	2.2	256/513	52	1.7
	All Buildings February 2018	4.8	5.7	1	1	0.72	5.3	1/22	1	NA[7]
	Building A 2006-February 2018	0.47 J	15	0.19	4	2.7	3.7	52/80	21	3.3
	Building A February 2018	4.8	5.7	1	1	1.7	5.3	1/4	1	NA[8]
	Building B 2006-February 2018	0.23 J	5	0.19	5.6	1.1	1.6	32/53	3	1.4
	Building B February 2018	-	-	-	-	-	-	-	-	-
	Building C 2006-February 2018	0.2 J	6.9	0.19	96.7	1.3	1.9	172/380	28	1.3
	Building C February 2018	-	-	1	1	-	-	0/18	0	NA[7]
First Floor[9]	All Buildings 2006-February 2018	0.19 J	12 J	0.19	31	1.1	1.5	104/286	8	0.85
	All Buildings February 2018	-	-	1	1	-	-	0/13	0	NA[7]
	Building A 2006-February 2018	0.19 J	12 J	0.19	31	1.0	1.6	78/224	6	0.89
	Building A February 2018	-	-	1	1	-	-	0/11	0	NA[7]
	Building B 2006-February 2018	0.26 J	6.5 J	0.19	24	1.5	1.5	26/62	2	1.2
	Building B February 2018	-	-	1	1	-	-	0/2	0	NA[8]
Background	2006-February 2018	0.2 J	8.1 J	0.19	3.8	0.84	1.5	24/70	1	0.97
	February 2018	-	-	1	1	-	-	0/4	0	NA[8]

All results are in µg/m^3.

(1) The original sample and duplicate are considered as two separate samples when determining the minimum and maximum concentration and as one sample when determining the frequency of detection.

(2) Values presented are sample-specific quantitation limits.

(3) The average of the original sample and duplicate is used for determining the average of all values, average of detected values, and 95% UCL.

(4) One-half the detection limit was used to represent non-detected results in calculating the average of all results.

(5) Value is the carcinogenic industrial air regional screening level corresponding to 1×10^{-5} risk level (USEPA, November 2017).

(6) Field duplicate pair samples are counted as one sample in determining the number of samples exceeding the screening level. The field duplicate pair is considered to exceed the screening level if either the original or duplicate sample is greater than the screening level.

(7) There are less than three detections; therefore, a UCL is not presented.

(8) There are less than five samples; therefore, a UCL is not presented.

(9) There are no naphthalene results for the Building C first floor from historical or February 2018 sampling events.

Definitions:

HQ - hazard quotient

ILCR - incremental lifetime cancer risk

J - estimated value

µg/m^3 - micrograms per cubic meter

UCL - upper confidence limit

USEPA - United States Environmental Protection Agency

A benchmark of 3.6 µg/m^3 corresponds to ILCR = 1×10^{-5}.

TABLE 3-5

INDOOR AIR QUALITY SAMPLING RESULTS, BULIDING A, FEBRUARY 2018
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 1 OF 3

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL (µg/m ^{3})	Industrial Air Screening Level (µg/m ^{3})	Key	AIR-015-A IA-015-A-24 20180221	AIR-018-A[(1)] IA-018-A-24 20180221	AIR-018-A[(1)] IA-018-A-24-D 20180221	AIR-021-A IA-021-A-24 20180221	AIR-075-A IA-075-A-24 20180221	AIR-076-A IA-076-A-24 20180221
Volatile organic compounds (µg/m ^{3})									
BENZENE	31,900	16	ca	0.66 J	0.84 J	0.69 J	0.42 J	0.41 J	0.42 J
CARBON TETRACHLORIDE	62,900	20	ca	0.47 U	0.61 J	0.59 J	0.49 J	0.5 J	0.47 U
CHLORODIFLUOROMETHANE	3,540,000 N	220,000	nc	2.8	1.3 J	1.3 J	1.8	3.5	1.4
CHLOROFORM	240,000	5.3	ca	0.37 U	1 J	1.2 J	0.37 U	0.37 U	0.37 U
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	2.1	1.8 J	1.6 J	1.8 J	1.7 J	1.9 J
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.72 J	0.8 J	0.28 U	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
ETHYLBENZENE	435,000	49	ca	0.59 U	0.67 J	0.59 U	0.88 J	1.7 J	1.1 J
METHYL TERT-BUTYL ETHER	180,000 A	470	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	3 J	7.9	2.8 J	3 J	2.7 J	2.3 U
NAPHTHALENE	50,000	3.6	ca	1 U	**5.7**	**4.8**	1 U	1 U	1 U
TETRACHLOROETHENE	678,000	180	nc	0.54 U	0.54 U	0.54 U	0.54 U	1.1 J	0.54 U
TOLUENE	754,000	22,000	nc	6.9	3.3	2.3 U	30	35	37
1,2,4-TRICHLOROBENZENE	40,000 N	8.8	nc	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	537,000	8.8	nc	0.38 U	2.1	2.5	0.43 J	0.38 U	0.38 U
1,2,3-TRIMETHYLBENZENE	123,000 N	260	nc	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	123,000 N	260	nc	0.61 U	0.61 U	0.61 U	0.97 J	1.5 J	1.3 J
1,3,5-TRIMETHYLBENZENE	123,000 N	260	nc	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	435,000	440	nc	2.7 J	2.8 J	0.52 U	3.9	8.6	5.1

Shaded cells indicate a concentration greater than the risk-based screening level.

-- = not available

J = estimated value

U = not detected

UJ = non-detected value is estimated

Industrial Air Screening Levels from USEPA RSLs for Chemical Contaminants at Superfund Sites, November 2017

ca =carcinogenic screening values based on 1×10^{-5} carcinogenic risk

nc = noncarcinogenic screening values based on noncarcinogenic hazard quotient = 1

MDE = Maryland Department of the Environment

OSHA PEL = Occupational Safety and Health Administration Pemissible Exposure Limit

USEPA = United States Environmental Protection Agency

A = American Council of Governmental Industrial Hygenists Theshold Limit Value

N = National Institute for Occupational Safety and Health Recommended Exposure Limit

RSLs= Regional Screening Levels

1 - This location is in the basement. The TCE screening level for basement samples is 35 ug/m^3 based on reduced exposure potential in the basement. The screening level was approved by MDE in 2017.

TABLE 3-5

INDOOR AIR QUALITY SAMPLING RESULTS, BULIDING A, FEBRUARY 2018
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 2 OF 3

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL (µg/m ^{3})	Industrial Air Screening Level (µg/m ^{3})	Key	AIR-078-A IA-078-A-24 20180221	AIR-079-A IA-079-A-24 20180221	AIR-079-A IA-079-A-24-D 20180221	AIR-081-A IA-081-A-24 20180221	AIR-093-A[(1)] IA-093-A-24 20180221	AIR-117-A IA-117-A-24 20180221
Volatile organic compounds (µg/m ^{3})									
BENZENE	31,900	16	ca	0.44 J	0.61 J	10 J	0.46 J	0.79 J	0.37 U
CARBON TETRACHLORIDE	62,900	20	ca	0.47 U	0.48 J	0.48 J	0.49 J	0.98 J	0.53 J
CHLORODIFLUOROMETHANE	3,540,000 [N]	220,000	nc	1.5	1.9	1.8	4.4	1.5	1.4
CHLOROFORM	240,000	5.3	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.77 J
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	2	1.7 J	1.9 J	1.9 J	1.6 J	1.9 J
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U	0.28 U	0.28 U	0.47 J	0.28 U
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U	0.48 U	0.5 J	0.48 U
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
ETHYLBENZENE	435,000	49	ca	1.1 J	1.2 J	3.4	1.2 J	0.59 U	0.98 J
METHYL TERT-BUTYL ETHER	180,000 [A]	470	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	4.4	3.3 J	3.4 J	14	2.9 J	2.3 U
NAPHTHALENE	50,000	3.6	ca	1 U	1 U	1 U	1 U	1 U	1 U
TETRACHLOROETHENE	678,000	180	nc	0.54 U	0.54 U	2.2 J	0.54 U	0.54 U	0.54 U
TOLUENE	754,000	22,000	nc	39	35	44	20	2.3 U	38
1,2,4-TRICHLOROBENZENE	40,000 [N]	8.8	nc	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.33 U	0.33 U	0.33 U	0.33 U	0.79 J	0.33 U
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	537,000	8.8	nc	0.38 U	0.38 U	0.38 U	0.38 U	3.4	0.38 U
1,2,3-TRIMETHYLBENZENE	123,000 [N]	260	nc	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	123,000 [N]	260	nc	1.6 J	1 J	2.1	0.62 J	0.61 U	1.6 J
1,3,5-TRIMETHYLBENZENE	123,000 [N]	260	nc	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	435,000	440	nc	5	5.4 J	14 J	6.9	0.52 U	4.4

Shaded cells indicate a concentration greater than the risk-based screening level.

-- = not available

J = estimated value

U = not detected

UJ = non-detected value is estimated

Industrial Air Screening Levels from USEPA RSLs for Chemical Contaminants at Superfund Sites, November 2017

ca =carcinogenic screening values based on 1×10^{-5} carcinogenic risk

nc = noncarcinogenic screening values based on noncarcinogenic hazard quotient = 1

MDE = Maryland Department of the Environment

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USEPA = United States Environmental Protection Agency

A = American Council of Governmental Industrial Hygenists Theshold Limit Value

N = National Institute for Occupational Safety and Health Recommended Exposure Limit

RSLs= Regional Screening Levels

1 - This location is in the basement. The TCE screening level for basement samples is 35 ug/m^3 based on reduced exposure potential in the basen
The screening level was approved by MDE in 2017.

TABLE 3-5

INDOOR AIR QUALITY SAMPLING RESULTS, BULIDING A, FEBRUARY 2018
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 3 OF 3

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL (µg/m^3)	Industrial Air Screening Level (µg/m^3)	Key	AIR-118-A IA-118-A-24 20180221	AIR-136-A IA-136-A-24 20180221	AIR-138-A[(1)] IA-138-A-24 20180221	AIR-168-A IA-168-A-24 20180221	AIR-174-A[(1)] IA-174-A-24 20180221
Volatile organic compounds (µg/m^3)								
BENZENE	31,900	16	ca	0.47 J	0.38 J	0.74 J	0.44 J	0.89 J
CARBON TETRACHLORIDE	62,900	20	ca	0.49 J	0.47 U	0.96 J	0.47 U	0.88 J
CHLORODIFLUOROMETHANE	3,540,000 N	220,000	nc	9.8	1.7	1.3 J	1.4	1.3 J
CHLOROFORM	240,000	5.3	ca	0.37 U	0.37 U	0.37 U	0.45 J	0.43 J
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	1.7 J	1.9 J	1.4 J	1.5 J	1.7 J
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U	0.45 J	0.28 U	0.37 J
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
ETHYLBENZENE	435,000	49	ca	0.88 J	1.1 J	0.59 U	0.93 J	0.59 U
METHYL TERT-BUTYL ETHER	180,000 A	470	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	3.4 J	3 J	3.4 J	3.4 J	4.4
NAPHTHALENE	50,000	3.6	ca	1 U	1 U	1 U	1 U	1 U
TETRACHLOROETHENE	678,000	180	nc	0.97 J	3.6	0.54 U	3.7	0.54 U
TOLUENE	754,000	22,000	nc	7.4	44	2.3 U	31	2.8
1,2,4-TRICHLOROBENZENE	40,000 N	8.8	nc	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.33 U	0.33 U	0.41 J	0.33 U	0.55 J
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	537,000	8.8	nc	0.38 U	0.57 J	2.2	0.82 J	2.7
1,2,3-TRIMETHYLBENZENE	123,000 N	260	nc	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	123,000 N	260	nc	0.61 U	1 J	0.61 U	1.7 J	0.61 U
1,3,5-TRIMETHYLBENZENE	123,000 N	260	nc	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	435,000	440	nc	5.1	5.2	0.52 U	4.5	2.1 J

Shaded cells indicate a concentration greater than the risk-based screening level.

-- = not available

J = estimated value

U = not detected

UJ = non-detected value is estimated

Industrial Air Screening Levels from USEPA RSLs for Chemical Contaminants at Superfund Sites, November 2017

ca =carcinogenic screening values based on 1×10^{-5} carcinogenic risk

nc = noncarcinogenic screening values based on noncarcinogenic hazard quotient = 1

MDE = Maryland Department of the Environment

OSHA PEL = Occupational Safety and Health Administration Pemissible Exposure Limit

USEPA = United States Environmental Protection Agency

A = American Council of Governmental Industrial Hygenists Theshold Limit Value

N = National Institute for Occupational Safety and Health Recommended Exposure Limit

RSLs= Regional Screening Levels

1 - This location is in the basement. The TCE screening level for basement samples is 35 ug/m^3 based on reduced exposure potential in the basen
The screening level was approved by MDE in 2017.

TABLE 3-6

SUB-SLAB VAPOR SAMPLING RESULTS, BUILDING A, FEBRUARY 2018
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 1 OF 3

LOCATION SAMPLE ID SAMPLE DATE	Target Shallow Soil Gas Concentration ($\mu g/m^3$)(1)	Key	AIR-015-A SV-015-A-24 20180221	AIR-075-A SV-075-A-24 20180221	AIR-078-A SV-078-A-24 20180221	AIR-079-A SV-079-A-24 20180221	AIR-079-A SV-079-A-24-D 20180221	AIR-081-A SV-081-A-24 20180221
Volatile Organic Compounds ($\mu g/m^3$)								
BENZENE	533	ca	2.2	0.51 J	0.43 J	0.41 J	0.41 J	0.37 U
CARBON TETRACHLORIDE	667	ca	0.48 J	0.47 U	0.51 J	0.47 U	0.47 U	0.55 J
CHLORODIFLUOROMETHANE	7,333,333	nc	2.9	1.5	1.4 J	20	17	4
CHLOROFORM	177	ca	0.49 J	0.37 U	0.48 J	0.4 J	0.37 U	2.1
DICHLORODIFLUOROMETHANE	14,667	nc	3.5	2.3	1.9 J	2.9	2	2.9
1,1-DICHLOROETHANE	2,567	ca	2.7	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-DICHLOROETHANE	157	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	29,333	nc	8.9	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	--	--	1.2 J	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	--	--	0.4 U	0.4 U	0.4 U	0.53 J	0.53 J	0.4 U
ETHYLBENZENE	1,633	ca	0.99 J	1.2 J	1.4 J	3.2	3.3	2.1
METHYL TERT-BUTYL ETHER	15,667	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	86,667	nc	3.7 U	3.3 J	4.9	2.8 U	4.9	3.4 U
NAPHTHALENE	120	ca	1 UJ	84	1 U	1 UJ	1 U	4.8 J
TETRACHLOROETHENE	6,000	nc	0.54 U	1.1 J	22	25	30	13
TOLUENE	733,333	nc	9.8	4.9	6.9	2.3 U	2.3	5.5
1,2,4-TRICHLOROBENZENE	293	nc	1.4 UJ	1.4 U	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ
1,1,1-TRICHLOROETHANE	733,333	nc	1.7 J	0.33 U	0.85 J	1.3 J	1.1 J	3.9
1,1,2-TRICHLOROETHANE	29	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	293	nc	6.3	2.6	12	87	96	0.54 J
1,2,3-TRIMETHYLBENZENE	8,667	nc	0.84 U	29	0.84 U	1.5 J	7.6 J	880
1,2,4-TRIMETHYLBENZENE	8,667	nc	0.62 J	94	1.7 J	1.2 J	1.7 J	67
1,3,5-TRIMETHYLBENZENE	8,667	nc	0.64 U	52	0.64 U	0.64 U	2	220
VINYL CHLORIDE	933	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	14,667	nc	4.2	13	7	15	15	19

Notes: All sample concentrations are in micrograms per cubic meter ($\mu g/m^3$)

Shaded cells indicate a concentration greater than risk-based screening level.

$\mu g/m^3$ = micrograms per cubic meter
-- = not available
J = estimated value
U = nondetect
UJ = non-detected value is estimated
ca = screening value based on carcinogenic effects
nc = screening value based on noncarcinogenic effects
(1) Screening values derived in accordance with Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (November 2002). Screening values are equal to United States Environmental Protection Agency (USEPA) Industrial Air Screening Values divided by an attenuation factor of 0.03, and correspond to a target cancer risk level of 1×10^{-5}.

TABLE 3-6

SUB-SLAB VAPOR SAMPLING RESULTS, BUILDING A, FEBRUARY 2018
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 2 OF 3

LOCATION SAMPLE ID SAMPLE DATE	Target Shallow Soil Gas Concentration ($\mu g/m^3$)(1)	Key	AIR-093-A SV-093-A-24 20180221	AIR-095-A SV-095-A-24 20180221	AIR-116-A SV-116-A-24 20180221	AIR-116-A SV-116-A-24-D 20180221	AIR-118-A SV-118-A-24 20180221	AIR-136-A SV-136-A-24 20180221
Volatile Organic Compounds ($\mu g/m^3$)								
BENZENE	533	ca	0.78 J	0.37 U	0.53 J	0.59 J	0.61 J	2 J
CARBON TETRACHLORIDE	667	ca	0.66 J	0.47 U	0.56 J	0.6 J	0.51 J	0.94 U
CHLORODIFLUOROMETHANE	7,333,333	nc	1.4 J	3.5	1.3 J	1.4	4.1	1.7 J
CHLOROFORM	177	ca	0.37 U	0.37 U	0.82 J	0.89 J	2.6	8
DICHLORODIFLUOROMETHANE	14,667	nc	2.6	1.9 J	2.6	2.7	2.9	2.9 J
1,1-DICHLOROETHANE	2,567	ca	1.5 J	0.2 U	0.2 U	0.2 U	30	0.4 U
1,2-DICHLOROETHANE	157	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.77 U
1,1-DICHLOROETHENE	29,333	nc	1 J	0.28 U	0.34 J	0.45 J	230	0.56 U
CIS-1,2-DICHLOROETHENE	--	--	0.69 J	0.48 U	0.48 U	0.48 U	91	1.8 J
TRANS-1,2-DICHLOROETHENE	--	--	0.4 U	0.4 U	0.4 U	0.4 U	8	0.79 U
ETHYLBENZENE	1,633	ca	0.59 U	1.7	0.59 U	0.59 U	9.8	5.4
METHYL TERT-BUTYL ETHER	15,667	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	2.5 U
METHYLENE CHLORIDE	86,667	nc	2.8 U	2.4 J	2.8 U	3.1 U	5.4 U	4.5 U
NAPHTHALENE	120	ca	1 UJ	1 U	1 UJ	1.4 J	1 UJ	2.1 U
TETRACHLOROETHENE	6,000	nc	0.54 U	1.7 J	16	12	16	1.1 U
TOLUENE	733,333	nc	2.3 U	3.3	2.3 U	2.3 U	2.4	50
1,2,4-TRICHLOROBENZENE	293	nc	1.4 UJ	1.4 U	1.4 UJ	1.4 UJ	1.4 UJ	2.9 UJ
1,1,1-TRICHLOROETHANE	733,333	nc	0.94 J	0.33 U	0.33 J	0.37 J	11	0.65 U
1,1,2-TRICHLOROETHANE	29	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	1.1 U
TRICHLOROETHENE	293	nc	2.5	6	3.5	4.6	**1500**	**380**
1,2,3-TRIMETHYLBENZENE	8,667	nc	0.84 U	0.84 U	0.84 U	0.84 U	3.8	1.7 U
1,2,4-TRIMETHYLBENZENE	8,667	nc	0.61 U	3	0.61 U	0.61 U	9.6	4.4
1,3,5-TRIMETHYLBENZENE	8,667	nc	0.64 U	1.2 J	0.64 U	0.64 U	6.1	1.7 J
VINYL CHLORIDE	933	ca	0.37 U	0.37 U	0.37 U	0.37 U	1.1	0.74 U
TOTAL XYLENES	14,667	nc	0.52 U	9.2	0.52 U	0.52 U	91	33

Notes: All sample concentrations are in micrograms per cubic meter ($\mu g/m^3$)

Shaded cells indicate a concentration greater than risk-based screening level.

$\mu g/m^3$ = micrograms per cubic meter
-- = not available
J = estimated value
U = nondetect
UJ = non-detected value is estimated
ca = screening value based on carcinogenic effects
nc = screening value based on noncarcinogenic effects
(1) Screening values derived in accordance with Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (November 2002). Screening values are equal to United States Environmental Protection Agency (USEPA) Industrial Air Screening Values divided by an attenuation factor of 0.03, and correspond to a target cancer risk level of 1×10^{-5}.

TABLE 3-6

SUB-SLAB VAPOR SAMPLING RESULTS, BUILDING A, FEBRUARY 2018
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION SAMPLE ID SAMPLE DATE	Target Shallow Soil Gas Concentration ($\mu g/m^3$)(1)	Key	AIR-138-A SV-138-A-24 20180221	AIR-168-A SV-168-A-24 20180221	AIR-170-A SV-170-A-24 20180221	AIR-171-A SV-171-A-24 20180221	AIR-173-A SV-173-A-24 20180221	AIR-174-A SV-174-A-24 20180221
Volatile Organic Compounds ($\mu g/m^3$)								
BENZENE	533	ca	0.74 J	1.8 U	0.81 J	0.86 J	1 J	0.38 J
CARBON TETRACHLORIDE	667	ca	0.79 J	2.4 U	0.52 J	0.47 U	0.47 U	0.49 J
CHLORODIFLUOROMETHANE	7,333,333	nc	1.5	1.5 J	1.2 J	1.4 J	1.9	1.2 J
CHLOROFORM	177	ca	0.37 J	3.6 J	0.37 U	8.5	14	4.8
DICHLORODIFLUOROMETHANE	14,667	nc	2.9	3.5 J	2.5	2.5	3.4	2.7
1,1-DICHLOROETHANE	2,567	ca	2.5	3.6 J	0.5 J	23	71	18
1,2-DICHLOROETHANE	157	ca	0.38 U	1.9 U	0.38 U	0.52 J	1.3 J	0.38 U
1,1-DICHLOROETHENE	29,333	nc	12	500	8.4	510	1300	43
CIS-1,2-DICHLOROETHENE	--	--	7	6.1 J	2.6	92	310	9.1
TRANS-1,2-DICHLOROETHENE	--	--	0.4 U	2 U	0.4 U	5	13	0.49 J
ETHYLBENZENE	1,633	ca	0.59 U	2.9 U	0.87 J	0.84 J	0.59 U	0.75 J
METHYL TERT-BUTYL ETHER	15,667	ca	1.2 U	6.1 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	86,667	nc	3.2 U	14 J	3 J	5.8 U	4.5 U	3.4 U
NAPHTHALENE	120	ca	1 UJ	5.2 U	1 U	1 UJ	1 UJ	1 UJ
TETRACHLOROETHENE	6,000	nc	12	23	0.54 U	11	4	1 J
TOLUENE	733,333	nc	2.3 U	11 U	4.9	4.3	2.3 U	3
1,2,4-TRICHLOROBENZENE	293	nc	1.4 UJ	7.2 U	1.4 U	1.4 UJ	1.4 UJ	1.4 UJ
1,1,1-TRICHLOROETHANE	733,333	nc	0.43 J	9.3 J	1.2 J	1.9 J	8.5	34
1,1,2-TRICHLOROETHANE	29	nc	0.57 U	2.9 U	0.57 U	0.57 U	0.7 J	0.57 U
TRICHLOROETHENE	293	nc	83	**1300**	26	**3100**	**12000**	270
1,2,3-TRIMETHYLBENZENE	8,667	nc	0.84 U	4.2 U	0.84 U	0.84 U	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	8,667	nc	0.61 U	3.1 U	0.93 J	0.95 J	0.68 J	0.98 J
1,3,5-TRIMETHYLBENZENE	8,667	nc	0.64 U	3.2 U	0.64 U	0.64 U	0.64 U	0.64 U
VINYL CHLORIDE	933	ca	0.37 U	1.9 U	0.37 U	0.37 J	1.3	0.37 U
TOTAL XYLENES	14,667	nc	0.52 U	2.6 U	4.3	4.3	1.3 J	4.1

Notes: All sample concentrations are in micrograms per cubic meter ($\mu g/m^3$)

Shaded cells indicate a concentration greater than risk-based screening level.

$\mu g/m^3$ = micrograms per cubic meter
-- = not available
J = estimated value
U = nondetect
UJ = non-detected value is estimated
ca = screening value based on carcinogenic effects
nc = screening value based on noncarcinogenic effects
(1) Screening values derived in accordance with Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (November 2002). Screening values are equal to United States Environmental Protection Agency (USEPA) Industrial Air Screening Values divided by an attenuation factor of 0.03, and correspond to a target cancer risk level of 1×10^{5}.

TABLE 3-7

INDOOR AIR QUALITY SAMPLING RESULTS, BULIDING B, FEBRUARY 2018
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL ($\mu g/m^3$)	Industrial Air Screening Level ($\mu g/m^3$)	Key	AIR-100-B IA-100-B-24 20180220	AIR-101-B IA-101-B-24 20180220
Volatile organic compounds ($\mu g/m^3$)					
BENZENE	31,900	16	ca	0.56 J	0.7 J
CARBON TETRACHLORIDE	62,900	20	ca	0.47 U	0.5 J
CHLORODIFLUOROMETHANE	3,540,000[N]	220,000	nc	3.2	4.6
CHLOROFORM	240,000	5.3	ca	0.37 U	0.37 U
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	2.5	2.9
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U
ETHYLBENZENE	435,000	49	ca	2.3	2.5
METHYL TERT-BUTYL ETHER	180,000[A]	470	ca	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	5.1	4.3
NAPHTHALENE	50,000	3.6	ca	1 U	1 U
TETRACHLOROETHENE	678,000	180	nc	0.54 U	0.54 U
TOLUENE	754,000	22,000	nc	65	70
1,2,4-TRICHLOROBENZENE	40,000[N]	8.8	nc	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.33 U	0.71 U
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U
TRICHLOROETHENE	537,000	8.8	nc	0.38 U	0.38 U
1,2,3-TRIMETHYLBENZENE	123,000[N]	260	nc	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	123,000[N]	260	nc	0.73 J	0.89 J
1,3,5-TRIMETHYLBENZENE	123,000[N]	260	nc	0.64 U	0.64 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U
TOTAL XYLENES	435,000	440	nc	9.5	11

Shaded cells indicate a concentration greater than the risk-based screening level.

-- = not available

J = estimated value

U = not detected

Industrial Air Screening Levels from USEPA RSLs for Chemical Contaminants at Superfund Sites, November 2017

ca =carcinogenic screening values based on 1×10^{-5} carcinogenic risk

nc = noncarcinogenic screening values based on noncarcinogenic hazard quotient = 1

MDE = Maryland Department of the Environment

OSHA PEL = Occupational Safety and Health Administration Pemissible Exposure Limit

USEPA = United States Environmental Protection Agency

A = American Council of Governmental Industrial Hygenists Theshold Limit Value

N = National Institute for Occupational Safety and Health Recommended Exposure Limit

RSLs= Regional Screening Levels

TABLE 3-8

SUB-SLAB VAPOR SAMPLING RESULTS, BUILDING B, FEBRUARY 2018
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION SAMPLE ID SAMPLE DATE	Target Shallow Soil Gas Concentration ($\mu g/m^3$)(1)	Key	AIR-100-B SV-100-B-24 20180220	AIR-101-B SV-101-B-24 20180220
Volatile Organic Compounds ($\mu g/m^3$)				
BENZENE	533	ca	0.37 U	0.37 U
CARBON TETRACHLORIDE	667	ca	2.9	3.8
CHLORODIFLUOROMETHANE	7,333,333	nc	1.8	2.1
CHLOROFORM	177	ca	2.3	0.62 J
DICHLORODIFLUOROMETHANE	14,667	nc	4	7.7
1,1-DICHLOROETHANE	2,567	ca	0.2 U	0.2 U
1,2-DICHLOROETHANE	157	ca	0.38 U	0.38 U
1,1-DICHLOROETHENE	29,333	nc	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	--	--	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	--	--	0.4 U	0.4 U
ETHYLBENZENE	1,633	ca	0.59 U	0.71 J
METHYL TERT-BUTYL ETHER	15,667	ca	1.2 U	1.2 U
METHYLENE CHLORIDE	86,667	nc	4.6 U	2.8 U
NAPHTHALENE	120	ca	1 UJ	4.2 J
TETRACHLOROETHENE	6,000	nc	5.7	58
TOLUENE	733,333	nc	2.3 U	8.2
1,2,4-TRICHLOROBENZENE	293	nc	1.4 UJ	1.4 UJ
1,1,1-TRICHLOROETHANE	733,333	nc	0.56 J	200
1,1,2-TRICHLOROETHANE	29	nc	0.57 U	0.57 U
TRICHLOROETHENE	293	nc	6.4	94
1,2,3-TRIMETHYLBENZENE	8,667	nc	0.84 U	2.2
1,2,4-TRIMETHYLBENZENE	8,667	nc	0.63 J	4.3
1,3,5-TRIMETHYLBENZENE	8,667	nc	0.64 U	2
VINYL CHLORIDE	933	ca	0.37 U	0.37 U
TOTAL XYLENES	14,667	nc	0.52 U	4

Notes: All sample concentrations are in micrograms per cubic meter ($\mu g/m^3$)
Shaded cells indicate a concentration greater than risk-based screening level.
$\mu g/m^3$ = micrograms per cubic meter
-- = not available
J = estimated value
U = nondetect
UJ = non-detected value is estimated
ca = screening value based on carcinogenic effects
nc = screening value based on noncarcinogenic effects
(1) Screening values derived in accordance with Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (November 2002). Screening values are equal to United States Environmental Protection Agency (USEPA) Industrial Air Screening Values divided by an attenuation factor of 0.03, and correspond to a target cancer risk level of 1×10^{5}.

TABLE 3-9

INDOOR AIR QUALITY SAMPLING RESULTS, BULIDING C, FEBRUARY 2018
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL (µg/m ^{3})	Industrial Air Screening Level (µg/m ^{3})	Key	AIR-001-C IA-001-C-24 20180220	AIR-004-C IA-004-C-24 20180220	AIR-060-C IA-060-C-24 20180220	AIR-088-C IA-088-C-24 20180220	AIR-102-C IA-102-C-24 20180220	AIR-113-C IA-113-C-24 20180220
Volatile organic compounds (µg/m ^{3})									
BENZENE	31,900	16	ca	0.5 J	0.51 J	0.67 J	0.56 J	0.56 J	0.53 J
CARBON TETRACHLORIDE	62,900	20	ca	0.47 U	0.48 J	0.47 J	0.49 J	0.48 J	0.47 U
CHLORODIFLUOROMETHANE	3,540,000 [N]	220,000	nc	1.7	2.2	15	2	5.8	2.3
CHLOROFORM	240,000	5.3	ca	0.37 U	0.37 U	0.47 J	0.37 U	0.37 U	0.37 U
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	1.8 J	2 J	1.9 J	1.9 J	2	2.1
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
ETHYLBENZENE	435,000	49	ca	0.59 U	0.59 U	1.1 J	0.61 J	0.79 J	1.1 J
METHYL TERT-BUTYL ETHER	180,000 [A]	470	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	2.9 J	3.1 J	4.2	3.5 J	4.1	3.2 J
NAPHTHALENE	50,000	3.6	ca	1 U	1 U	1 U	1 U	1 U	1 U
TETRACHLOROETHENE	678,000	180	nc	0.54 U	0.54 U	0.55 J	0.54 U	0.54 U	0.54 U
TOLUENE	754,000	22,000	nc	2.3 U	2.3 U	3	3	3.4	2.3 U
1,2,4-TRICHLOROBENZENE	40,000 [N]	8.8	nc	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.33 U	0.33 U	0.45 J	0.33 U	0.6 J	0.33 U
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	537,000	8.8	nc	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,2,3-TRIMETHYLBENZENE	123,000 [N]	260	nc	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	123,000 [N]	260	nc	0.61 U	0.61 U	1.5 J	0.7 J	0.8 J	1.4 J
1,3,5-TRIMETHYLBENZENE	123,000 [N]	260	nc	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	435,000	440	nc	2.3 J	2.3 J	7.3	3.3 J	5	7

Shaded cells indicate a concentration greater than the risk-based screening level.

-- = not available

J = estimated value

U = not detected

Industrial Air Screening Levels from USEPA RSLs for Chemical Contaminants at Superfund Sites, November 2017

ca =carcinogenic screening values based on 1×10^{-5} carcinogenic risk

nc = noncarcinogenic screening values based on noncarcinogenic hazard quotient = 1

MDE = Maryland Department of the Environment

OSHA PEL = Occupational Safety and Health Administration Pemissible Exposure Limit

USEPA = United States Environmental Protection Agency

A = American Council of Governmental Industrial Hygenists Theshold Limit Value

N = National Institute for Occupational Safety and Health Recommended Exposure Limit

RSLs= Regional Screening Levels

TABLE 3-9

INDOOR AIR QUALITY SAMPLING RESULTS, BULIDING C, FEBRUARY 2018
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 2 OF 4

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL (µg/m ^{3})	Industrial Air Screening Level (µg/m ^{3})	Key	AIR-126-C IA-126-C-24 20180220	AIR-133-C IA-133-C-24 20180220	AIR-141-C IA-141-C-24 20180220	AIR-142-C IA-142-C-24 20180220	AIR-144-C IA-144-C-24 20180220	AIR-145-C IA-145-C-24 20180220
Volatile organic compounds (µg/m ^{3})									
BENZENE	31,900	16	ca	0.55 J	0.5 J	0.63 J	0.57 J	0.61 J	0.58 J
CARBON TETRACHLORIDE	62,900	20	ca	0.47 U	0.47 U	0.51 J	0.48 J	0.47 U	0.51 J
CHLORODIFLUOROMETHANE	3,540,000 [N]	220,000	nc	2.7	4.4	4.9	2.1	17	67
CHLOROFORM	240,000	5.3	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.58 J	0.41 J
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	2.5	1.8 J	2	1.9 J	2	2.6
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
ETHYLBENZENE	435,000	49	ca	0.59 U	0.59 U	0.59 U	0.81 J	1.3 J	0.69 J
METHYL TERT-BUTYL ETHER	180,000 [A]	470	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	4.6	3.8	2.8 J	2.9 J	3.9	4.1
NAPHTHALENE	50,000	3.6	ca	1 U	1 U	1 U	1 U	1 U	1 U
TETRACHLOROETHENE	678,000	180	nc	0.54 U	2.7	0.54 U	0.54 U	0.83 J	0.54 U
TOLUENE	754,000	22,000	nc	5.4	2.3 U	2.3 U	2.3 U	3	2.3 U
1,2,4-TRICHLOROBENZENE	40,000 [N]	8.8	nc	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.38 U	0.33 U	0.33 U	0.33 U	0.39 J	0.33 U
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	537,000	8.8	nc	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,2,3-TRIMETHYLBENZENE	123,000 [N]	260	nc	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	123,000 [N]	260	nc	0.61 U	0.61 U	0.61 U	0.94 J	1.7 J	0.87 J
1,3,5-TRIMETHYLBENZENE	123,000 [N]	260	nc	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	435,000	440	nc	0.52 U	1.9 J	2.7 J	4.7	8.9	4.4

Shaded cells indicate a concentration greater than the risk-based screening level.

-- = not available

J = estimated value

U = not detected

Industrial Air Screening Levels from USEPA RSLs for Chemical Contaminants at Superfund Sites, November 2017

ca =carcinogenic screening values based on 1×10^{-5} carcinogenic risk

nc = noncarcinogenic screening values based on noncarcinogenic hazard quotient = 1

MDE = Maryland Department of the Environment

OSHA PEL = Occupational Safety and Health Administration Pemissible Exposure Limit

USEPA = United States Environmental Protection Agency

A = American Council of Governmental Industrial Hygenists Theshold Limit Value

N = National Institute for Occupational Safety and Health Recommended Exposure Limit

RSLs= Regional Screening Levels

TABLE 3-9

INDOOR AIR QUALITY SAMPLING RESULTS, BULIDING C, FEBRUARY 2018
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL (µg/m ^{3})	Industrial Air Screening Level (µg/m ^{3})	Key	AIR-146-C IA-146-C-24 20180220	AIR-149-C IA-149-C-24 20180220	AIR-149-C IA-149-C-24-D 20180220	AIR-150-C IA-150-C-24 20180220	AIR-152-C IA-152-C-24 20180220	AIR-153-C IA-153-C-24 20180220
Volatile organic compounds (µg/m ^{3})									
BENZENE	31,900	16	ca	0.64 J	0.61 J	0.72 J	0.65 J	0.76 J	0.63 J
CARBON TETRACHLORIDE	62,900	20	ca	0.48 J	0.47 U	0.51 J	0.47 U	0.49 J	0.47 U
CHLORODIFLUOROMETHANE	3,540,000 N	220,000	nc	66	3.3	3.8	60	24	4.9
CHLOROFORM	240,000	5.3	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.44 J	0.37 U
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	2.8	2.5	3	1.9 J	1.9 J	1.9 J
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
ETHYLBENZENE	435,000	49	ca	0.68 J	0.59 U	0.59 U	0.78 J	1.1 J	0.59 J
METHYL TERT-BUTYL ETHER	180,000 A	470	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	3.9	5.1	6	2.9 J	3.5	2.4 J
NAPHTHALENE	50,000	3.6	ca	1 U	1 U	1 U	1 U	1 U	1 U
TETRACHLOROETHENE	678,000	180	nc	0.54 U	1.8 J	0.54 U	0.54 U	0.54 U	0.54 U
TOLUENE	754,000	22,000	nc	2.3 U	5.8	5.6	2.3 U	3.1	2.3
1,2,4-TRICHLOROBENZENE	40,000 N	8.8	nc	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.33 U	0.33 U	0.33 U	0.33 U	0.61 J	0.33 U
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	537,000	8.8	nc	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,2,3-TRIMETHYLBENZENE	123,000 N	260	nc	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	123,000 N	260	nc	0.95 J	0.61 U	0.61 U	1.1 J	1.7 J	1.5 J
1,3,5-TRIMETHYLBENZENE	123,000 N	260	nc	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	435,000	440	nc	4.5	1.3 J	1.2 J	5	7.2	3.7

Shaded cells indicate a concentration greater than the risk-based screening level.

-- = not available

J = estimated value

U = not detected

Industrial Air Screening Levels from USEPA RSLs for Chemical Contaminants at Superfund Sites, November 2017

ca =carcinogenic screening values based on 1×10^{-5} carcinogenic risk

nc = noncarcinogenic screening values based on noncarcinogenic hazard quotient = 1

MDE = Maryland Department of the Environment

OSHA PEL = Occupational Safety and Health Administration Pemissible Exposure Limit

USEPA = United States Environmental Protection Agency

A = American Council of Governmental Industrial Hygenists Theshold Limit Value

N = National Institute for Occupational Safety and Health Recommended Exposure Limit

RSLs= Regional Screening Levels

TABLE 3-9

INDOOR AIR QUALITY SAMPLING RESULTS, BULIDING C, FEBRUARY 2018
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 4 OF 4

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL (µg/m^3)	Industrial Air Screening Level (µg/m^3)	Key	AIR-153-C IA-153-C-24-D 20180220	AIR-155-C IA-155-C-24 20180220
Volatile organic compounds (µg/m^3)					
BENZENE	31,900	16	ca	0.66 J	0.6 J
CARBON TETRACHLORIDE	62,900	20	ca	0.49 J	0.48 J
CHLORODIFLUOROMETHANE	3,540,000 [N]	220,000	nc	4.7	4.8
CHLOROFORM	240,000	5.3	ca	0.37 U	0.37 U
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	2	1.7 J
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U
ETHYLBENZENE	435,000	49	ca	0.66 J	0.64 J
METHYL TERT-BUTYL ETHER	180,000 [A]	470	ca	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	4.8	5
NAPHTHALENE	50,000	3.6	ca	1 U	1 U
TETRACHLOROETHENE	678,000	180	nc	0.54 U	0.54 U
TOLUENE	754,000	22,000	nc	2.8	3.2
1,2,4-TRICHLOROBENZENE	40,000 [N]	8.8	nc	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.33 U	0.33 J
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U
TRICHLOROETHENE	537,000	8.8	nc	0.38 U	0.38 U
1,2,3-TRIMETHYLBENZENE	123,000 [N]	260	nc	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	123,000 [N]	260	nc	1.5 J	0.75 J
1,3,5-TRIMETHYLBENZENE	123,000 [N]	260	nc	0.64 U	0.64 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U
TOTAL XYLENES	435,000	440	nc	4	3.8

Shaded cells indicate a concentration greater than the risk-based screening level.

-- = not available

J = estimated value

U = not detected

Industrial Air Screening Levels from USEPA RSLs for Chemical Contaminants at Superfund Sites, November 2017

ca =carcinogenic screening values based on 1×10^{-5} carcinogenic risk

nc = noncarcinogenic screening values based on noncarcinogenic hazard quotient = 1

MDE = Maryland Department of the Environment

OSHA PEL = Occupational Safety and Health Administration Pemissible Exposure Limit

USEPA = United States Environmental Protection Agency

A = American Council of Governmental Industrial Hygenists Theshold Limit Value

N = National Institute for Occupational Safety and Health Recommended Exposure Limit

RSLs= Regional Screening Levels

TABLE 3-10

SUB-SLAB VAPOR SAMPLING RESULTS, BUILDING C, FEBRUARY 2018
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 1 OF 4

LOCATION SAMPLE ID SAMPLE DATE	Target Shallow Soil Gas Concentration ($\mu g/m^3$)(1)	Key	AIR-001-C SV-001-C-24 20180220	AIR-004-C SV-004-C-24 20180220	AIR-060-C SV-060-C-24 20180220	AIR-088-C SV-088-C-24 20180220	AIR-102-C SV-102-C-24 20180220
Volatile Organic Compounds ($\mu g/m^3$)							
BENZENE	533	ca	0.37 U	0.37 U	0.54 J	0.4 J	5.3
CARBON TETRACHLORIDE	667	ca	0.47 U	0.47 U	0.48 J	0.51 J	3
CHLORODIFLUOROMETHANE	7,333,333	nc	1.5	1.1 J	10	1.9	2.4
CHLOROFORM	177	ca	3	5.5	12	0.37 U	52
DICHLORODIFLUOROMETHANE	14,667	nc	2.6	2.7	2.8	2.6	5
1,1-DICHLOROETHANE	2,567	ca	0.2 U	0.2 U	9.3	0.2 U	**5600**
1,2-DICHLOROETHANE	157	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	29,333	nc	0.28 U	0.28 U	2.1	0.28 U	2400
CIS-1,2-DICHLOROETHENE	--	--	72	22	11	7.3	57
TRANS-1,2-DICHLOROETHENE	--	--	15	1 J	0.99 J	0.4 U	4.4
ETHYLBENZENE	1,633	ca	0.59 U	0.59 U	14	0.59 U	790
METHYL TERT-BUTYL ETHER	15,667	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	86,667	nc	2.9 J	2.7 J	4.9	3.1 J	3.2 J
NAPHTHALENE	120	ca	1 UJ	1 UJ	3.6 J	1.1 J	**180 J**
TETRACHLOROETHENE	6,000	nc	1.7 J	8.7	12	10	10
TOLUENE	733,333	nc	2.3 U	2.3 U	2.3 U	2.3 U	51
1,2,4-TRICHLOROBENZENE	293	nc	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ
1,1,1-TRICHLOROETHANE	733,333	nc	0.33 U	0.33 U	23	0.33 U	3800
1,1,2-TRICHLOROETHANE	29	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	293	nc	200	69	**400**	37	**1500**
1,2,3-TRIMETHYLBENZENE	8,667	nc	0.84 U	0.84 U	0.84 U	0.84 U	18
1,2,4-TRIMETHYLBENZENE	8,667	nc	0.61 U	0.61 U	1.6 J	0.68 J	22
1,3,5-TRIMETHYLBENZENE	8,667	nc	0.64 U	0.64 U	0.85 J	0.64 U	11
VINYL CHLORIDE	933	ca	0.37 U	0.37 U	0.37 U	0.37 U	8.4
TOTAL XYLENES	14,667	nc	0.52 U	0.52 U	120	4	2600

Notes: All sample concentrations are in micrograms per cubic meter ($\mu g/m^3$)
Shaded cells indicate a concentration greater than risk-based screening level.
$\mu g/m^3$ = micrograms per cubic meter
-- = not available
J = estimated value
U = nondetect
UJ = non-detected value is estimated
ca = screening value based on carcinogenic effects
nc = screening value based on noncarcinogenic effects
(1) Screening values derived in accordance with Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (November 2002). Screening values are equal to United States Environmental Protection Agency (USEPA) Industrial Air Screening Values divided by an attenuation factor of 0.03, and correspond to a target cancer risk level of 1×10^{-5}.

TABLE 3-10

SUB-SLAB VAPOR SAMPLING RESULTS, BUILDING C, FEBRUARY 2018
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 2 OF 4

LOCATION SAMPLE ID SAMPLE DATE	Target Shallow Soil Gas Concentration ($\mu g/m^3$)(1)	Key	AIR-113-C SV-113-C-24 20180220	AIR-126-C SV-126-C-24 20180220	AIR-133-C SV-133-C-24 20180220	AIR-141-C SV-141-C-24 20180220	AIR-142-C SV-142-C-24 20180220
Volatile Organic Compounds ($\mu g/m^3$)							
BENZENE	533	ca	0.37 U	210	0.37 U	1.1 J	0.37 U
CARBON TETRACHLORIDE	667	ca	0.47 U	1.2 J	0.69 J	0.66 J	0.62 J
CHLORODIFLUOROMETHANE	7,333,333	nc	2.3	1 J	5	6.2	1.8
CHLOROFORM	177	ca	1.5 J	0.62 J	8.8	0.85 J	2.1
DICHLORODIFLUOROMETHANE	14,667	nc	2.2	2.9	2.9	2.7	2.6
1,1-DICHLOROETHANE	2,567	ca	0.2 U	1.5 J	0.2 U	0.2 U	0.2 U
1,2-DICHLOROETHANE	157	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	29,333	nc	0.28 U	540	0.28 U	3.1	0.28 U
CIS-1,2-DICHLOROETHENE	--	--	27	300	0.66 J	12	0.48 U
TRANS-1,2-DICHLOROETHENE	--	--	0.4 U	30	1.5 J	2.3	0.4 U
ETHYLBENZENE	1,633	ca	0.59 U	1.5 J	0.59 U	0.59 U	0.59 U
METHYL TERT-BUTYL ETHER	15,667	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	86,667	nc	3.1 J	4.8 U	3.4 J	3.4 J	3.3 J
NAPHTHALENE	120	ca	1 UJ	1.9 J	1 UJ	1 UJ	1 UJ
TETRACHLOROETHENE	6,000	nc	0.54 U	11	53	22	0.54 U
TOLUENE	733,333	nc	2.3 U	13	2.3 U	2.3 U	2.3 U
1,2,4-TRICHLOROBENZENE	293	nc	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ
1,1,1-TRICHLOROETHANE	733,333	nc	0.33 U	0.33 U	0.33 U	0.47 U	0.33 U
1,1,2-TRICHLOROETHANE	29	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	293	nc	150	**540**	**2000**	**310**	9.4
1,2,3-TRIMETHYLBENZENE	8,667	nc	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	8,667	nc	0.61 U	1.4 J	0.61 U	0.61 U	0.61 U
1,3,5-TRIMETHYLBENZENE	8,667	nc	0.64 U	0.69 J	0.64 U	0.64 U	0.64 U
VINYL CHLORIDE	933	ca	0.37 U	**2700**	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	14,667	nc	2.4 J	5.1	2.1 J	3.7	2.8 J

Notes: All sample concentrations are in micrograms per cubic meter ($\mu g/m^3$)
Shaded cells indicate a concentration greater than risk-based screening level.
$\mu g/m^3$ = micrograms per cubic meter
-- = not available
J = estimated value
U = nondetect
UJ = non-detected value is estimated
ca = screening value based on carcinogenic effects
nc = screening value based on noncarcinogenic effects
(1) Screening values derived in accordance with Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (November 2002). Screening values are equal to United States Environmental Protection Agency (USEPA) Industrial Air Screening Values divided by an attenuation factor of 0.03, and correspond to a target cancer risk level of 1×10^{-5}.

TABLE 3-10

SUB-SLAB VAPOR SAMPLING RESULTS, BUILDING C, FEBRUARY 2018
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION SAMPLE ID SAMPLE DATE	Target Shallow Soil Gas Concentration ($\mu g/m^3$)[1]	Key	AIR-149-C SV-149-C-24 20180220	AIR-149-C SV-149-C-24-D 20180220	AIR-150-C SV-150-C-24 20180220	AIR-152-C SV-152-C-24 20180220	AIR-153-C SV-153-C-24 20180220
Volatile Organic Compounds ($\mu g/m^3$)							
BENZENE	533	ca	1.1 J	0.81 J	1.2 J	0.95 J	0.37 U
CARBON TETRACHLORIDE	667	ca	0.66 J	0.48 J	0.52 J	0.47 U	0.57 J
CHLORODIFLUOROMETHANE	7,333,333	nc	2.2	2.3	51	17	3.3
CHLOROFORM	177	ca	11	10	0.51 J	1.3 J	0.37 U
DICHLORODIFLUOROMETHANE	14,667	nc	2.9	2.9	2.9	2.6	3
1,1-DICHLOROETHANE	2,567	ca	0.2 U	0.2 U	0.38 J	0.2 U	0.2 U
1,2-DICHLOROETHANE	157	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	29,333	nc	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	--	--	0.48 U	0.48 U	0.48 U	7	0.48 U
TRANS-1,2-DICHLOROETHENE	--	--	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
ETHYLBENZENE	1,633	ca	1.7 J	1.5 J	1.9	1.1 J	0.59 U
METHYL TERT-BUTYL ETHER	15,667	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	86,667	nc	4.1	3.7 U	4	7.1	3.1 J
NAPHTHALENE	120	ca	1 UJ	1 UJ	1 UJ	1 UJ	1.6 J
TETRACHLOROETHENE	6,000	nc	0.54 U	0.54 U	15	7.1	0.62 J
TOLUENE	733,333	nc	14	11	5.3	4.5	2.3 U
1,2,4-TRICHLOROBENZENE	293	nc	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ
1,1,1-TRICHLOROETHANE	733,333	nc	0.33 U	0.33 U	1.2 U	2 U	0.33 U
1,1,2-TRICHLOROETHANE	29	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	293	nc	5.7	3.6	0.94 J	210	6.3
1,2,3-TRIMETHYLBENZENE	8,667	nc	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	8,667	nc	1.9 J	1.6 J	1 J	1.3 J	0.74 J
1,3,5-TRIMETHYLBENZENE	8,667	nc	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
VINYL CHLORIDE	933	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	14,667	nc	8.7	7.6	8.1	6.3	3.4 J

Notes: All sample concentrations are in micrograms per cubic meter ($\mu g/m^3$)

Shaded cells indicate a concentration greater than risk-based screening level.

$\mu g/m^3$ = micrograms per cubic meter
-- = not available
J = estimated value
U = nondetect
UJ = non-detected value is estimated
ca = screening value based on carcinogenic effects
nc = screening value based on noncarcinogenic effects
(1) Screening values derived in accordance with Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (November 2002). Screening values are equal to United States Environmental Protection Agency (USEPA) Industrial Air Screening Values divided by an attenuation factor of 0.03, and correspond to a target cancer risk level of 1×10^{-5}.

TABLE 3-10

SUB-SLAB VAPOR SAMPLING RESULTS, BUILDING C, FEBRUARY 2018
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION SAMPLE ID SAMPLE DATE	Target Shallow Soil Gas Concentration ($\mu g/m^3$)(1)	Key	AIR-153-C SV-153-C-24-D 20180220	AIR-155-C SV-155-C-24 20180220
Volatile Organic Compounds ($\mu g/m^3$)				
BENZENE	533	ca	0.37 U	0.37 J
CARBON TETRACHLORIDE	667	ca	0.49 J	0.92 J
CHLORODIFLUOROMETHANE	7,333,333	nc	2.8	5.3
CHLOROFORM	177	ca	0.37 U	0.7 J
DICHLORODIFLUOROMETHANE	14,667	nc	2.7	2.6
1,1-DICHLOROETHANE	2,567	ca	0.2 U	2.8
1,2-DICHLOROETHANE	157	ca	0.38 U	0.38 U
1,1-DICHLOROETHENE	29,333	nc	0.28 U	1.2 J
CIS-1,2-DICHLOROETHENE	--	--	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	--	--	0.4 U	0.4 U
ETHYLBENZENE	1,633	ca	0.59 U	0.94 J
METHYL TERT-BUTYL ETHER	15,667	ca	1.2 U	1.2 U
METHYLENE CHLORIDE	86,667	nc	3 J	3 J
NAPHTHALENE	120	ca	1 UJ	1 UJ
TETRACHLOROETHENE	6,000	nc	0.54 U	2.4 J
TOLUENE	733,333	nc	2.3 U	2.3 U
1,2,4-TRICHLOROBENZENE	293	nc	1.4 UJ	1.4 UJ
1,1,1-TRICHLOROETHANE	733,333	nc	0.33 U	2.3
1,1,2-TRICHLOROETHANE	29	nc	0.57 U	0.57 U
TRICHLOROETHENE	293	nc	4.7	1.1
1,2,3-TRIMETHYLBENZENE	8,667	nc	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	8,667	nc	0.65 J	0.85 J
1,3,5-TRIMETHYLBENZENE	8,667	nc	0.64 U	0.64 U
VINYL CHLORIDE	933	ca	0.37 U	0.37 U
TOTAL XYLENES	14,667	nc	3.6	5.9

Notes: All sample concentrations are in micrograms per cubic meter ($\mu g/m^3$)
Shaded cells indicate a concentration greater than risk-based screening level.
$\mu g/m^3$ = micrograms per cubic meter
-- = not available
J = estimated value
U = nondetect
UJ = non-detected value is estimated
ca = screening value based on carcinogenic effects
nc = screening value based on noncarcinogenic effects
(1) Screening values derived in accordance with Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (November 2002). Screening values are equal to United States Environmental Protection Agency (USEPA) Industrial Air Screening Values divided by an attenuation factor of 0.03, and correspond to a target cancer risk level of 1×10^{-5}.

TABLE 3-11

AMBIENT AIR (BACKGROUND) SAMPLING RESULTS, FEBRUARY 2018
LOCKHEED MARTIN MIDDLE RIVER COMPLEX
MIDDLE RIVER, MARYLAND

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL ($\mu g/m^3$)	Industrial Air Screening Level ($\mu g/m^3$)	Key	AIR-BCK-1 IA-BCK-1-24 20180221	AIR-BCK-2 IA-BCK-2-24 20180221	AIR-BCK-3 IA-BCK-3-24 20180221	AIR-BCK-4 IA-BCK-4-24 20180221
Volatile organic compounds ($\mu g/m^3$)							
BENZENE	31,900	16	ca	0.39 J	0.44 J	0.53 J	0.52 J
CARBON TETRACHLORIDE	62,900	20	ca	0.5 J	0.54 J	0.5 J	0.47 U
CHLORODIFLUOROMETHANE	3,540,000[N]	220,000	nc	1.4	1.4	0.27 U	1.2 J
CHLOROFORM	240,000	5.3	ca	0.55 J	0.92 J	0.37 U	0.37 U
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	2.4	3.4	2.7	2.7
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.54 J	3.2
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U	0.28 U	1.6 J
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U	0.4 U
ETHYLBENZENE	435,000	49	ca	0.59 U	0.59 U	0.59 U	1.8
METHYL TERT-BUTYL ETHER	180,000[A]	470	ca	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	3.5	3.8	2.8 J	3.2 J
NAPHTHALENE	50,000	3.6	ca	1 UJ	1 UJ	1 UJ	1 UJ
TETRACHLOROETHENE	678,000	180	nc	0.54 U	0.54 U	0.54 U	0.58 J
TOLUENE	754,000	22,000	nc	2.3 U	2.3 U	2.3 U	15
1,2,4-TRICHLOROBENZENE	40,000[N]	8.8	nc	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.33 U	0.33 U	0.38 U	1.9 U
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	537,000	8.8	nc	0.38 U	0.38 U	0.38 U	0.72 J
1,2,3-TRIMETHYLBENZENE	123,000[N]	260	nc	0.84 U	0.84 U	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	123,000[N]	260	nc	0.61 U	0.61 U	0.61 U	0.61 U
1,3,5-TRIMETHYLBENZENE	123,000[N]	260	nc	0.64 U	0.64 U	0.64 U	0.64 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	435,000	440	nc	0.52 U	0.52 U	1.9 J	8.9

All concentrations are in micrograms per cubic meter air ($\mu g/m^3$).

Shaded cells indicate a concentration greater than the risk-based screening level.

Industrial Air Screening Levels from USEPA Regional Screening Levels for Chemical Contaminants at Superfund Sites, November 2017

-- = not available
A = American Council of Governmental Industrial Hygienists Theshold Limit Value
ca = screening value based on 1×10^{-5} carcinogenic risk
J = estimated value
N = National Institute for Occupational Safety and Health Recommended Exposure Limit
nc = screening value based on noncarcinogenic hazard quotient = 1
OSHA PEL = Occupational Safety and Health Administration Pemissible Exposure Limit
U = not detected
UJ = non-detected value is estimated
USEPA = United States Environmental Protection Agency

TABLE 3-12

ANALYTE CONCENTRATIONS IN BACKGROUND AIR SAMPLES COMPARED TO INDOOR AIR SAMPLES - FEBRUARY 2018 LOCKHEED MARTIN CORPORATION MIDDLE RIVER COMPLEX MIDDLE RIVER, MARYLAND

Analyte	Maximum Background Concentration ($\mu g/m^3$)	Maximum Indoor Air Sample Concentration ($\mu g/m^3$)(1)	Number of Indoor Air Samples with Detects(1)	Number of Indoor Air Detects < Background(1)(2)	Number of Indoor Air Detects = Background(1)(2)	Number of Indoor Air Detects > Background(1)(2)
BENZENE	0.53	10	34	11	1	22
CARBON TETRACHLORIDE	0.54	0.98	23	19	0	4
CHLORODIFLUOROMETHANE	1.4	67	35	3	3	29
CHLOROFORM	0.92	1.2	8	7	0	1
DICHLORODIFLUOROMETHANE	3.4	3	35	35	0	0
1,1-DICHLOROETHANE	3.2	ND	0	--	--	--
1,1-DICHLOROETHENE	1.6	0.8	4	4	0	0
ETHYLBENZENE	1.8	3.4	25	22	0	3
METHYLENE CHLORIDE	3.8	14	33	17	1	15
TETRACHLOROETHENE	0.58	3.7	9	1	0	8
TOLUENE	15	70	24	13	0	11
TRICHLOROETHENE	0.72	3.4	7	2	0	5
TOTAL XYLENES	8.9	14	32	28	1	3

(1) The original sample and duplicate are considered as two separate samples when determining the minimum and maximum concentration, but are considered one sample when determining the number of samples with detects and the number of samples less than, equal to, or greater than background.

(2) If one sample in a duplicate pair was greater/equal to background and the other sample in the duplicate pair was less than background, the maximum detected concentration in the field duplicate pair was used to represent the field duplicate pair.

There are a total of four background samples and 35 indoor air samples for Round 24.

ND - Not detected

TABLE 4-1

SUMMARY OF SUB-SLAB VAPOR VOC DETECTIONS NEAR SSDS, BUILDING A
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Location	VOC (µg/m^3)	Apr-07	Oct-07	Jul-08	Nov-08	Nov-07	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Oct-11	Feb-12	Aug-12	Feb-13	Mar-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16	Feb-17	Aug-17	Feb-18
SSD-11-A	1,1-DICHLOROETHENE	NS	NS	3900	1900	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	BENZENE	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	CHLOROFORM	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	CIS-1,2-DICHLOROETHENE	NS	NS	79000	31000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	ETHYLBENZENE	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	METHYL TERT-BUTYL ETHER	NS	NS	-	NA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	TETRACHLOROETHENE	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	TOLUENE	NS	NS	500	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	TOTAL XYLENES	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	TRANS-1,2-DICHLOROETHENE	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	TRICHLOROETHENE	NS	NS	2800	850	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	VINYL CHLORIDE	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	**TOTAL VOCs**	**NS**	**NS**	**86,200**	**33,750**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**
Note: SSD-11-A is also referenced as SV-11-A																											
SSD-12-A	1,1-DICHLOROETHENE	NS	NS	1800	9900	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	BENZENE	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	CARBON TETRACHLORIDE	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	CHLOROFORM	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	CIS-1,2-DICHLOROETHENE	NS	NS	1200	2900	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	ETHYLBENZENE	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	METHYL TERT-BUTYL ETHER	NS	NS	-	NA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	TETRACHLOROETHENE	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	TOLUENE	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	TOTAL XYLENES	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	TRANS-1,2-DICHLOROETHENE	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	TRICHLOROETHENE	NS	NS	3500	6800	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	VINYL CHLORIDE	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	**TOTAL VOCs**	**NS**	**NS**	**6,500**	**19,600**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**
Note: SSD-12-A is also referenced as SV-12-A																											
SSD-13-A	1,1-DICHLOROETHANE	11000	NS	200	-	3400	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-13-A	BENZENE	-	NS	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-13-A	CHLOROFORM	64.5 J	NS	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-13-A	CIS-1,2-DICHLOROETHENE	292000	NS	3800	47	15463	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-13-A	METHYL TERT-BUTYL ETHER	-	NS	NA	NA	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-13-A	TETRACHLOROETHENE	166 J	NS	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-13-A	TOLUENE	-	NS	-	170	1093	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-13-A	TOTAL XYLENES	-	NS	-	15	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-13-A	TRANS-1,2-DICHLOROETHENE	4650	NS	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-13-A	TRICHLOROETHENE	326000	NS	4700	46	806	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-13-A	VINYL CHLORIDE	549	NS	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SV-13-A	**TOTAL VOCs**	**634,430 J**	**NS**	**8,700**	**278**	**20,762**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**
Note: SSD-13-A is also referenced as SV-13-A																											
015-A	1,1,1-TRICHLOROETHANE	-	-	9800	2500	-	-	-	-	1200	380	-	1100	840	940	140	460	280	112	NS	45.6 J	1300	41 J	15	3	23.5	1.7 J
015-A	1,1-DICHLOROETHANE	6010	7690 J	320	480	5666 J	1.2	0.43 J	120	58	12	1.7	51	65 J	92	13	170	45	14.6	NS	4.6 J	56	70 J	19	3.05	22.5	2.7
015-A	1,1-DICHLOROETHENE	-	-	3400	6400	-	3.2	3.4	2800	1200	150	12	1100	780 J	1600	490	3100	1100 J	473	NS	71.4 J	1200	190	50	9.5	77	8.9
015-A	1,2,3-TRIMETHYLBENZENE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.85	1.3	1.1	-	NS	-	13 J	-	-	-	-	-
015-A	1,2-DICHLOROETHANE	-	-	-	-	-	0.082 J	-	-	-	-	-	0.53	-	-	-	0.66	0.7	-	NS	-	-	-	-	-	-	-
015-A	1,3,5-TRIMETHYLBENZENE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.75	1	-	NS	-	12 J	-	-	-	-	-
015-A	BENZENE	-	-	-	-	-	-	-	-	-	0.4	-	-	1.1	-	-	0.32	0.49	0.64	NS	0.64	-	-	4 J	1.2 J	3.95	2.2
015-A	CARBON TETRACHLORIDE	-	-	-	-	-	0.48 J	-	-	-	-	0.64	0.96	-	-	0.77 J	-	0.83 J	-	NS	-	-	-	-	-	-	0.48 J
015-A	CHLORODIFLUOROMETHANE	-	-	-	-	-		-	-	6.5 J	-	-		4	3.4 J	-	0.93	1.7	5.8 J	NS	3 J	-	-	3.2 J	7.4	3.4	2.9
015-A	CHLOROFORM	109	-	-	-	-	0.46	-	6.1 J	5.5 J	0.9 J	1.1	5.2	1.4 J	23 J	6.8	26	19	93.6	NS	13.8 J	9.4 J	-	-	0.58 J	1.8	0.49 J
015-A	CIS-1,2-DICHLOROETHENE	167000	190312 J	7800	20000	134804 J	83	36	4400	1800	200	320	1800	1100 J	2400	1300	7000	2700	1260	NS	195	900	130	7.2 J	0.73 J	12.5	1.2 J
015-A	DICHLORODIFLUOROMETHANE	-	-	-	-	-	2.2	3.2 J	-	-	2	2.7	2.2	2.3 J	-	2.7	2.4	2.8	2.3 J	NS	2.2	7.2 J	-	-	2.1	2.05	3.5
015-A	ETHYLBENZENE	-	-	-	-	-	1.2	4.6	-	-	2	3.6	0.79	19 J	-	2.3 K	4.5	7.5	-	NS	1 J	18	40 J	3.5 J	-	17	0.99 J
015-A	M+P-XYLENES	-	-	-	-	-	3.3	11	-	-	-	20	4.1	-	-	8.8 J	23	47	3.1 J	NS	6.9 J	-	-	-	-	-	N/A
015-A	METHYL TERT-BUTYL ETHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NS	-	-	-	-	-	-	-
015-A	METHYLENE CHLORIDE	-	-	-	-	-	0.94	-	-	-	-	0.92	0.6	-	-	0.74	-	0.99	31.6 J	NS	8.7	-	160 J	-	3.2 J	-	-
015-A	NAPHTHALENE	-	-	-	-	-	0.65 J	-	-	-	-	4	-	-	-	0.8	-	2.1 J	-	NS	2.1 J	-	-	-	-	-	-
015-A	O-XYLENE	-	-	-	-	-	1.2	2.9 J	-	-	-	7.9	1.8	-	-	8.5	8.8	10	1.6 J	NS	6.1 J	-	-	-	-	-	N/A
015-A	TETRACHLOROETHENE	98.5	-	-	-	-	0.26 J	-	-	-	-	-	1.4	-	-	-	1.2	3.9	-	NS	-	-	-	-	-	1.35	-
015-A	TOLUENE	14.8 J	-	-	480	-	64	210	10 J	14	27	28	15	440 J	11 J	14	160	240 J	7.1	NS	1.3	-	-	-	4.2	10.35	9.8
015-A	TOTAL XYLENES	-	-	-	310	-	-	-	-	-	10	-	-	120 J		-	-	-	-	NS	-	120	210	6.1 J	2.4 J	54	4.2
015-A	TRANS-1,2-DICHLOROETHENE	4660	3212 J	-	-	2101 J	1	-	150	99	13	2.7	46	46 J	84	23	160	79	37.7	NS	7.4 J	110	22 J	-	-	0.95	-
015-A	TRICHLOROETHENE	326000	225718 J	17000	12000	155853 J	16	8.1	3200	1300	340	18	3400	2400 J	3000	710	8800	1600	619	NS	112 J	1300	540 J	35	2.3	51.5	6.3
015-A	VINYL CHLORIDE	491	-	-	-	-	0.078 J	-	11 J	9.8	0.8	0.26	4	-	13	1.4	12	7.5 J	1.5 J	NS	-	-	-	-	-	-	-
015-A	**TOTAL VOCs**	**504,383 J**	**426,932 J**	**38,320**	**42,170**	**298,424 J**	**179 J**	**280 J**	**10,697 J**	**4,493 J**	**758 J**	**424**	**6,434**	**4,979 J**	**7,226 J**	**2,584 J**	**19,472**	**5,871 J**	**2,552 J**	**NS**	**482 J**	**5,046 J**	**1,403 J**	**143 J**	**40 J**	**282**	**45**

TABLE 4-1

SUMMARY OF SUB-SLAB VAPOR VOC DETECTIONS NEAR SSDS, BUILDING A
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Location	VOC (µg/m^3)	Apr-07	Oct-07	Jul-08	Nov-08	Nov-07	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Oct-11	Feb-12	Aug-12	Feb-13	Mar-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16	Feb-17	Aug-17	Feb-18
SSD-16-A	1,1,1-TRICHLOROETHANE	NS	NS	67	420	NS	NS	NS	NS	5.7 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	1,1-DICHLOROETHANE	NS	NS	180	1400	NS	NS	NS	NS	52	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	1,1-DICHLOROETHENE	NS	NS	2100	18000	NS	NS	NS	NS	890	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	BENZENE	NS	NS	-	-	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	CARBON TETRACHLORIDE	NS	NS	-	-	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	CHLORODIFLUOROMETHANE	NS	NS	-	-	NS	NS	NS	NS	3.8 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	CHLOROFORM	NS	NS	-	-	NS	NS	NS	NS	2.5 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	CIS-1,2-DICHLOROETHENE	NS	NS	710	3000	NS	NS	NS	NS	110	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	METHYL TERT-BUTYL ETHER	NS	NS	-	-	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	TETRACHLOROETHENE	NS	NS	-	-	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	TOLUENE	NS	NS	-	-	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	TOTAL XYLENES	NS	NS	-	-	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	TRANS-1,2-DICHLOROETHENE	NS	NS	-	-	NS	NS	NS	NS	11	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	TRICHLOROETHENE	NS	NS	1300	3700	NS	NS	NS	NS	160	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	VINYL CHLORIDE	NS	NS	-	63	NS	NS	NS	NS	7.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	**TOTAL VOCs**	**NS**	**NS**	**4,357**	**26,583**	**NS**	**NS**	**NS**	**NS**	**1,242 J**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**
Note: SSD-16-A is also referenced as 016-A																											
017-A	1,1-DICHLOROETHANE	-	-	NS	47	-	21	6.7	8.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	1,1-DICHLOROETHENE	-	-	NS	38	-	17	6	6.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	1,2-DICHLOROETHANE	-	-	NS		-	-	0.13 J	0.084 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	BENZENE	-	-	NS	-	-	0.59 J	0.41	0.14 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	CARBON TETRACHLORIDE	-	-	NS	-	-	0.57 J	0.53	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	CHLOROFORM	-	-	NS	78	-	81	27	7.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	CIS-1,2-DICHLOROETHENE	-	-	NS	8	-	6.2	2.4	1.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	DICHLORODIFLUOROMETHAN	-	-	NS	-	-	2.6	2.8	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	ETHYLBENZENE	-	-	NS	-	-	-	3.3	0.13 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	M+P-XYLENES	-	-	NS		-	1.8	9.3	0.37	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	METHYL TERT-BUTYL ETHER	-	-	NS	NA	-	-	0.51 J	0.24 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	METHYLENE CHLORIDE	-	-	NS		-	43	2.5	1.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	O-XYLENE	-	-	NS		-	0.56 J	2	0.14 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	TETRACHLOROETHENE	-	-	NS	-	-	1.2 J	0.81	0.58	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	TOLUENE	-	-	NS	-	-	14	58	0.54	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	TOTAL XYLENES	-	-	NS	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	TRANS-1,2-DICHLOROETHENE	-	-	NS	-	-	0.52 J	0.2 J	0.18 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	TRICHLOROETHENE	-	-	NS	310	-	170	67	56	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	VINYL CHLORIDE	-	-	NS	-	-	-	0.1 J	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	**TOTAL VOCs**	**-**	**-**	**NS**	**481**	**-**	**360 J**	**190 J**	**86 J**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**
018-A	1,1,1-TRICHLOROETHANE	-	NA	NS	-	-	-	-	-	280 J	-	-	730	300 J	160 J	270	240 J	65 J	-	NS	NS	NS	NS	NS	NS	NS	NS	NS
018-A	1,1-DICHLOROETHANE	78600	76901 J	NS	44000	76901 J	1100	-	280	660	3	-	2200	1300	1200	410	1400 J	430 J	3.2	NS	NS	NS	NS	NS	NS	NS	NS	NS
018-A	1,1-DICHLOROETHENE	-	-	NS	1500000	-	43000	-	12000	32000	48	2.9	130000	69000	42000	54000	67000 J	24000 J	230	NS	NS	NS	NS	NS	NS	NS	NS	NS
018-A	1,2,4-TRIMETHYLBENZENE	-	-	NS	-	-	-	-	-	-	-	-	-	-	-	-	0.85	0.75	1.7 J	NS	NS	NS	NS	NS	NS	NS	NS	NS
018-A	1,2-DICHLOROETHANE	-	-	NS	-	-	-	-	-	750	-	-	62	-	-	44	29 J	7.4 J	-	NS	NS	NS	NS	NS	NS	NS	NS	NS
018-A	1,3,5-TRIMETHYLBENZENE	-	-	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4 J	NS	NS	NS	NS	NS	NS	NS	NS	NS
018-A	BENZENE	-	-	NS	-	-	-	-	24000 J	-	1	0.58	7.8	-	-	23	10 J	2	0.96	NS	NS	NS	NS	NS	NS	NS	NS	NS
018-A	CARBON TETRACHLORIDE	337	-	NS	-	-	-	-	-	-	-	-	6.7	-	-	7	2.7	3.5 J	-	NS	NS	NS	NS	NS	NS	NS	NS	NS
018-A	CHLORODIFLUOROMETHANE	-	-	NS	-	-	-	-	-	-	-	-	-	-	-	-		2.6	8.9	NS	NS	NS	NS	NS	NS	NS	NS	NS
018-A	CHLOROFORM	316	-	NS	-	-	-	-	-	-	0.6 J	0.65 J	14	-	-	15 J	8.3 J	2.9	1.7 J	NS	NS	NS	NS	NS	NS	NS	NS	NS
018-A	CIS-1,2-DICHLOROETHENE	232000	249784 J	NS	170000	249784 J	4400	-	1400	3200	17	1.3	23000	6700	8200	3800	5200	1700 J	16.3	NS	NS	NS	NS	NS	NS	NS	NS	NS
018-A	DICHLORODIFLUOROMETHAN	-	-	NS	-	-	-	-	150 J	-	2	2.5	2.2	-	-	2.8	2.4	3.3	2.2	NS	NS	NS	NS	NS	NS	NS	NS	NS
018-A	ETHYLBENZENE	-	-	NS	-	-	-	-	8100 J	-	1	2.6	0.97	-	-		0.79	1.1	-	NS	NS	NS	NS	NS	NS	NS	NS	NS
018-A	M+P-XYLENES	-	-	NS	-	-	-	-	28000 J	-	-	11	1.1 J	-	-	0.62 J	3.2 J	4	2 J	NS	NS	NS	NS	NS	NS	NS	NS	NS
018-A	METHYL TERT-BUTYL ETHER	-	-	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS
018-A	METHYLENE CHLORIDE	-	-	NS	-	-	520	-	-	-	-	0.81	-	-	-	-	-	1.7 J	19.8	NS	NS	NS	NS	NS	NS	NS	NS	NS
018-A	NAPHTHALENE	-	-	NS	-	-	-	-	-	-	-	11 J	-	-	450 J		2.7 J	7.1	3.1	NS	NS	NS	NS	NS	NS	NS	NS	NS
018-A	O-XYLENE	-	-	NS	-	-	-	-	3600 J	-	-	3.9	0.53 J	-	-	-	0.97	1.1	-	NS	NS	NS	NS	NS	NS	NS	NS	NS
018-A	TETRACHLOROETHENE	4470	-	NS	-	-	-	-	-	-	-	-	120	-	-	110	64 J	17 J	-	NS	NS	NS	NS	NS	NS	NS	NS	NS
018-A	TOLUENE	29.6 J	-	NS	-	-	300 J	-	1900 J	-	4	32	19	-	-	4.1	82 J	27 J	2.6	NS	NS	NS	NS	NS	NS	NS	NS	NS
018-A	TOTAL XYLENES	-	-	NS	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS
018-A	TRANS-1,2-DICHLOROETHENE	4160	-	NS	-	-	-	-	-	-	-	-	71	-		66	56 J	17 J	-	NS	NS	NS	NS	NS	NS	NS	NS	NS
018-A	TRICHLOROETHENE	6200000	3869448 J	NS	2700000	3869448 J	63000	-	19000	64000	160	7.2	800000	83000	69000	95000	96000 J	28000 J	174	NS	NS	NS	NS	NS	NS	NS	NS	NS
018-A	VINYL CHLORIDE	1850	-	NS	-	-	-	-	-	-	-	-	550	300 J	180 J	170	310 J	40	0.59	NS	NS	NS	NS	NS	NS	NS	NS	NS
018-A	**TOTAL VOCs**	**6,521,763 J**	**4,196,133 J**	**NS**	**4,414,000**	**4,196,133 J**	**112,320 J**	**-**	**98,430 J**	**100,890 J**	**242 J**	**76 J**	**956,785 J**	**160,600 J**	**121,190 J**	**153,923 J**	**170,413 J**	**54,333 J**	**468 J**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**

TABLE 4-1

SUMMARY OF SUB-SLAB VAPOR VOC DETECTIONS NEAR SSDS, BUILDING A
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Location	VOC (µg/m^3)	Apr-07	Oct-07	Jul-08	Nov-08	Nov-07	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Oct-11	Feb-12	Aug-12	Feb-13	Mar-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16	Feb-17	Aug-17	Feb-18
078-A	1,2,3-TRIMETHYLBENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	15	-	-	-	-
078-A	1,1-DICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	-	-	-
078-A	1,2,4-TRIMETHYLBENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	17	0.68 J	0.67 J	1.8 J	1.7 J
078-A	BENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2	0.44 J	0.5 J	2.7	0.4 J
078-A	CARBON TETRACHLORIDE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	-	0.53 J	0.51 J
078-A	CHLORODIFLUOROMETHANE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.3 J	1.6	2.7	2.9	1.4 J
078-A	CHLOROFORM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	1 J	-	0.65 J	0.48 J
078-A	CIS-1,2-DICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	-	-	-
078-A	DICHLORODIFLUOROMETHAN	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.8	3	2.5	2.1	1.9 J
078-A	ETHYLBENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.95	1.1 J	-	1.8	1.4 J
078-A	METHYLENE CHLORIDE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	4.2	2.8 J	-	4.9
078-A	TOLUENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.5	2.3	2.8	12	6.9
078-A	TOTAL XYLENES	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.8	8.4	3 J	9.2	7
078-A	TRANS-1,2-DICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	-	-	-
078-A	TRICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11	13	11	4.4	12
078-A	**TOTAL VOCs**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**46 J**	**35 J**	**26 J**	**38 J**	**39 J**
079-A	1,1,1-TRICHLOROETHANE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	2.2	0.83 J	1.7 J	1.3 J
079-A	1,2,4-TRIMETHYLBENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	1.0 J	0.70 J	2.2	1.7 J
079-A	BENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	0.78 J	0.51 J	0.95 J	0.41 J
079-A	CHLORODIFLUOROMETHANE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	2.6	3.4	2.5	20
079-A	CHLOROFORM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13	0.80 J	-	0.78 J	0.4 J
079-A	CIS-1,2-DICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,400	-	-	-	-
079-A	DICHLORODIFLUOROMETHAN	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	2.7	2.1	2.1	2.9
079-A	ETHYLBENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	10	0.87 J	5.8	3.3
079-A	METHYLENE CHLORIDE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	3.5	2.5 J	-	4.9
079-A	NAPHTHALENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	1.0	-	-	-
079-A	TETRACHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9.9 J	7.4	1.5 J	16	30
079-A	TOLUENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	8.3	3.8	21	2.3
079-A	TOTAL XYLENES	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	44	3.1 J	32	15
079-A	TRANS-1,2-DICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	300	-	-	1 J	0.53 J
079-A	TRICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3,500	120	41	130	96
079-A	**TOTAL VOCs**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**3,810 J**	**204 J**	**60 J**	**216 J**	**179 J**
093-A	1,2,3-TRIMETHYLBENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	-	-	-
093-A	1,1-DICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.98 J	0.85 J	0.30 J	0.89 J	1 J
093-A	1,2,4-TRIMETHYLBENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	-	-	-
093-A	BENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.71 J	0.42 J	0.6 J	0.78 J	0.8 J
093-A	CARBON TETRACHLORIDE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	0.47 J	-	0.54 J	0.66 J
093-A	CHLORODIFLUOROMETHANE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.1 J	1.3 J	1.7	2.1	1.4 J
093-A	CHLOROFORM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	-	0.8 J	-
093-A	CIS-1,2-DICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	-	-	0.69 J
093-A	DICHLORODIFLUOROMETHAN	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.6	2.6	1.9 J	1.7 J	2.6
093-A	ETHYLBENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	-	-	-
093-A	METHYLENE CHLORIDE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	8.7	-	2.3 J	-	-
093-A	TOLUENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	-	5.8	-
093-A	TOTAL XYLENES	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	1.2 J	-	-	-
093-A	TRANS-1,2-DICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	-	-	-
093-A	TRICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7	-	2	2	2.5
093-A	**TOTAL VOCs**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**21**	**6.8 J**	**9.0 J**	**15 J**	**10 J**
116-A	1,2,3-TRIMETHYLBENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	0.86 J	-	-	-
116-A	1,1-DICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	1.7	0.42 J	-	0.34 J
116-A	1,2,4-TRIMETHYLBENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	0.94 J	-	0.63 J	-
116-A	BENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.62 J	0.48 J	0.4 J	0.71 J	0.5 J
116-A	CARBON TETRACHLORIDE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	0.5 J	0.54 J	0.55 J	0.56 J
116-A	CHLORODIFLUOROMETHANE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1 J	1.3 J	18.0	2.3	1.3 J
116-A	CHLOROFORM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.39 J	2 J	0.7 J	1.5 J	0.82 J
116-A	CIS-1,2-DICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	-	-	-
116-A	DICHLORODIFLUOROMETHAN	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.7	2.4	2.0	2	2.6
116-A	ETHYLBENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	1.1 J	-	-	-
116-A	METHYLENE CHLORIDE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	3.4 J	2.4 J	26 J	-
116-A	TOLUENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	2.5	-	11	-
116-A	TOTAL XYLENES	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	4.6	-	-	-
116-A	TRANS-1,2-DICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	-	-	-
116-A	TRICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6	21	14	9.4	3.5
116-A	**TOTAL VOCs**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**11**	**42 J**	**38 J**	**54 J**	**10 J**

TABLE 4-1

SUMMARY OF SUB-SLAB VAPOR VOC DETECTIONS NEAR SSDS, BUILDING A
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Location	VOC (µg/m^3)	Apr-07	Oct-07	Jul-08	Nov-08	Nov-07	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Oct-11	Feb-12	Aug-12	Feb-13	Mar-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16	Feb-17	Aug-17	Feb-18
118-A	1,2,3-TRIMETHYLBENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	-	3.2 J	3.8
118-A	1,1-DICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	650	150	470.00	150	230
118-A	1,2,4-TRIMETHYLBENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10 J	3.80 J	13.00 J	5.1	9.6
118-A	BENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	-	-	0.6 J
118-A	CARBON TETRACHLORIDE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	-	-	0.51 J
118-A	CHLORODIFLUOROMETHANE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	2.8 J	-	4.2	4.1
118-A	CHLOROFORM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	7.8 J	3 J	2.6
118-A	CIS-1,2-DICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	190	70	120.0	60	91
118-A	DICHLORODIFLUOROMETHAN	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	-	2.2 J	2.9
118-A	ETHYLBENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	12 J	5.4 J	12.0 J	12	9.8
118-A	METHYLENE CHLORIDE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	-	-	-
118-A	TOLUENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	-	6.5	2.4
118-A	TOTAL XYLENES	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	110	49	120	95	91
118-A	TRANS-1,2-DICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	14	5 J	10 J	6.2	8
118-A	TRICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2,300	890	2000	690	1500
118-A	**TOTAL VOCs**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**3,286 J**	**1,176 J**	**2,753 J**	**1,037 J**	**1,956 J**
136-A	1,2,3-TRIMETHYLBENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.40	-	-
136-A	1,1-DICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	0.48 J	-	-	-
136-A	1,2,4-TRIMETHYLBENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	0.95 J	0.79 J	-	4.4
136-A	BENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	1.8	1.4	2.7	2.0 J
136-A	CARBON TETRACHLORIDE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.51 J	-	-
136-A	CHLORODIFLUOROMETHANE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	2.0	2.4	3.7	1.7 J
136-A	CHLOROFORM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	330	50	7.8	20	8
136-A	CIS-1,2-DICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	4.5	1.2 J	4.2	1.8 J
136-A	DICHLORODIFLUOROMETHAN	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	2.5	2.2	2.2 J	2.9 J
136-A	ETHYLBENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	1.6 J	3.1	-	5.4
136-A	METHYLENE CHLORIDE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	5.9	2.5 J	-	-
136-A	TOLUENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	13	9.7	12	50
136-A	TOTAL XYLENES	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	7.9	15	1.2 J	33
136-A	TRANS-1,2-DICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	0.56 J	-	-	-
136-A	TRICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	35,000	850	300	790	380
136-A	**TOTAL VOCs**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**35,330**	**941 J**	**347 J**	**836 J**	**489 J**
168-A	1,1,1-TRICHLOROETHANE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	59 J	22.5	9.3 J
168-A	1,1-DICHLOROETHANE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	70 J	14.5	3.6 J
168-A	1,1-DICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4,900	3,000	500
168-A	1,2,4-TRIMETHYLBENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	-
168-A	CARBON TETRACHLORIDE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	-
168-A	CHLORODIFLUOROMETHANE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	1.5 J
168-A	CHLOROFORM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	120 J	19.5	3.6 J
168-A	CIS-1,2-DICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	270	34.5	6.1 J
168-A	DICHLORODIFLUOROMETHAN	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	3.5 J
168-A	ETHYLBENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	-
168-A	METHYLENE CHLORIDE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	-
168-A	TRANS-1,2-DICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	-
168-A	TRICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	22,000	8,100	1,300
168-A	**TOTAL VOCs**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**27,290 J**	**11,154**	**1,815 J**

Notes:
Data presented in this table is from sub-slab vapor samples.
VOC = volatile organic compound
SSDS = sub-slab depressurization system
µg/m^3 = micrograms per cubic meter
- = not detected (below reporting limit)
N/A = compound not reported
N/S = not sampled
J = estimated value
J+ = estimated value, may be biased high
K = value is biased high
NS = not sampled
N/A = sampling data for this location not previously included in this table

TABLE 4-2

SUMMARY OF SUB-SLAB VOC DETECTIONS NEAR SSDS, BUILDING C
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Location	VOC (µg/m³)	Oct-07	Jul-08	Nov-08	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Feb-12	Jun-12	Jul-12	Aug-12	Feb-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16	Feb-17	Aug-17	Feb-18
001-C	1,1,1-TRICHLOROETHANE	-	-	-	-	-	-	2.1	-	2.8	-	-	-	-	NS	NS	NS	2	-	1.5 J	0.43 J	2.2 J	-	0.88 J	-
001-C	1,1-DICHLOROETHANE	-	-	-	0.33	-	0.28	-	-	6.7	-	-	-	1.4	NS	NS	NS	5.8	-	-	-	-	-	-	-
001-C	1,1-DICHLOROETHENE	-	24	39	0.9	1	2.7	-	-	2.3	0.59	-	23	-	NS	NS	NS	-	-	-	0.45 J	-	-	-	-
001-C	1,2,4-TRIMETHYLBENZENE	-	-	-	-	-	-	-	-	-	-	-	-	-	NS	NS	NS	1.4	-	-	-	-	-	-	-
001-C	BENZENE	-	-	-	-	-	0.26	-	-	0.39	-	-	-	-	NS	NS	NS	-	0.81	-	0.41 J	-	-	-	-
001-C	CARBON TETRACHLORIDE	-	-	-	-	-	0.3	-	-	-	-	-	-	-	NS	NS	NS	-	-	-	-	-	-	0.57 J	-
001-C	CHLORODIFLUOROMETHANE	-	-	-	-	-	-	7.5	-	-	-	NA	NA	-	NS	NS	NS	6.3	1.8	7.9	2.1	2.8 J	2.1 J	2.3	1.5
001-C	CHLOROFORM	-	-	-	8.5	7.4	6.1	18	5	13	5.2	-	-	8.9	NS	NS	NS	16.3	3.4	14	13	24	4.7	4.8	3.0
001-C	CIS-1,2-DICHLOROETHENE	257714	1100	3300	270	230	300	360	120	250	100	110	1900	170	NS	NS	NS	251	64	130	110	230	74	77	72
001-C	DICHLORODIFLUOROMETHANE	-	-	-	2.4	2.2	0.87	-	2	2.6	3	-	-	-	NS	NS	NS	2.6	2.1	2.7 J	2.4	2.9 J	2.2 J	2	2.6
001-C	ETHYLBENZENE	-	-	-	0.67	-	0.45	-	-	6.6	-	-	-	-	NS	NS	NS	4.3	0.89 J	-	0.79 J	2.4 J	-	1.1 J	-
001-C	M+P-XYLENES	-	-	-	1.3	-	1	13	-	14	-	NA	NA	-	NS	NS	NS	4.8	0.98 J	-	-	-	-	-	-
001-C	METHYL TERT-BUTYL ETHER	-	NA	NA	-	-	-	-	1	-	-	-	-	-	NS	NS	NS	-	-	-	-	-	-	-	-
001-C	METHYLENE CHLORIDE	-	-	-	-	4.5	-	7.4	33	1.1	-	-	32	-	NS	NS	NS	-	-	-	2.9 J	-	-	-	2.9 J
001-C	NAPHTHALENE	-	-	-	1.6	-	2.9	-	-	3.1	-	-	-	-	NS	NS	NS	18.3	2.2 J	-	1.1	-	-	3.7	-
001-C	O-XYLENE	-	-	-	-	-	0.41	5.6	-	4	-	NA	NA	-	NS	NS	NS	2.5	-	-	-	-	-	-	N/A
001-C	TETRACHLOROETHENE	-	-	-	3.3	3	3.6	6.2	2	4.8	1.8	-	-	8.7	NS	NS	NS	7	-	4.2 J	2.6 J	8.8 J	4.1 J	2.6 J	1.7 J
001-C	TOLUENE	-	-	-	1.8	-	0.49	-	0.6	3.6	1.2	-	-	13	NS	NS	NS	3.2	1.2 J	-	-	-	-	18	-
001-C	TOTAL XYLENES	-	-	-	-	-		-	-		3.5	-	-	5.1	NS	NS	NS	-	-	-	-	-	-	2.1 J	-
001-C	TRANS-1,2-DICHLOROETHENE	3529	-	-	65	49	67	88	30	44	19	-	-	33	NS	NS	NS	45.7	13.5	32	24	60	20	16	15
001-C	TRICHLOROETHENE	8599	450	850	270	330	230	620	190	550	200	150	700	300	NS	NS	NS	591	158	410	350	900	200	240	200
001-C	VINYL CHLORIDE	-	58	40	-	-	1.4	-	-	-	-	-	14	-	NS	NS	NS	-	-	-	-	-	-	-	-
001-C	**TOTAL VOCs**	**269,842**	**1,632**	**4,229**	**626**	**627**	**618**	**1,128**	**384**	**909**	**334**	**260**	**2,669**	**540**	**NS**	**NS**	**NS**	**962**	**249 J**	**602**	**510 J**	**1,233 J**	**307 J**	**371 J**	**299 J**
SSD-2-C	BENZENE	NS	-	8.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	CHLOROFORM	NS	-	18	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	CIS-1,2-DICHLOROETHENE	NS	22	350	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	DICHLORODIFLUOROMETHANE	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	ETHYLBENZENE	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	METHYL TERT-BUTYL ETHER	NS	NA	NA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	TETRACHLOROETHENE	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	TOLUENE	NS	14	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	TOTAL XYLENES	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	TRANS-1,2-DICHLOROETHENE	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	TRICHLOROETHENE	NS	55	770	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	VINYL CHLORIDE	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	**TOTAL VOCs**	**NS**	**91**	**1,146**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**
Note: SSD-2-C has been referenced as 002-C and SV-002-C																									
SSD-3-C	BENZENE	NS	64	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	CARBON TETRACHLORIDE	NS	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	CHLOROFORM	NS	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	CIS-1,2-DICHLOROETHENE	NS	-	8.5	NS	NS	NS	NS	NS	NS	NS	-	11	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	ETHYLBENZENE	NS	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	METHYL TERT-BUTYL ETHER	NS	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	TETRACHLOROETHENE	NS	-	14	NS	NS	NS	NS	NS	NS	NS	-	58	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	TOLUENE	NS	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	TOTAL XYLENES	NS	-	-	NS	NS	NS	NS	NS	NS	NS	8.7	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	TRANS-1,2-DICHLOROETHENE	NS	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	TRICHLOROETHENE	NS	49	60	NS	NS	NS	NS	NS	NS	NS	49	310	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	**TOTAL VOCs**	**NS**	**113**	**83**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**58**	**379**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**
Note: SSD-3-C has been referenced as 003-C and SV-003-C																									

TABLE 4-2

SUMMARY OF SUB-SLAB VOC DETECTIONS NEAR SSDS, BUILDING C
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Location	VOC (µg/m³)	Oct-07	Jul-08	Nov-08	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Feb-12	Jun-12	Jul-12	Aug-12	Feb-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16	Feb-17	Aug-17	Feb-18
SSD-4-C	1,1,1-TRICHLOROETHANE	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS	NA	NA	NS	NA	NA	NS	NA	NA	NA	NA	NA	-	1.7 J	-
SSD-4-C	1,1-DICHLOROETHENE	-	9.7	9.9	NS	NS	NS	NS	NS	NS	NS	-	-	NS	1.2	1.7	NS	-	1.1 J	0.8 J	-	0.69 J	0.37 J	0.88 J	-
SSD-4-C	1,2,3-TRIMETHYLBENZENE	-	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	0.6 J	2	NS	-	-	-	-	-	-	-	-
SSD-4-C	1,2,4-TRICHLOROBENZENE	-	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	-	-	NS	-	-	-	-	-	-	-	-
SSD-4-C	1,2,4-TRIMETHYLBENZENE	-	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	1	4.8	NS	-	-	-	-	-	-	-	-
SSD-4-C	1,3,5-TRIMETHYLBENZENE	-	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	-	1.5	NS	-	-	-	-	-	-	-	-
SSD-4-C	BENZENE		-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	0.62	-	NS	-	-	-	-	0.37 J	-	-	-
SSD-4-C	CARBON TETRACHLORIDE	-	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	0.83 J	0.83 J	NS	-	-	-	-	3.4	-	2.9	-
SSD-4-C	CHLORODIFLUOROMETHANE	-	-	-	NS	NS	NS	NS	NS	NS	NS	NA	NA	NS	-	2.9	NS	26	1.6	2.1	0.99 J	1.7	1.8	-	1.1 J
SSD-4-C	CHLOROFORM	-	270	240	NS	NS	NS	NS	NS	NS	NS	33	46	NS	37	88	NS	34.3	15	4.7	5.9	20	4.3	180	5.5
SSD-4-C	CIS-1,2-DICHLOROETHENE	10705	650	520	NS	NS	NS	NS	NS	NS	NS	200	2500	NS	82	71	NS	80.4	57.2	47	39	79	38	45	22
SSD-4-C	DICHLORODIFLUOROMETHANE	-	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	3.4	2.3	NS	-	2.1	2.3	2.3	2.6	2.1	2.1	2.7
SSD-4-C	ETHYLBENZENE	-	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	-	1.5 J	NS	-	-	-	-	-	-	-	-
SSD-4-C	M+P-XYLENES	-	-	-	NS	NS	NS	NS	NS	NS	NS	NA	NA	NS	1.3 K	3.6	NS	-	-	-	-	-	-	-	N/A
SSD-4-C	METHYL TERT-BUTYL ETHER	-	-	NA	NS	NS	NS	NS	NS	NS	NS	-	-	NS	-	-	NS	-	-	-	-	-	-	-	-
SSD-4-C	METHYLENE CHLORIDE	-	-	36	NS	NS	NS	NS	NS	NS	NS	-	-	NS	1.5	1.2	NS	145	3.5 J	-	-	5.7	2.8 J	-	2.7 J
SSD-4-C	NAPHTHALENE	-	-	-	NS	NS	NS	NS	NS	NS	NS	NA	NA	NS	12	4.4	NS	-	1.2 J	-	-	1.1	-	-	-
SSD-4-C	O-XYLENE	-	-	-	NS	NS	NS	NS	NS	NS	NS	NA	NA	NS	0.93	1.1	NS	-	-	-	-	-	-	-	N/A
SSD-4-C	TETRACHLOROETHENE	-	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	1.1	2.2 J	NS	-	-	0.79 J	1.3 J	2.4 J	0.91 J	2.5 J	8.7
SSD-4-C	TOLUENE	215	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	1.3	14	NS	9.6 J	1.1 J	-	-	-	-	4.3	-
SSD-4-C	TOTAL XYLENES	-	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	-	-	NS	-	-	-	-	-	-	-	-
SSD-4-C	TRANS-1,2-DICHLOROETHENE	139	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	8.5	20	NS	12.4 J	6.2	7.4	2.2	5.1	2	2.4	1.0 J
SSD-4-C	TRICHLOROETHENE	2741	430	300	NS	NS	NS	NS	NS	NS	NS	240	2500	NS	180	140	NS	210	121	120	99	250	110	150	69
SSD-4-C	VINYL CHLORIDE	-	16	13	NS	NS	NS	NS	NS	NS	NS	-	-	NS	0.47	0.65	NS	-	-	-	-	-	-	-	-
004-C	**TOTAL VOCs**	**13,800**	**1,376**	**1,119**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**473**	**5,046**	**NS**	**334 J**	**364 J**	**NS**	**518 J**	**210 J**	**185**	**151 J**	**372 J**	**162 J**	**392 J**	**113 J**
Note: SSD-4-C has been referenced as 004-C and SV-004-C																									
SSD-5-C	1,1,1-TRICHLOROETHENE	NS	NS	-	-	-	-	4.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	1,1-DICHLOROETHANE	NS	NS	-	-	-	-	0.12 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	1,2,4-TRICHLOROBENZENE	NS	NS	-	0.39 J	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	1,2-DICHLOROETHANE	NS	NS	-	0.27 J	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	BENZENE	NS	NS	-	0.86	0.36	0.22 J	0.39	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	CARBON TETRACHLORIDE	NS	NS	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	CARBON TETRACHLORIDE	NS	NS	-	0.4 J	0.44 J	0.29 J	0.61	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	CHLORODIFLUOROMETHANE	NS	NS	-	-	-	-	6.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	CHLOROFORM	NS	NS	15	15	8.5	5.9	13	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	DICHLORODIFLUOROMETHANE	NS	NS	-	0.25 J	3.7	0.32 J	0.73	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	ETHYLBENZENE	NS	NS	-	1	0.24 J	-	0.41	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	M+P-XYLENES	NS	NS	-	3.3	0.65	0.24 J	1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	METHYL TERT-BUTYL ETHER	NS	NS	NA	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	METHYLENE CHLORIDE	NS	NS	-	0.59 J	-	-	0.58 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	NAPHTHALENE	NS	NS	-	1.4	0.47 J	0.33 J	0.29 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	O-XYLENE	NS	NS	-	1.8	0.43	0.16 J	0.64	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	TETRACHLOROETHENE	NS	NS	64	94	66	48	110	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	TOLUENE	NS	NS	-	4.1	0.53	0.36	0.56	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	TOTAL XYLENES	NS	NS	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	TRICHLOROETHENE	NS	NS	-	1.5	0.94	0.81	2.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	**TOTAL VOCs**	**NS**	**NS**	**79**	**125 J**	**82 J**	**57**	**142 J**	**NS**	**NS -**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS -**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**
Note: SSD-5-C has been referenced as 005-C and SV-005-C																									
SSD-6-C	BENZENE	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-6-C	CARBON TETRACHLORIDE	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-6-C	CHLOROFORM	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-6-C	DICHLORODIFLUOROMETHANE	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-6-C	ETHYLBENZENE	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-6-C	METHYL TERT-BUTYL ETHER	NS	NS	NA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-6-C	TETRACHLOROETHENE	NS	NS	42	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-6-C	TOLUENE	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-6-C	TOTAL XYLENES	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-6-C	**TOTAL VOCs**	**NS**	**NS**	**42**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**
Note: SSD-6-C has been referenced as 006-C and SV-006-C																									

TABLE 4-2

SUMMARY OF SUB-SLAB VOC DETECTIONS NEAR SSDS, BUILDING C
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Location	VOC (µg/m³)	Oct-07	Jul-08	Nov-08	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Feb-12	Jun-12	Jul-12	Aug-12	Feb-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16	Feb-17	Aug-17	Feb-18
																								-	-
060-C	1,1,1-TRICHLOROETHANE	NS	NS	NS	-	-	-	14 J	4	33	17 J	NS	NS	9.5 J	19	19	-	0.95 J	7.9	0.76 J	51	3.9	23	11	23
060-C	1,1-DICHLOROETHANE	NS	NS	NS	8.5	0.29 J	-	87	21	250	120 J	NS	NS	74	43	6.9	2.3	1.8	3.1 J	0.69 J	6.8	3.2	7.6	4.5	9.3
060-C	1,1-DICHLOROETHENE	NS	NS	NS	-	-	-	3 J	2	17	12 J	NS	NS	4.6 J	22	7.4	0.86 J	-	-	-	0.86 J	-	1.2 J	-	2.1
060-C	1,2,3-TRIMETHYLBENZENE	NS	NS	NS	-	-	-	-	-	-	-	NS	NS	-	6.8	1.5 J	0.91	1 J	-	-	-	1.2 J	-	-	-
060-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	-	-	-	-	-	-	64	NS	NS	-	9.5	5.4 J	3.2	4.3	3.8 J	1.5 J	4	5.2	1.2 J	-	1.6 J
060-C	1,2-DICHLOROETHANE	NS	NS	NS	-	-	-	-	-	-	-	NS	NS	-	-	0.53 J	-	-	-	-	-	-	-	-	-
060-C	1,3,5-TRIMETHYLBENZENE	NS	NS	NS	-	-	-	-	-	-	19 J	NS	NS	-	14 J	5.8 J	2.2	1.7	2.7 J	0.94 J	3.1	4.2	1.1 J	-	0.85 J
060-C	BENZENE	NS	NS	NS	2.2 J	0.53	0.64	-	1	6.5	-	NS	NS	-	5.9	0.62	0.85	-	-	-	0.48 J	-	0.4 J	3.1	0.54 J
060-C	CARBON TETRACHLORIDE	NS	NS	NS	-	0.5 J	0.38 J	-	-	-	-	NS	NS	-	-	-	-	-	-	-	-	-	-	0.74 J	0.48 J
060-C	CHLORODIFLUOROMETHANE	NS	NS	NS	-	-	-	190	-	-	-	NS	NS	6 J	-	260	5.8 J	9.4	6.4	62	6.8	17	3.8	14	10
060-C	CHLOROFORM	NS	NS	NS	9.1	0.44	0.13 J	67	16	200	94 J	NS	NS	69	57	5	3.1	-	4.5	1.3 J	9.9	3.1	9.1	6.4	12
060-C	CIS-1,2-DICHLOROETHENE	NS	NS	NS	45	0.19 J	-	140	31	540	340 J	NS	NS	230	460 J	23	16.5	1.4	-	-	2.1	1.5 J	4	3.3	11
060-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	2.7 J	2.3	1.9	-	3	7.5	-	NS	NS	-	4	3.8	2.8	3	-	3	2.4	2.9	2	2.1	2.8
060-C	ETHYLBENZENE	NS	NS	NS	490	2.8	22	53	31	270	460 J	NS	NS	160	390 J	150 J	96.5	65	234	66	190	190	34	3.3	14
060-C	M+P-XYLENES	NS	NS	NS	2200	11	95	110	-	580	-	NS	NS	-	2800	650	561	250	1240	-	-	-	-	-	N/A
060-C	METHYLENE CHLORIDE	NS	NS	NS	-	-	-	12 J	-	10	-	NS	NS	-	5.8	3.4	10.7	70.9	6.7 J	4.4	2.5 J	11	3 J	-	4.9
060-C	NAPHTHALENE	NS	NS	NS	5.8 J	0.44 J	3.2	-	-	3	770 J	NS	NS	360 J	67	4.3 J	4.4	28.6 J	7.5 J	5	10	13	4.8	-	3.6 J
060-C	O-XYLENE	NS	NS	NS	670	5.8	40	130	-	720	-	NS	NS	-	1300	130	230	171	455	-	-	-	-	-	N/A
060-C	TETRACHLOROETHENE	NS	NS	NS	3.4 J	0.26 J	21	25 J	6	88	40 J	NS	NS	26 J	23	1.2 J	2.2	2.9	-	-	1 J	1.2 J	1.1 J	140	12
060-C	TOLUENE	NS	NS	NS	50	2.4	7	7.6 J	4	14	29 J	NS	NS	10 J	8	20	13.1	8.2	18.8	14	3.4	4.8	-	160	-
060-C	TOTAL XYLENES	NS	NS	NS	-	-	-	-	130	-	3100 J	NS	NS	2600	-	-	-	-	-	550	1000	1200 DL	310	4.1	120
060-C	TRANS-1,2-DICHLOROETHENE	NS	NS	NS	2.1 J	-	-	17	5	61	38	NS	NS	24	18	3.5	1.1 J	-	-	-	1.1 J	0.96 J	0.83 J	1.1 J	0.99 J
060-C	TRICHLOROETHENE	NS	NS	NS	180	2.6	0.46	2200	440	12000	4900	NS	NS	3700	10000	370	291	58.6	78.5	8.2	220	70	270	83	400
060-C	VINYL CHLORIDE	NS	NS	NS	-	-	-	-	-	1.9	-	NS	NS	-	-	-	-	-	-	-	-	-	-	-	-
060-C	**TOTAL VOCs**	NS	NS	NS	**3,669 J**	**30 J**	**192 J**	**3,056 J**	**694**	**14,802 -**	**10,003 J**	NS	NS	**7,273 J**	**15,253 J**	**1,671 J**	**1,249 J**	**679 J**	**2,069 J**	**718**	**1,515 J**	**1,533 J**	**677 J**	**437 J**	**629 J**
088-C	1,1,1-TRICHLOROETHANE	NS	NS	NS	-	-	-	0.54 J	0.6 J	0.89	-	NS	NS	-	-	0.67 J	-	-	-	0.93 J	-	1.3 J	-	-	-
088-C	1,1-DICHLOROETHANE	NS	NS	NS	0.2 J	0.32 J	-	-	0.14 J	0.74	-	NS	NS	-	-	-	0.66	1.6 J	-	0.22 J	-	0.23 J	-	-	-
088-C	1,1-DICHLOROETHENE	NS	NS	NS	0.2 J	0.43 J	0.13 J	-	-	1	3.3 J	NS	NS	-	1	0.52 J	-	-	-	-	-	-	-	-	-
088-C	1,2,3-TRIMETHYLBENZENE	NS	NS	NS	-	-	-	-	-	-	30	NS	NS	-	2.9	3	1.1	1.5 J	-	1.6 J	-	1.5 J	1.1 J	1.7 J	-
088-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	-	-	-	-	-	-	39	NS	NS	-	5.4	5.4	1.8	2	-	1 J	-	1.8 J	0.67 J	2.2	0.68 J
088-C	1,2-DICHLOROETHANE	NS	NS	NS	-	-	-	-	-	-	-	NS	NS	-	-	0.62	-	-	-	-	-	-	-	-	-
088-C	1,3,5-TRIMETHYLBENZENE	NS	NS	NS	-	-	-	-	-	-	11 J	NS	NS	-	1.1	1.7	-	-	-	-	-	0.69 J	-	1 J	-
088-C	BENZENE	NS	NS	NS	2.8	2	0.93	1.3	6	2.6	-	NS	NS	-	1.1	0.97	1.2	-	1.7	0.39 J	0.59 J	0.4 J	-	0.67 J	0.4 J
088-C	CARBON TETRACHLORIDE	NS	NS	NS	0.53 J	0.64 J	0.33 J	0.66 J	-	-	-	NS	NS	-	0.77 J	-	-	-	-	-	-	0.59 J	-	-	0.51 J
088-C	CHLORODIFLUOROMETHANE	NS	NS	NS	-	-	-	49	-	-	-	NS	NS	-	-	210	3.2	6.5	3.9	35	1.8	7.1	2.2	5.6	1.9
088-C	CHLOROFORM	NS	NS	NS	4.4	1.8 J	1.4	2.8	3	11	9.7 J	NS	NS	5.1 J	6.6	2.4	-	-	-	0.96 J	0.44 J	1.4 J	0.58 J	1.2 J	-
088-C	CIS-1,2-DICHLOROETHENE	NS	NS	NS	95	140	73	73	100	620	670	NS	NS	350	470	33	17.6	17.7	8.4	7.7	12	17	14	11	7.3
088-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	2.5	2.2	1.6	2.7	2	3.1	-	NS	NS	-	3.2	6.8	2.6	2.8	1.9 J	2.5	2.5	2.4	2	2.1	2.6
088-C	ETHYLBENZENE	NS	NS	NS	30	6.7	2.2	2.9	11	7.2	15 J	NS	NS	-	1.1	2.6 J	2.2	1.8	-	0.78 J	-	1.4 J	0.87 J	1.4 J	-
088-C	M+P-XYLENES	NS	NS	NS	110	30	11	14	-	23	-	NS	NS	-	5.5	11	10	8.7	1.9 J	-	-	-	-	-	N/A
088-C	METHYLENE CHLORIDE	NS	NS	NS	2.8	-	-	3.3 J	-	1.8	-	NS	NS	-	0.92	1.3	82.5	-	1.3 J	3.2 J	-	3.7	3.3 J	-	3.1 J
088-C	NAPHTHALENE	NS	NS	NS	17	3.5 J	1.7	3.2 J	0.9 J	3.7	540	NS	NS	290	61	15	22.3	61.7 J	4.4 J	5.4	1.8	4	1.2 J	1.7	1.1 J
088-C	O-XYLENE	NS	NS	NS	100	25	8.1	10	-	18	-	NS	NS	-	4.4	7.1	4.7	5.5	-	-	-	-	-	-	N/A
088-C	TETRACHLOROETHENE	NS	NS	NS	0.95 J	0.65 J	0.43 J	-	-	1.1	-	NS	NS	-	2.3	0.83 J	-	-	-	-	2.9	-	-	-	10
088-C	TOLUENE	NS	NS	NS	32	8	5.7	9.2	10	18	12 J	NS	NS	-	1.4	8.4	-	10.3	114	-	-	3.2	-	5.6	-
088-C	TOTAL XYLENES	NS	NS	NS	-	-	-	-	31	-	150	NS	NS	5 J	-	-	-	-	-	7.3	3.9	16	7.3	12	4
088-C	TRANS-1,2-DICHLOROETHENE	NS	NS	NS	1.7	3	1.2	1.4 J	2	7.5	14 J	NS	NS	6.1 J	5.4	1.9	-	0.87 J	-	-	-	1 J	0.59 J	0.89 J	-
088-C	TRICHLOROETHENE	NS	NS	NS	260	560	240	270	270	1800	3800	NS	NS	2000	2800	270	70.6	79.8	40	31	46	76	84	46	37
088-C	VINYL CHLORIDE	NS	NS	NS	-	-	-	-	-	-	-	NS	NS	-	-	-	0.49	-	-	-	-	-	-	-	-
088-C	**TOTAL VOCs**	NS	NS	NS	**660 J**	**784 J**	**348 J**	**444 J**	**437 J**	**2,520 -**	**5,294 J**	NS	NS	**2,656 J**	**3,374 J**	**583 J**	**221 -**	**201 J**	**178 J**	**98**	**72 J**	**140 J**	**118 J**	**93 J**	**69 J**

TABLE 4-2

SUMMARY OF SUB-SLAB VOC DETECTIONS NEAR SSDS, BUILDING C
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Location	VOC (µg/m³)	Oct-07	Jul-08	Nov-08	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Feb-12	Jun-12	Jul-12	Aug-12	Feb-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16	Feb-17	Aug-17	Feb-18
111-C	1,2,3-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.98 J	-	NS	NS	NS	NS	NS
111-C	1,3,5-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.3 J	0.76 J	NS	NS	NS	NS	NS
111-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5.6	30	NS	NS	NS	NS	NS
111-C	CHLOROFORM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2	1.5 J	NS	NS	NS	NS	NS
111-C	CIS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.2 J	-	NS	NS	NS	NS	NS
111-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.6	2.4	NS	NS	NS	NS	NS
111-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.7	2.3	NS	NS	NS	NS	NS
111-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3		NS	NS	NS	NS	NS
111-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	37.4	5.3	NS	NS	NS	NS	NS
111-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.9 J	1.1	NS	NS	NS	NS	NS
111-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.7		NS	NS	NS	NS	NS
111-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.9	4.9	NS	NS	NS	NS	NS
111-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	18.4	9.4	NS	NS	NS	NS	NS
111-C	**TOTAL VOCs**	NS	NS	NS	NS	NS	NS	NS	NS	NS -	NS	NS	NS	NS	NS	NS	NS	NS	**84 J**	**58**	NS	NS	NS	NS	NS
113-C	1,1,1-TRICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	-	2.6	-	NS	NS	-	1.1 J	1.3 J	-	-	-	0.56 J	1.4 J	1 J	-	-	-
113-C	1,1-DICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	-	4.1	-	NS	NS	-	2.2 J	2.2 J	-	1.4 J	-	-	1.6	-	-	-	-
113-C	1,1-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	-	3.1	-	NS	NS	-	1.7	0.69 J	-	-	-	-	0.66 J	-	-	-	-
113-C	1,2,3-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	-	-	-	NS	NS	-	2.8 J	3 J	-	12.5	27.3	-	-	0.89 J	-	-	-
113-C	1,2,4-TRICHLOROBENZENE	NS	NS	NS	NS	NS	NS	NS	-	-	-	NS	NS	-	-	-	-	-	-	-	-	-	-	-	-
113-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	-	-	-	NS	NS	-	8.5 J	-	-	-	121	-	-	1.1 J	-	2.3	-
113-C	1,3,5-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	-	-	-	NS	NS	-	2.2 J	1.9 J	-	5.2	38.9	-	-	-	-	0.85 J	-
113-C	BENZENE	NS	NS	NS	NS	NS	NS	NS	-	4.6	-	NS	NS	-	2 J	0.49 J	2.4	-	12.1	-	-	-	-	-	-
113-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	NS	NS	NS	-	0.7	-	NS	NS	-	-	-	1.1	-	-	-	-	0.51 J	-	-	-
113-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	-	-	-	NS	NS	12 J	3.2	27	10.7 J	6.7	4.4	18	2.9	5.9	2.7	7.1	2.3
113-C	CHLOROFORM	NS	NS	NS	NS	NS	NS	NS	25	67	38	NS	NS	59	50 J	3 J	1.8	-	2.5	1.6 J	1.4 J	2.5	1.3 J	2.3	1.5 J
113-C	CIS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	330	490	500	NS	NS	700	850 J	40	31.7 J	17.5	28.6	14	19	36	17	20	27
113-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	-	3.6	-	NS	NS	-	3.2	2.4 J	3.8 J	3.3	2.2	2.4	2.3	3	2.1	2	2.2
113-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	11	4.6	-	NS	NS	-	1.6 J	2.6 J	-	2.3	27.5	0.98 J	-	0.65 J	-	0.72 J	-
113-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	-	15	-	NS	NS	-	6.4 J	14 J	2.4 J	7.6	207	-	-	-	-	-	N/A
113-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	-	1.7	-	NS	NS	-	0.56	0.53 J	557 J	9.4	2.4 J	-	4.8	19	2.3 J	-	3.1 J
113-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	17 L	1600 J	64 J	NS	NS	30 J	51 J	47	3.7 J	233 J	27	1.4	-	3.1	-	-	-
113-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	-	7.8	-	NS	NS	-	2.5 J	4.5 J	0.83 J	4.7	80.2	-	-	-	-	-	N/A
113-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	9 J	20	14 J	NS	NS	21 J	15 J	0.69 J	-	1.8	1.4	-	-	-	-	-	-
113-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	16	8.4	15 J	NS	NS	16 J	3 J	7 J	6.1 J	7.3	51.1	-	-	2.3	-	9.9	-
113-C	TOTAL XYLENES	NS	NS	NS	NS	NS	NS	NS	79	-	-	NS	NS	-	-	-	-	-	-	5.3	2 J	4	2.7 J	5	2.4 J
113-C	TRANS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	-	8.3	-	NS	NS	-	5.2 J	0.6 J	-	-	-	-	-	-	-	-	-
113-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	5000	7300	5700	NS	NS	8900	16000 J	290	243 J	222	424	140	150	320	180	190	150
113-C	VINYL CHLORIDE	NS	NS	NS	NS	NS	NS	NS	-	0.65	-	NS	NS	-	0.86	-	-	-	-	-	-	-	-	-	-
113-C	**TOTAL VOCs**	NS	NS	NS	NS	NS	NS	NS	**5,487**	**9,542**	**6,331**	NS	NS	**9,738 J**	**17,013 J**	**449 J**	**865 J**	**535 J**	**1,058 J**	**184**	**186 J**	**400 J**	**208 J**	**240 J**	**189 J**
126-C	1,1-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	360	NS	NS	1300	680	720	199	80.4	104	330	500	1100	620	NA	540
126-C	1,2,3-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	5.5 J	5.8 J	-	1.4	-	-	-	-	-	3.1	-
126-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	29 J	NS	NS	-	-	6.2 J	4.3	1.7	2.1	-	-	-	-	4	1.4 J
126-C	1,3,5-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	-	1.1 J	-	-	-	-	-	-	1.7 J	0.69 J
126-C	BENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	86	NS	NS	270	250 J	300	88.4	29.3	40.6	120	150	290	110	300	210
126-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	22 J	1.2 J	-	-	-	-	-	-	-	-	3.6	1.2 J
126-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	20 J	NS	NS	-	-	-	-	5.3	-	6.5 J	-	-	-	-	1 J
126-C	CHLOROFORM	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	2.3 J	0.84 J	-	-	-	-	-	-	1 J	0.62 J
126-C	CIS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	350	NS	NS	900	560	740	205	74.2	83.1	250	290	530	190	370	300
126-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.96 J	0.55 J	1.5 J	3.1	1.3 J	-	-	-	-	1.8 J	2.9
126-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	72	NS	NS	220	8.7 J	13 J	3	1.1 J	0.81 J	6.4 J	-	-	-	4.8	1.5 J
126-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	18 J	15 J	13.4	3.9	3.6	-	-	-	-	-	N/A
126-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	4.2 J	3.1 J	9.2	-	1.4 J	-	-	-	-	-	-
126-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	250	NS	NS	380	200 J	100 J	70.6	152 J	25.7	11	-	28	-	6.7	1.9 J
126-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	11 J	14 J	5.7	1.8	1.5 J	-	-	-	-	-	N/A
126-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	-	-	1.2	-	-	-	-	-	0.94 J	11
126-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	54	NS	NS	110	19 J	45 J	14.7	20	19.6	23	-	-	-	120	13
126-C	TOTAL XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	350	NS	NS	1200	-	-	-	-	-	11 J	-	-	-	12	5.1
126-C	TRANS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	41 J	NS	NS	95	32 J	92	-	8.5	-	31	20 J	43	16	25	30
126-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	280	NS	NS	5800 J	920 J	2400	177	26.4	71.3	170	340	890	310	850	540
126-C	VINYL CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	82000	NS	NS	110000	37000	28000	11900	4030	1310 J	16000	3100	5000 DL	2600 J	3300	2700
126-C	**TOTAL VOCs**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**83,892 J**	NS	NS	**120,297 J**	**39,711 J**	**32,457 J**	**12,694 J**	**4,440 J**	**1,665 J**	**16,959**	**4,400 J**	**7,881 J**	**3,846 J**	**5,005 J**	**4,360 J**

TABLE 4-2

SUMMARY OF SUB-SLAB VOC DETECTIONS NEAR SSDS, BUILDING C
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Location	VOC (µg/m³)	Oct-07	Jul-08	Nov-08	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Feb-12	Jun-12	Jul-12	Aug-12	Feb-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16	Feb-17	Aug-17	Feb-18
127-C	1,1,1-TRICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	268	NS	NS	NS	NS	NS	NS	NS
127-C	1,1-DICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	25.1	NS	NS	NS	NS	NS	NS	NS
127-C	1,2,3-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	2200	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS
127-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	4000	NS	NS	NS	NS	NS	NS	0.91 J	NS	NS	NS	NS	NS	NS	NS
127-C	1,3,5-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	1000 J	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS
127-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	27.8	NS	NS	NS	NS	NS	NS	NS
127-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	4.1	NS	NS	NS	NS	NS	NS	NS
127-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	1.4 J	NS	NS	NS	NS	NS	NS	NS
127-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	5.2	NS	NS	NS	NS	NS	NS	NS
127-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	2.1 J	NS	NS	NS	NS	NS	NS	NS
127-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	4300 J	NS	NS	NS	NS	NS	NS	5.9 J	NS	NS	NS	NS	NS	NS	NS
127-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	2.6	NS	NS	NS	NS	NS	NS	NS
127-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	2.6	NS	NS	NS	NS	NS	NS	NS
127-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	5.9	NS	NS	NS	NS	NS	NS	NS
127-C	TOTAL XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	2900 J	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS
127-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	240000	NS	NS	NS	NS	NS	NS	410	NS	NS	NS	NS	NS	NS	NS
127-C	VINYL CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	1.1	NS	NS	NS	NS	NS	NS	NS
127-C	**TOTAL VOCs**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**254,400 J**	NS	NS	NS	NS	NS	NS -	**763 J**	NS	NS	NS	NS	NS	NS	NS
133-C	1,1,1-TRICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	5.2	-	-	NS	NS	NS	NS	NS	NS	-
133-C	1,1-DICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	4.6 J	-	-	NS	NS	NS	NS	NS	NS	-
133-C	1,1-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	1.5 J	-	-	NS	NS	NS	NS	NS	NS	-
133-C	1,2,3-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.95	4.1 J	-	-	NS	NS	NS	NS	NS	NS	-
133-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	2.1	28 J	-	-	NS	NS	NS	NS	NS	NS	-
133-C	1,2-DICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.7	0.66	0.92	-	NS	NS	NS	NS	NS	NS	-
133-C	1,3,5-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.6 J	3.6	-	-	NS	NS	NS	NS	NS	NS	-
133-C	BENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	1.3	0.71	0.87	-	NS	NS	NS	NS	NS	NS	-
133-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	2.5	0.9 J	-	-	NS	NS	NS	NS	NS	NS	0.69 J
133-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	1500	NS	NS	290 J	-	440 J	4.4	12.7	NS	NS	NS	NS	NS	NS	5
133-C	CHLOROFORM	NS	NS	NS	NS	NS	NS	NS	NS	NS	83 J	NS	NS	-	43	8.3	6.7	-	NS	NS	NS	NS	NS	NS	8.8
133-C	CIS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	33	2.5	8.7	-	NS	NS	NS	NS	NS	NS	0.66 J
133-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	130 J	NS	NS	-	-	2.8 J	3.2	4.3	NS	NS	NS	NS	NS	NS	2.9
133-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.93	2.5	-	1.2 J	NS	NS	NS	NS	NS	NS	-
133-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.93 J	9.6	2 J	4	NS	NS	NS	NS	NS	NS	N/A
133-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	2700 J	NS	NS	13000 J	-	0.74	20.2 J	-	NS	NS	NS	NS	NS	NS	3.4 J
133-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	2200	NS	NS	-	110	42 J	4.7	3.3 J	NS	NS	NS	NS	NS	NS	-
133-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.57 J	2.3	0.95 J	1.5	NS	NS	NS	NS	NS	NS	N/A
133-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	2200	NS	NS	740	1500	77	169	3.3 J	NS	NS	NS	NS	NS	NS	53
133-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	180 J	NS	NS	2400 J	1.3	9.2	5.5 J	5.1	NS	NS	NS	NS	NS	NS	-
133-C	TOTAL XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	170 J	NS	NS	-	-	-	-	-	NS	NS	NS	NS	NS	NS	2.1 J
133-C	TRANS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	25 L	3.1	3.6 J+	-	NS	NS	NS	NS	NS	NS	1.5 J
133-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	50000	NS	NS	20000	60000	5600	10700	199 J	NS	NS	NS	NS	NS	NS	2000
133-C	VINYL CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	0.57	-	-	NS	NS	NS	NS	NS	NS	-
133-C	**TOTAL VOCs**	NS	NS	NS	NS	NS	NS	NS	NS	NS	**59,163 J**	NS	NS	**36,430 J**	**61,723 J**	**6,250 J**	**10,931 J**	**234 J**	NS	NS	NS	NS	NS	NS	**2,078 J**

TABLE 4-2

SUMMARY OF SUB-SLAB VOC DETECTIONS NEAR SSDS, BUILDING C
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Location	VOC (µg/m³)	Oct-07	Jul-08	Nov-08	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Feb-12	Jun-12	Jul-12	Aug-12	Feb-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16	Feb-17	Aug-17	Feb-18
135-C	1,1,1-TRICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	0.78 J	-	NS	NS	NS	NS	NS	NS	NS	NS
135-C	1,2,3-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	-	3.2	NS	NS	NS	NS	NS	NS	NS	NS
135-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	81	NS	NS	-	4.1	2.1	-	NS	NS	NS	NS	NS	NS	NS	NS
135-C	1,2-DICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	0.49 J	-	NS	NS	NS	NS	NS	NS	NS	NS
135-C	1,3,5-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	27 J	NS	NS	-	1.2 J	1	-	NS	NS	NS	NS	NS	NS	NS	NS
135-C	BENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.75	1.1	0.33 J	NS	NS	NS	NS	NS	NS	NS	NS
135-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	52	1.7	-	NS	NS	NS	NS	NS	NS	NS	NS
135-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-		89	2.1	NS	NS	NS	NS	NS	NS	NS	NS
135-C	CHLOROFORM	NS	NS	NS	NS	NS	NS	NS	NS	NS	14 J	NS	NS	-	21	0.84	-	NS	NS	NS	NS	NS	NS	NS	NS
135-C	CIS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	220	NS	NS	260	130	-	-	NS	NS	NS	NS	NS	NS	NS	NS
135-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	2.7	3.4	2.1	NS	NS	NS	NS	NS	NS	NS	NS
135-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	40 J	NS	NS	-	-	3	4.2	NS	NS	NS	NS	NS	NS	NS	NS
135-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	1.9	9.2	18.1	NS	NS	NS	NS	NS	NS	NS	NS
135-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.49 J	-	2.1 J	NS	NS	NS	NS	NS	NS	NS	NS
135-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	510	NS	NS	580	280	6.7	3.8 J	NS	NS	NS	NS	NS	NS	NS	NS
135-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.66	4.8	4.3	NS	NS	NS	NS	NS	NS	NS	NS
135-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	22 J	NS	NS	-	11	-	-	NS	NS	NS	NS	NS	NS	NS	NS
135-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	49	NS	NS	-	0.61	7.7	-	NS	NS	NS	NS	NS	NS	NS	NS
135-C	TOTAL XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	210	NS	NS	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS
135-C	TRANS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	15 J	NS	NS	-	3.9	-	-	NS	NS	NS	NS	NS	NS	NS	NS
135-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	11000	NS	NS	16000	4500	29	5.6	NS	NS	NS	NS	NS	NS	NS	NS
135-C	**TOTAL VOCs**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**12,188 J**	**NS**	**NS**	**16,840**	**5,010 J**	**161 J**	**46 J**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**
141-C	1,1-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	0.44 J	1.7	-	-	0.69 J	NS	NS	NS	NS	3.1
141-C	1,2,3-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.1 J	-	-	-	-	-	NS	NS	NS	NS	-
141-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	7.5 J	1.9	-	1.5 J	-	-	NS	NS	NS	NS	-
141-C	1,3,5-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.9 J	-	-	-	-	-	NS	NS	NS	NS	-
141-C	BENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.58 J	-	0.88	-	0.96	-	NS	NS	NS	NS	1.1 J
141-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	0.64 J	-	-	-	-	NS	NS	NS	NS	0.66 J
141-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.7 J	3.4	2.6	19.9	2.7	90	NS	NS	NS	NS	6.2
141-C	CIS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.73	2.2		-	0.72 J	NS	NS	NS	NS	12
141-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.7 J	2.3	2.3	2.7	2	2.3	NS	NS	NS	NS	2.7
141-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	48	1.9	2.2	2.6	-	1.2 J	NS	NS	NS	NS	-
141-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	250	10	11.6	10.3	1 J	-	NS	NS	NS	NS	N/A
141-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.3 J	1	39.1	1.4 J	1.8 J	7.5	NS	NS	NS	NS	3.4 J
141-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	170	1.7	4.1 J	1.5 J	-	-	NS	NS	NS	NS	-
141-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	62	2.4 J	3.7	4.6	-	-	NS	NS	NS	NS	N/A
141-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	1.5	-	-	NS	NS	NS	NS	22
141-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.7 J	15	3.7	5.2	2.4	33	NS	NS	NS	NS	-
141-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	7.4 J	5.7	25.2	3.2	2	3.9	NS	NS	NS	NS	310
141-C	**TOTAL VOCs**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**560 J**	**47 J**	**99 J**	**54 J**	**13 J**	**139**	**NS**	**NS**	**NS**	**NS**	**361**
149-C	1,1,1-TRICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	-	0.86 J	-	-	-
149-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.3 J	1.2 J	-	4		-	1.9	1.9 J
149-C	BENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.95 J	1.9	0.45 J	1.1 J	0.6 J	0.87 J	0.88 J	1.1 J
149-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	-	0.54 J	-	-	0.66 J
149-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	8	11.7	11	3.5	3.7	0.88 J	4.8	2.3
149-C	CHLOROFORM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	-	0.84 J	-	0.85 J	11
149-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.4	4.6	2.3	2.4	2.7	2	2.1	2.9
149-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2	-	0.7 J	1.5 J	1.8	-	2.1	1.7 J
149-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	7.2	2.9 J	-	-	-	-	-	N/A
149-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.1 J	105	6.1	7.2	12	3.2 J	-	4.1
149-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.2 J	-	-	-	-	-	-	-
149-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.6	1.1 J	-	-	-	-	-	N/A
149-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.6	-	-	-	0.57 J	-	-	-
149-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	21.1	23.5	5.9	13	7.4	5.3	97	14
149-C	TOTAL XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	-	12	2.6 J	15	8.7
149-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.4	1.4	3.5	-	5.3	4.4	3.5	5.7
149-C	**TOTAL VOCs**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**59 J**	**153 J**	**30**	**33 J**	**48 J**	**19 J**	**128 J**	**54 J**

TABLE 4-2

SUMMARY OF SUB-SLAB VOC DETECTIONS NEAR SSDS, BUILDING C
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Location	VOC (µg/m³)	Oct-07	Jul-08	Nov-08	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Feb-12	Jun-12	Jul-12	Aug-12	Feb-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16	Feb-17	Aug-17	Feb-18
152-C	1,1,1-TRICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.7	13 J	1.1 J	0.84 J	19 J	10	-
152-C	1,1-DICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	-	3.3 J	1.9	-
152-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.98 J	-	0.97 J	0.79 J	-	1.4 J	1.3 J
152-C	BENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3	-	1.5	1.3	-	0.84 J	0.95 J
152-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	6.6	72	18	38	19	24	17
152-C	CHLOROFORM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	0.40 J	5.5 J	5.5	1.3 J
152-C	CIS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	-	41	37	7
152-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.6	-	2.5	2.8	-	1.8 J	2.6
152-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.89 J	-	0.75 J	1.8	-	1.1 J	1.1 J
152-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.1	-	-	-	-	-	N/A
152-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.89 J	-	4.1	12	-	-	7.1
152-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.4 J	-	-	5	-	-	-
152-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.1 J	-	-	-	-	-	N/A
152-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.2	-	-	-	-	0.96 J	7.1
152-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	15.1	-	4.3	5.5	-	5.9	4.5
152-C	TOTAL XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	7.9	-	6.6	6.3
152-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.8	2100	-	0.48 J	1300	1400	210
152-C	**TOTAL VOCs**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**		**NS**	**46 J**	**2,185**	**33 J**	**77 J**	**1,388 J**	**1,497 J**	**266 J**
153-C	1,1,1-TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	-	0.57 J	-	-	N/A
153-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	0.98 J	0.81 J	1 J	0.83 J	0.64 J	1.9	0.74 J
153-C	BENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	2.3	1.4	0.86 J	0.38 J	-	0.8	-
153-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	-	0.49 J	-	-	0.57 J
153-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	10.7	7.6	21	3	6.7	3.8	7.45	3.3
153-C	CHLOROFORM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	-	0.57 J	-	0.4175	-
153-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3	2.3	2.5	2.7	2.6	1.9 J	1.95	3
153-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.8	-	1 J	1 J	1.6 J	-	1.2	-
153-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	6.9	2.3 J	-	-	-	-	-	N/A
153-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.97 J	1.7 J	4.1	-	15	2.7 J	-	3.1 J
153-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.5 J	1.1 J	-	-	-	-	-	1.6 J
153-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.6	0.92 J	-	-	-	-	-	N/A
153-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5	-	0.62 J	-	2.9	-	0.455	0.62 J
153-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	8.6	56.9 J	3.5	-	4.9	2.6	11	-
153-C	TOTAL XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	-	11	1.9 J	5.95	3.6
153-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	18.8 J	13	10	12	5.7	2.65	6.3
153-C	**TOTAL VOCs**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS -**	**42 J**	**95 J**	**48**	**19 J**	**60 J**	**19 J**	**34 J**	**23 J**
155-C	1,1,1-TRICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	-	-	0.96 J	-	-	2.3
155-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.91 J	NS	-	-	-	-	1.9 J	0.85 J
155-C	BENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	-	-	-	0.48 J	0.79 J	0.37 J
155-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	-	-	1.4 J	-	0.89 J	0.92 J
155-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	9.4	NS	22	4.4	5.7	2.9	14	5.3
155-C	CHLOROFORM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	-	-	1.7 J	-	1.2 J	0.7 J
155-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.9	NS	2.3	2.2	2.5	2	1.9 J	2.6
155-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.4 J	NS	0.65 J	1.3 J	1.2 J	-	1.5 J	0.94 J
155-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4.5	NS	-	-	-	-	-	N/A
155-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.4 J	NS	-	-	3.3 J	3.9 J	-	3 J
155-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.3 J	NS	-	-	2	-	-	-
155-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.1	NS	-	-	-	-	-	N/A
155-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	-	-	5.7	-	1.1 J	2.4 J
155-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	11.2	NS	-	-	2.4	2.9	18	-
155-C	TOTAL XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	-	-	8.6	1.2 J	8.4	5.9
155-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.5 J	NS	0.66 J	0.96 J	1.4	-	-	1.1
155-C	**TOTAL VOCs**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**39 J**	**NS**	**26**	**9 J**	**37 J**	**13 J**	**50 J**	**26 J**

TABLE 4-2

SUMMARY OF SUB-SLAB VOC DETECTIONS NEAR SSDS, BUILDING C
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Location	VOC (µg/m^3)	Oct-07	Jul-08	Nov-08	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Feb-12	Jun-12	Jul-12	Aug-12	Feb-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16	Feb-17	Aug-17	Feb-18
156-C	BENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.4	NS	NS	NS	NS	NS	NS
156-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5.3	NS	NS	NS	NS	NS	NS
156-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.1	NS	NS	NS	NS	NS	NS
156-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.6 J	NS	NS	NS	NS	NS	NS
156-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	22.5	NS	NS	NS	NS	NS	NS
156-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.3 J	NS	NS	NS	NS	NS	NS
156-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	9.9	NS	NS	NS	NS	NS	NS
156-C	**TOTAL VOCs**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**46 J**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**

Notes:
Data presented in this table is from sub-slab vapor samples.
µg/m^3 = micrograms per cubic meter
- = not detected (below reporting limit)
DL = diluted analysis
NA = compound not reported
NS = not sampled
NA = compound not reported
K = value is biased high
L = value is biased low
VOC = volatile organic compound
SSDS = sub-slab depressurization system

TABLE 4-3

SUB-SLAB MONITORING POINTS SAMPLED NEAR SSDS, BUILDING A
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Date	*Sub-Slab Vapor Monitoring Point*									
	SSD-11-A	*SSD-12-A*	*SSD-13-A*	*015-A*	*SSD-16-A*	*017-A*	*018-A*	*079-A*	*136-A*	*168-A*
March-16	✓	✓	✓	✓	✓	✓	✓	N/A	N/A	N/A
December-16	-	-	✓	✓	-	-	✓	N/A	N/A	N/A
April-16	-	-	✓	✓	-	-	✓	N/A	N/A	N/A
October-16	-	-	✓	✓	-	-	✓	N/A	N/A	N/A
November-16	-	-	✓	✓	-	-	✓	N/A	N/A	N/A
July-16	✓	✓	✓	✓	✓	-	-	N/A	N/A	N/A
November-16	✓	✓	✓	✓	✓	✓	✓	N/A	N/A	N/A
July-16	-	-	-	✓	-	✓	✓	N/A	N/A	N/A
October-16	-	-	-	✓	-	✓	✓	N/A	N/A	N/A
August-16	-	-	-	✓	✓	-	✓	N/A	N/A	N/A
February-16	-	-	-	✓	-	✓	✓	N/A	N/A	N/A
February-16	-	-	-	✓	-	-	✓	N/A	N/A	N/A
August-16	-	-	-	✓	-	-	✓	N/A	N/A	N/A
October-16	-	-	-	✓	-	-	✓	N/A	N/A	N/A
February-16	-	-	-	✓	-	-	✓	N/A	N/A	N/A
August-16	-	-	-	✓	-	-	✓	N/A	N/A	N/A
February-16	-	-	-	✓	-	-	✓	N/A	N/A	N/A
March-16	-	-	-	✓	-	-	✓	N/A	N/A	N/A
August-16	-	-	-	✓	-	-	✓	N/A	N/A	N/A
February-16	-	-	-	✓	-	-	✓	N/A	N/A	N/A
September-16	-	-	-	-	-	-	-	N/A	N/A	N/A
February-16	-	-	-	✓	-	-	-	N/A	N/A	N/A
August-16	-	-	-	✓	-	-	-	N/A	N/A	N/A
February-16	-	-	-	✓	-	-	-	✓	✓	N/A
August-16	-	-	-	✓	-	-	-	✓	✓	N/A
February-17	-	-	-	✓	-	-	-	✓	✓	✓
August-17	-	-	-	✓	-	-	-	✓	✓	✓
February-18	-	-	-	✓	-	-	-	✓	✓	✓

Notes:
- —point(s) not sampled.
N/A—point may have been sampled but the results were not applicable to the SSD-system.
Points with an “SSD” designation were installed and are monitored for the SSD-system.
Points without the SSD designation are used for the vapor-intrusion monitoring program.

TABLE 4-4

TRICHLOROETHENE CONCENTRATIONS BEFORE AND DURING SSDS OPERATION, BUILDING A LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Vapor Monitoring Point	Before SSD-system operation*		During SSD-system operation (most recent concentration)	
	Date	Sub-Slab Vapor Concentration ($\mu g/m^3$)	Date	Sub-Slab Vapor Concentration ($\mu g/m^3$)
015-A	April 2007	326,000	February 2018	6.3
018-A	August 2010	64,000	February 2014	174
079-A	February 2016	3,500	February 2018	96
136-A	February 2016	35,300	February 2018	380

Notes:

*SSD-system startup for the main floor of Building A (015-A) was in March 2008, for the Building A basement (018-A) in October 2010, and April 2016 for the Building A eastern area (079-A and 136-A).

$\mu g/m^3$—microgram(s) per cubic meter air

SSD—sub-slab depressurization

TABLE 4-5

SUB-SLAB MONITORING POINTS SAMPLED NEAR SSDS, BUILDING C
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Date	Sub-Slab Vapor Monitoring Point																			
	001-C	SSD-2-C	SSD-3-C	SSD-4-C	SSD-5-C	SSD-6-C	060-C	088-C	111-C	113-C	126-C	127-C	133-C	135-C	141-C	149-C	152-C	153-C	155-C	156-C
Mar-16	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec-16	✓	-	-	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Apr-16	✓	-	-	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oct-16	✓	-	-	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jul-16	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nov-16	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jul-16	✓	-	-	-	✓	-	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-
Oct-16	✓	-	-	-	✓	-	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-
Feb-16	✓	-	-	-	✓	-	✓	✓	-	-	-	-	-	-	-	-	-	-	-	
Aug-16	✓	-	-	-	✓	-	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-
Feb-16	✓	-	-	-	-	-	✓	✓	-	✓	-	-	-	-	-	-	-	-	-	-
Aug-16	✓	-	-	-	-	-	✓	✓	-	✓	-	-	-	-	-	-	-	-	-	-
Feb-16	✓	-	-	-	-	-	✓	✓	-	✓	✓	✓	✓	✓	-	-	-	-	-	-
Jun-16	✓	-	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jul-16	✓	-	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aug-16	✓	-	-	-	-	-	✓	✓	-	✓	✓	-	✓	✓	-	-	-	-	-	-
Feb-16	-	-	-	✓	-	-	✓	✓	-	✓	✓	-	✓	✓	✓	-	-	-	-	-
Aug-16	-	-	-	✓	-	-	✓	✓	-	✓	✓	-	✓	✓	✓	-	-	-	-	-
Feb-16	-	-	-	-	-	-	✓	✓	-	✓	✓	-	✓	✓	✓	-	-	-	-	-
Sep-16	✓	-	-	✓	-	-	✓	✓	-	✓	✓	✓	✓	-	✓	✓	-	✓	✓	-
Feb-16	✓	-	-	✓	-	-	✓	✓	✓	✓	✓	-	-	-	✓	✓	✓	✓	-	✓
Aug-16	✓	-	-	✓	-	-	✓	✓	✓	✓	✓	-	-	-	✓	✓	✓	✓	✓	-
Feb-16	✓	-	-	✓	-	-	✓	✓	-	✓	✓	-	-	-	-	✓	✓	✓	✓	-
Aug-16	✓	-	-	✓	-	-	✓	✓	-	✓	✓	-	-	-	-	✓	✓	✓	✓	-
Feb-17	✓	-	-	✓	-	-	✓	✓	-	✓	✓	-	-	-	-	✓	✓	✓	✓	-
Aug-17	✓	-	-	✓	-	-	✓	✓	-	✓	✓	-	-	-	-	✓	✓	✓	✓	-
Feb-18	✓	-	-	✓	-	-	✓	✓	-	✓	✓	-	✓	-	✓	✓	✓	✓	✓	-

Notes:
- —point(s) not sampled.
N/A—point may have been sampled but the results were not applicable to the SSD-system
Points with an "SSD" designation were installed and are monitored for the SSD-system
Points without the SSD designation are used for the vapor-intrusion monitoring program

TABLE 4-6

TRICHLOROETHENE CONCENTRATIONS BEFORE AND DURING SSDS OPERATION, BUILDING C LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Vapor Monitoring Point	Before SSD-system operation*		During SSD-system operation (most recent concentration)	
	Date	Sub-Slab Vapor Concentration ($\mu g/m^3$)	Date	Sub-Slab Vapor Concentration ($\mu g/m^3$)
SOUTHERN BASEMENT AREA*				
001-C	March 2006	19,200	February 2018	200
SSD-4-C	December 2006	28,300	February 2018	69
MID-BASEMENT AREA*				
060‑C	August 2011	12,000	February 2018	400
088‑C	February 2012	3,800	February 2018	37
113‑C	February 2013	16,000 J	February 2018	150
126‑C	August 2012	5,800 J	February 2018	540
127-C	Not Sampled		September 2014	410
133‑C	February 2013	60,000	February 2018	2,000
141-C	Not Sampled		February 2018	310
149-C	Not Sampled		February 2018	5.7
152-C	Not Sampled		February 2018	210
153-C	Not Sampled		February 2018	6.3
155-C	Not Sampled		February 2018	1.1

Notes:

*SSD-system startup in the south end of the Building C basement was in March 2008.

**SSD-system startup in the mid-basement area of Building C was in May 2013.

$\mu g/m^3$—microgram(s) per cubic meter air

J—estimated value

SSD—sub-slab depressurization

Table 4-7A

Summary of VOC Detections in SSDS Influent, Building A
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

Building A - Influent Volatiles (µg/m^3)																							
Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	cis-1,2-dichloroethene	trans-1,2-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	1,1,1,-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	m-xylene & p-xylene	o-xylene	Total VOCs
Mar-08	--	--	N/A	--	--	**2,100**	--	**7,900**	**8,300**	--	**300**	--	--	--	**330**	**30,000**	**44,000**	--	--	--	--	--	**1,100**	**280**	94,310
Apr-08	--	--	N/A	--	--	**660**	--	**4,500**	**3,800**	--	--	--	--	--	--	**16,000**	**34,000**	--	--	--	--	--	--	--	58,960
Apr-08	--	--	N/A	--	--	**460**	--	**3,300**	**2,300**	--	--	--	--	--	--	**13,000**	**30,000**	--	--	--	--	--	--	--	49,060
Apr-08	--	--	N/A	--	--	**280**	--	**1,500**	**1,100**	--	--	--	--	--	**120**	**9,100**	**14,000**	--	--	--	--	--	--	--	26,100
Apr-08	--	--	N/A	--	--	**480**	--	**2,200**	**2,000**	--	--	--	--	--	**120**	**11,000**	**18,000**	--	--	--	--	--	**110**	--	33,910
Apr-08	--	--	N/A	--	--	**260**	--	**1,200**	**930**	--	--	--	--	--	**86**	**6,500**	**8,600**	--	--	--	--	--	--	--	17,576
May-08	--	--	N/A	--	--	**320**	--	**950**	**1,000**	--	--	--	--	--	--	**6,000**	**5,500**	--	--	--	--	--	--	--	13,770
Jun-08	**180**	--	N/A	--	--	**180**	--	**760**	**720**	--	--	--	--	--	--	**4,800**	**7,100**	--	--	--	--	--	--	--	13,740
Jul-08	--	--	N/A	--	--	**110**	--	**430**	**350**	--	--	--	--	--	--	**3,200**	**3,700**	--	--	--	--	--	--	--	7,790
Aug-08	--	--	N/A	--	--	**150**	--	**400**	**470**	--	--	--	--	--	**28**	**2,900**	**3,400**	--	--	--	--	--	--	--	7,348
Sep-08	--	--	N/A	--	--	**130**	--	**430**	**380**	--	--	**17**	--	**70**	**52**	**1,900**	**2,700**	**32**	--	--	--	--	--	--	5,711
Nov-08	--	--	N/A	--	--	**300**	--	**1,100**	**1,300**	--	--	--	--	--	**72**	**6,500**	**7,200**	--	--	--	--	--	--	--	16,472
Dec-08	--	--	N/A	--	--	**120**	--	**380**	**420**	--	--	--	--	--	--	**2,300**	**4,100**	--	--	--	--	--	**53**	--	7,373
Jan-09	--	--	N/A	--	--	**110**	--	**380**	**380**	--	--	--	--	--	--	**2,100**	**2,100**	--	--	--	--	--	--	--	5,070
Feb-09	--	--	N/A	--	--	**78**	--	**260**	**270**	--	--	--	--	--	**24**	**1,600**	**1,600**	--	--	--	--	--	--	--	3,832
Mar-09	--	--	N/A	--	--	**470**	--	**150**	**620**	--	--	--	--	--	--	**3,800**	**3,700**	--	--	--	--	--	--	--	8,740
Apr-09	--	--	N/A	--	--	**100**	--	**220**	**360**	--	--	--	--	--	--	**1,900**	**2,400**	--	--	--	--	--	--	--	4,980
May-09	--	--	N/A	--	--	**62**	--	**140**	**200**	--	--	--	--	--	**32**	**1,700**	**1,500**	--	--	--	--	--	--	--	3,634
Jun-09	--	--	N/A	--	--	**77**	--	**200**	**280**	--	--	--	--	--	**19**	**1,700**	**1,800**	--	--	--	--	--	--	--	4,076
Jul-09	--	--	N/A	--	--	**68**	--	**180**	**250**	--	--	**27**	--	--	**13**	**1,400**	**1,700**	**14**	--	--	--	--	--	--	3,652
Aug-09	--	--	N/A	--	--	**79**	--	**200**	**280**	--	--	--	--	--	**42**	**1,900**	**1,900**	--	--	--	--	--	--	--	4,401
Sep-09	--	--	N/A	--	--	**40**	--	**110**	**150**	--	--	--	--	--	**13**	**870**	**1,000**	--	--	--	--	--	--	--	2,183
Oct-09	--	--	N/A	--	--	**64**	--	**210**	**230**	--	--	--	--	--	**20**	**1,500**	**1,400**	--	--	--	--	--	**9.7**	--	3,434
Nov-09	--	--	N/A	--	--	**43**	--	**180**	**180**	--	--	--	--	--	**14**	**1,200**	**1,100**	--	--	--	--	--	--	--	2,717
Dec-09	--	--	N/A	--	--	**48**	--	**180**	**190**	--	--	--	--	--	**39**	**1,100**	**1,300**	--	--	--	--	--	--	--	2,857
Jan-10	--	--	N/A	--	--	**67**	--	**180**	**240**	--	--	--	--	--	**16**	**1,500**	**1,600**	--	--	--	--	--	--	--	3,603
Feb-10	--	--	N/A	--	--	**35**	--	**120**	**140**	--	--	--	--	--	**24**	**760**	**930**	--	--	--	--	--	--	--	2,009
Mar-10	--	--	N/A	--	--	**62**	--	**190**	**250**	--	--	--	--	--	**21**	**1,500**	**1,900**	--	--	--	--	--	--	--	3,923
Apr-10	--	--	N/A	--	--	**41**	--	**160**	**160**	--	--	--	--	--	--	**1,100**	**1,000**	--	--	--	--	--	--	--	2,461
May-10	--	--	N/A	--	--	**42**	--	**170**	**170**	--	**19**	--	--	--	**95**	**960**	**1,100**	--	--	**18**	--	--	**75**	**23**	2,672
Jun-10	--	--	N/A	--	--	**24**	--	**110**	**96**	--	**12**	--	--	--	**15**	**630**	**600**	**12**	--	**130**	**28**	--	**50**	**26**	1,733
Jul-10	--	--	N/A	--	--	**52**	--	**180**	**220**	--	--	--	--	--	--	**1,500**	**1,500**	--	--	**24**	--	--	--	--	3,476
Aug-10	--	--	N/A	--	--	**45**	--	**170**	**200**	--	--	--	--	--	**12**	**1,200**	**1,100**	**16**	--	--	--	--	--	--	2,743
Sep-10	--	--	N/A	--	--	**35**	--	**150**	**140**	--	--	--	--	--	**29**	**860**	**1,100**	**20**	--	--	--	--	--	--	2,334
10/12/2010[a]	--	--	N/A	--	--	**40**	--	**140**	**170**	--	--	--	--	--	**940**	**1,100**	**1,400**	**20**	--	--	--	--	**89**	**33**	3,932
Nov-10	--	--	N/A	--	--	**34**	--	**100**	**150**	--	--	--	--	--	**71**	**920**	**1,200**	**53**	--	--	--	--	**14**	--	2,542
Dec-10	--	--	N/A	--	--	**28**	--	**110**	**120**	--	**42**	--	--	--	**54**	**790**	**970**	**13**	--	--	--	--	**170**	**31**	2,328
Jan-11	--	--	N/A	--	--	**34**	--	**130**	**150**	--	**14**	--	--	--	**13**	**860**	**1,200**	--	--	--	--	--	**47**	**10**	2,458
Feb-11	--	--	N/A	--	--	**32**	--	**160**	**130**	--	--	--	--	--	**23**	**910**	**900**	--	--	--	--	--	**29**	--	2,184
Mar-11	--	--	N/A	--	--	**98**	--	**350**	**390**	--	**19**	--	--	--	**23**	**2,800**	**2,500**	--	--	--	--	--	**61**	--	6,241
Apr-11	--	--	N/A	--	--	**36**	--	**160**	**150**	--	--	**30**	--	--	**10**	**900**	**1,100**	--	--	--	--	--	--	--	2,386
May-11	--	--	N/A	--	--	**39**	--	**150**	**150**	--	--	--	--	--	--	**880**	**890**	--	--	--	--	--	--	--	2,109
Jun-11	--	--	N/A	--	--	**59**	--	**190**	**240**	--	--	--	--	--	**35**	**1,600**	**1,600**	**20**	--	--	--	--	--	--	3,744

Table 4-7A

Summary of VOC Detections in SSDS Influent, Building A
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

Building A - Influent Volatiles (µg/m^3)																								
Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	cis-1,2-dichloroethene	trans-1,2-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	1,1,1,-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	m-xylene & p-xylene	o-xylene	Total VOCs
Jul-11	--	--	N/A	--	--	**51**	--	**170**	**200**	--	--	**40**	--	--	**81**	**1,300**	**1,300**	--	--	--	--	--	**26**	--	3,168
Aug-11	--	--	N/A	--	--	**44**	--	**160**	**200**	--	--	--	--	--	**29**	**1,200**	**1,400**	--	--	--	--	--	--	--	3,033
Sep-11	**12**	--	N/A	--	--	**29**	--	**130**	**130**	--	--	--	--	--	**11**	**750**	**990**	**12**	--	--	--	--	--	--	2,064
Oct-11	**8.3**	--	N/A	--	--	**28**	--	**93**	**120**	--	--	--	--	--	**51**	**640**	**780**	--	--	--	--	--	--	--	1,720
Nov-11	**10**	--	N/A	--	--	**34**	--	**110**	**140**	--	--	--	--	--	**9.2**	**730**	**930**	--	--	--	--	--	--	--	1,963
Dec-11	**7.3**	--	N/A	--	--	**29**	--	**110**	**130**	--	--	--	--	--	**46**	**600**	**800**	--	--	--	--	--	--	--	1,722
Jan-12	--	--	N/A	--	--	**30**	--	**140**	**130**	--	--	--	--	--	**16**	**590**	**840**	--	--	--	--	--	--	--	1,746
Feb-12	--	--	N/A	--	--	**31**	--	**110**	**140**	--	--	--	--	--	--	**760**	**980**	--	--	--	--	--	--	--	2,021
Mar-12	--	--	N/A	--	--	**36**	--	**130**	**160**	--	--	--	--	--	**14**	**880**	**1,100**	--	--	--	--	--	--	--	2,320
Apr-12	--	--	N/A	--	--	**34**	--	**140**	**170**	--	--	--	--	--	--	**880**	**1,300**	--	--	--	--	--	**20**	--	2,544
May-12	--	--	N/A	--	--	**56**	--	**200**	**290**	--	--	--	--	--	**32**	**1,700**	**2,300**	--	--	--	--	--	--	--	4,578
Jun-12	--	--	N/A	--	--	**66**	--	**200**	**320**	--	--	--	--	--	--	**1,700**	**2,100**	--	--	--	--	--	--	--	4,386
Jul-12	--	--	N/A	--	--	**50**	--	**180**	**250**	--	--	--	--	--	**16**	**1,300**	**1,300**	--	--	--	--	--	--	--	3,096
Aug-12	--	--	N/A	--	--	**30**	--	**130**	**150**	--	--	--	--	--	**22**	**730**	**1,000**	**17**	--	--	--	--	--	--	2,079
Sep-12	--	--	N/A	--	--	**23**	--	**120**	**110**	--	--	--	--	--	**170**	**560**	**720**	--	--	--	--	--	**11**	--	1,714
Oct-12	--	--	N/A	--	--	**36**	--	**180**	**190**	--	--	--	--	--	--	**1,000**	**1,400**	--	--	--	--	--	--	--	2,806
Nov-12	--	--	N/A	--	--	**23**	--	**140**	**120**	--	--	--	--	--	--	**600**	**910**	--	--	--	--	--	--	--	1,793
Dec-12	--	--	N/A	--	--	**21**	--	**120**	**130**	--	--	--	--	--	**8**	**590**	**1,000**	--	--	--	--	--	--	--	1,869
Jan-13	--	--	N/A	--	--	**24**	--	**190**	**130**	--	--	--	--	--	--	**630**	**950**	--	--	--	--	--	--	--	1,924
Feb-13	--	--	N/A	--	--	**26**	--	**130**	**130**	--	--	--	--	--	--	**560**	**860**	--	--	--	--	--	--	--	1,706
Mar-13	--	--	N/A	--	--	**30**	--	**94**	**140**	--	--	--	--	--	**10**	**670**	**1,100**	--	--	--	--	--	--	--	2,044
Apr-13	--	--	N/A	--	--	**290**	--	**1,500**	**2,200**	--	--	--	--	--	--	**2,900**	**5,900**	--	--	--	--	--	--	--	12,790
May-13	--	--	N/A	--	**11**	**29**	--	**130**	**140**	--	--	--	--	--	**14**	**730**	**1,200**	**17**	--	--	--	--	--	--	2,271
Jun-13	--	--	N/A	--	--	**22**	--	**110**	**100**	--	--	--	--	--	--	**530**	**790**	--	--	--	--	--	--	--	1,552
Jul-13	--	--	N/A	--	--	**33**	--	**100**	**160**	--	--	--	--	--	--	**820**	**1,100**	--	--	--	--	--	--	--	2,213
Aug-13	--	--	N/A	--	--	**34**	--	**120**	**180**	--	--	--	--	--	**15**	**780**	**1,300**	--	--	--	--	--	--	--	2,429
Sep-13	--	--	N/A	--	--	**16**	--	**90**	**100**	--	--	--	--	--	--	**410**	**630**	--	--	--	--	--	--	--	1,246
Oct-13	--	--	N/A	--	--	**39**	--	**190**	**220**	--	--	--	--	--	**15**	**810**	**1,400**	**16**	--	--	--	--	--	--	2,690
Nov-13	--	--	N/A	--	--	**39**	--	**170**	**200**	--	--	--	--	--	**11**	**930**	**1,500**	**41**	--	--	--	--	--	--	2,891
Dec-13	**0.94**	--	--	**21.2**	--	**30.7**	--	**132**	**165**	**2.5**	--	**4.4**	--	--	**12.2**	**883**	**1,530**	--	--	--	--	--	--	--	2,782
Jan-14	--	--	**6.5**	**11.6**	**2.2**	**29.3**	--	**141**	**173**	--	**1.8**	**3.3**	**4.9**	--	**9,820**	**570**	**795**	--	--	**1.9**	--	--	**4.3**	**1.7**	11,567
Feb-14	--	--	**2.4**	**7.4**	--	**21.2**	--	**92.7**	**126**	--	--	**2.1**	--	--	**15.3**	**429**	**843**	--	--	--	--	--	--	--	1,539
Mar-14	--	--	**2.4**	--	**2.0**	**29.3**	**36.4**	**130**	**176**	--	--	--	--	**3.6**	**9.1**	**1,310**	**2,100**	--	--	--	--	--	**3.0**	--	3,802
Apr-14	**81.7**	--	--	--	--	**31.8**	--	**131**	**194**	--	**120**	--	--	--	**75.7**	**646**	**1,490**	--	--	--	--	--	**387**	**109**	3,266
May-14	**4.8**	--	**8.8**	**3.9**	**4.1**	**6.7**	--	**32.6**	**44.7**	--	**6.5**	**202**	**2.3 J**	**1.2**	**29.5**	**142**	**292**	--	**2.8**	**11.5**	**3.0**	--	**24.3**	**9.3**	832
Jun-14	**1,040**	--	**30.3**	**136**	--	**565**	--	**2,840**	**3,710**	**51.7**	--	**138**	**34.9 J**	--	**199**	**1,000 J**	**1,490**	--	--	**17.6 J**	--	--	**25.6 J**	--	11,278
Jul-14	**45.1**	--	--	**8.4 J**	--	**36.5**	**81.2**	**145**	**189**	--	--	--	--	--	**20.8 J**	**871**	**1,250**	--	--	--	--	--	--	--	2,647
Aug-14	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sep-14	**51.1**	**1.1**	**1.0 J**	**54**	**4.7**	**104**	--	**323**	**416**	**8.1**	--	**0.67 J**	--	**2.3**	**8.8**	**1,290**	**3,250**	--	--	**2.3**	**0.83 J**	**1.5**	**1.5 J**	**1.1 J**	5,522
Oct-14	**46.6**	--	--	--	--	**16.1**	--	**69.8**	**89.0**	--	--	**17.3 J**	--	--	--	**480**	**819**	NS	--	--	--	--	--	--	1,538
Nov-14	**38.2**	--	--	--	--	**16.8**	--	**71**	**92.4**	--	--	**23.9 J**	--	**59.4**	**14.3 J**	**459**	**803**	NS	--	--	--	--	--	--	1,578
Dec-14	**34.3**	--	--	**11.8**	--	**18.8**	--	**68.6**	**77.6**	--	--	**19.4 J**	--	--	**41.5 J**	**428**	**741**	NS	--	--	--	--	--	--	1,441
Jan-15	**64.8**	--	--	**6.8**	**4.4**	**15.7**	--	**81**	**85.6**	**1.3**	--	**2 J**	--	**2.0**	**1.7**	**404**	**695**	NS	--	--	--	--	**0.90 J**	--	1,365

Table 4-7A

Summary of VOC Detections in SSDS Influent, Building A
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

Building A - Influent Volatiles (µg/m^3)

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	cis-1,2-dichloroethene	trans-1,2-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	1,1,1,-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	m-xylene & p-xylene	o-xylene	Total VOCs
Feb-15	**1.5**	--	**3.7**	--	--	--	--	**6.5**	**8.5**	--	**1.9 J**	**46.9**	**4.1 J**	--	**13.5**	**17.0**	**22.4**	NS	--	--	--	--	**6.5**	**2.7**	135
Mar-15	**0.54**	**2.9**	**1.4**	**2.4**	**1.6**	**28.3**	--	**141**	**183**	--	**1.1 J**	**1.4 J**	**1.2 J**	--	**1.7**	**1,370**	**2,300**	NS	--	--	--	--	**4.1**	**1.3**	4,042
Apr-15	**0.73**	**0.78 J**	**2.1**	**7.1**	**2.2**	**22.7**	--	**112**	**147**	--	--	**3.5 J**	**2.7 J**	**0.87 J**	**2.7**	**617**	**1,090**	NS	--	**1.3 J**	--	--	**2.7 J**	**0.99 J**	2,016
May-15	--	--	--	--	--	**23 J**	--	**121**	**161**	--	--	--	--	--	--	**573**	**1,170**	NS	--	--	--	--	--	--	2,048
Jun-15	--	--	--	--	--	**19.4 J**	**33.4**	**105**	**143**	--	**133**	--	--	--	--	**536**	**1,110**	NS	--	--	--	--	**582**	**142**	2,804
Jul-15	--	--	--	--	--	**14**	--	**78**	**91**	--	--	--	--	--	--	**390**	**470**	NS	--	--	--	--	N/A	N/A	1,043
Aug-15	**12**	--	**1.3 J**	**2.4 J**	**2.8 J**	**16**	--	**63**	**82**	**1.4**	--	--	--	--	**12**	**400**	**590**	NS	--	--	--	--	N/A	N/A	1,183
Sep-15	**72**	--	**2.7 J**	**1.8 J**	--	**24**	--	**86**	**130**	**1.9 J**	--	--	--	--	--	**510**	**1,000**	NS	--	--	--	--	N/A	N/A	1,828
Oct-15	**78**	--	**1.5 J**	--	--	**24**	--	**91**	**130**	**2.0 J**	--	--	--	--	--	**560**	**900**	NS	--	--	--	--	N/A	N/A	1,787
Nov-15	**43**	--	**3.2 J**	**1.9 J**	**3.6**	**25**	--	**110**	**140**	**2.5 J**	--	--	--	--	--	**570**	**900**	NS	--	--	--	--	N/A	N/A	1,799
Dec-15	**34**	--	**3.2 J**	**1.4 J**	**3.2**	**23**	--	**83**	**120**	**1.8 J**	--	--	--	--	--	**490**	**830**	NS	--	--	--	--	N/A	N/A	1,590
Jan-16	**9.2**	--	**1.1 J**	**2.0**	**2.1**	**16**	--	**80**	**84**	**1.5 J**	--	**3 J**	--	--	**2.7**	**320**	**480**	NS	--	--	--	--	N/A	N/A	1,002
Feb-16	**2.6**	--	**1.0 J**	**1 J**	**2.4**	**20**	**0.60**	**82**	**100**	**1.6**	--	--	--	--	--	**550 EB**	**840**	NS	--	--	--	--	N/A	N/A	1,601
Mar-16	**36**	**0.49 J**	**7.9**	**1.5 J**	**2.4**	**25**	**0.70**	**98**	**130**	**2.0**	--	**2.8 J**	--	**0.64 J**	**5.3**	**680 E**	**1,300**	NS	--	--	--	**0.42**	N/A	N/A	2,293
Apr-16	**28**	--	--	--	--	**42**	--	**180**	**230**	--	--	--	--	--	--	**940**	**1,700**	NS	--	--	--	--	N/A	N/A	3,120
Apr-16	--	--	--	--	--	**18**	--	**68**	**90**	--	--	--	--	--	--	**490**	**950**	NS	--	--	--	--	N/A	N/A	1,616
May-16	--	--	**19.0**	**2 J**	**3.5 J**	**18**	--	**120**	**110**	--	--	**9**	--	--	**6.5**	**600 B**	**910**	NS	--	--	--	--	N/A	N/A	1,798
Jun-16	**31**	--	**63.0**	--	--	**26**	--	**140**	**150**	**3.6 J**	--	--	--	--	--	**670**	**1,100**	NS	--	--	--	--	N/A	N/A	2,184
Jul-16	**65**	--	--	--	--	**17**	--	**75**	**100**	--	--	**36**	--	--	**15**	**510**	**940**	NS	--	--	--	--	N/A	N/A	1,758
Aug-16	**20**	--	--	--	--	**17**	--	**68**	**92**	--	--	--	--	--	--	**460**	**860**	NS	--	**8.2 J**	--	--	N/A	N/A	1,525
Sep-16	**38**	--	**1.5 J**	**1.2 J**	**2.3 J**	**14**	--	**66**	**88**	**1.8 J**	--	**15**	--	--	--	**400**	**760**	NS	--	--	--	--	N/A	N/A	1,388
Oct-16	--	--	**1.7**	--	--	**14**	--	**68**	**81**	--	--		--	--	--	**410**	**630**	NS	--	--	--	--	N/A	N/A	1,205
Nov-16	--	--	--	--	--	**68**	--	**260**	**350**	--	--	**49 J**	--	--	--	**2,000**	**2,800**	NS	--	--	--	--	N/A	N/A	5,527
Dec-16	**11**	--	**2 J**	--	**3.1 J**	**17**	--	**120**	**95**	**2.5 J**	--	--	--	--	--	**600**	**710**	NS	--	--	--	--	N/A	N/A	1,561
Jan-17	**17**	--	--	**8.4 J**	--	**81**	--	**370**	**440**	**9.3 J**	--	**130**	--	--	--	**2,000**	**3,600**	NS	--	--	--	--	N/A	N/A	6,656
Feb-17	**33**	--	--	**6**	**3.7 J**	**19**	--	**100**	**110**	**2.1 J**	--	--	--	--	--	**660**	**1,100**	NS	--	--	--	--	**5.9 J***	N/A	2,040
Mar-17	**21**	--	--	**2 J**	**3.3 J**	**21**	--	**110**	**100**	**2.2 J**	--	--	--	**8.5 J**	--	**590**	**1,000**	NS	--	--	--	--	**6.9 J***	N/A	1,865
Apr-17	**15**	--	**--**	**1.3 J**	--	**10**	--	**71**	**65**	--	--	--	--	--	--	**370**	**680**	NS	--	--	--	--	N/A	N/A	1,212
May-17	**31**	--	**1.6 J**	--	--	**16**	--	**74**	**80**	--	--	--	--	--	--	**430**	**760**	NS	--	--	--	--	N/A	N/A	1,393
Jun-17	**10**	--	**--**	**3.4 J**	--	**13**	--	**66**	**69**	--	--	**13 JB**	--	--	--	**480**	**710**	NS	--	--	--	--	N/A	N/A	1,364
Jul-17	**25**	--	**7.2 J**	--	--	**20**	--	**120**	**94**	**4.6 J**	--	--	--	--	--	**450**	**1,400**	NS	--	--	--	--	N/A	N/A	2,121
Aug-17	**5 J**	--	**4.9 J**	--	--	**18**	--	**95**	**90**	--	--	**28 JB**	--	--	--	**480**	**940**	NS	--	--	--	--	N/A	N/A	1,661
Sep-17	**35**	--	--	**2.0**	--	**13**	--	**72**	**79**	--	--	**16 J**	--	--	--	**420**	**1,000**	NS	--	--	--	--	N/A	N/A	1,637
Oct-17	**22**	ND	**2.5 J**	--	--	**10**	--	**66**	**52**	--	--	**14 J**	--	--	--	**290**	**750**	NS	--	--	--	--	N/A	N/A	1,207
Nov-17	**4 J**	ND	ND	--	--	**17**	--	**88**	**83**	--	--	--	--	--	--	**550**	**1,100**	NS	--	--	--	--	N/A	N/A	1,842
Dec-17	**16**	ND	**1.5 J**	--	**3.4 J**	**15**	--	**92**	**75**	--	--	--	--	--	--	**500 B**	**990**	NS	--	--	--	--	N/A	N/A	1,693
Jan-18	**16**	**0.50 J**	**1.7**	**1.2 J**	2.00	**9**	--	**79**	**58**	**1.1 J**	**0.59 J**	--	--	**0.55 J**	**2.5 J**	**390**	**800**	NS	--	--	--	--	N/A	N/A	1,363
Feb-18	**16**	ND	**32**	--	**3.6 J**	**13**	--	**120**	**70**	--	--	**14 J**	--	--	--	**420**	**1,000**	NS	--	--	--	--	N/A	N/A	1,689
Mar-18	**22**	ND	**2.1 J**	--	3.60 **J**	**14**	--	**110**	**80**	--	--	--	--	--	--	**470**	**1,200**	NS	--	--	--	--	N/A	N/A	1,902

Table 4-7A

Summary of VOC Detections in SSDS Influent, Building A
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

Building A - Influent Volatiles (µg/m^3)																								
Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	cis-1,2-dichloroethene	trans-1,2-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	1,1,1,-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	m-xylene & p-xylene	o-xylene	**Total VOCs**
Previous 6-Month Average Apr-Sep 2017	**20.2 J**	--	**4.6 J**	**2.2 J**	--	**15**	--	**83**	**79.5**	**4.6 J**	--	**19 JB**	--	--	--	**438**	**915**	--	--	--	--	--	--	--	**1,565**
Current 6-Month Average Oct 2017-Mar 2018	**16 J**	**0.50 J**	**8.0 J**	**1.2 J**	**3.2**	**13.1**	--	**93**	**70**	**1.1 J**	**0.59 J**	**14 JB**	--	**0.55 J**	**2.5 J**	**437**	**973**	--	--	--	--	--	--	--	**1,616**

SSD - sub-slab depressurization SV - soil vapor D - duplicate J - estimated value NA - not applicable (compound not analyzed/reported) NS - not sampled -- - non-detect (below detection limit); not included in total VOC calculation
* value reported is for total xylenes
B - compound was found in the blank and sample

Table 4-7B

Summary of VOC Detections in SSDS Influent, Building C
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

Building C - Influent Volatiles (µg/m^3)																								
Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	chloromethane	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	cis-1,2-dichloroethene	trans-1,2-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	1,1,1,-trichloroethane	trichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	m-xylene & p-xylene	o-xylene	Total VOCs
Mar-08	--	--	N/A	--	--	--	--	--	--	**25,000**	--	**320**	--	--	--	--	--	**550**	--	N/A	**990**	**740**	**2,100**	**1,100**	**370**	**31,170**
Apr-08	--	--	N/A	--	--	--	--	--	--	**2,700**	--	--	--	--	--	--	--	**84**	--	N/A	**63**	**56**	**320**	**65**	--	**3,288**
Apr-08	--	--	N/A	--	--	--	--	--	**32**	**6,600**	--	**44**	--	--	--	--	--	**440**	--	N/A	**180**	**170**	**690**	**180**	**68**	**8,404**
Apr-08	--	--	N/A	--	--	--	--	--	--	**4,100**	--	--	--	--	--	--	--	**600**	--	N/A	**73**	**61**	**370**	**48**	--	**5,252**
Apr-08	--	--	N/A	--	--	--	--	--	--	**2,900**	--	--	--	--	--	--	--	**670**	--	N/A	**69**	**55**	**190**	**34**	--	**3,918**
Apr-08	--	--	N/A	--	--	--	--	--	--	**2,600**	--	--	--	--	**28**	--	--	**750**	--	N/A	**85**	**70**	**130**	**32**	**17**	**3,712**
May-08	--	--	N/A	--	--	--	--	--	--	**1,600**	--	--	--	--	**17**	--	--	**650**	--	N/A	**65**	**51**	**41**	**15**	--	**2,439**
Jun-08	**7.4**	--	N/A	--	--	--	--	--	--	**300**	--	--	--	--	--	**110**	--	--	--	N/A	**23**	**19**	**8**	**9**	--	**476**
Jul-08	--	--	N/A	--	--	--	--	--	--	**1,300**	--	--	--	--	**14**	--	--	**440**	--	N/A	**45**	**36**	**35**	--	--	**1,870**
Aug-08	--	--	N/A	**16**	--	--	--	--	--	**410**	--	--	--	--	--	--	--	**58**	--	N/A	--	--	**13**	--	--	**497**
Sep-08	--	--	N/A	--	--	--	--	--	--	**730**	--	--	**18**	--	--	--	**13**	**130**	--	N/A	--	--	**20**	--	--	**911**
Nov-08	--	--	N/A	--	--	--	--	--	--	**390**	--	--	--	--	--	--	--	**110**	--	N/A	--	--	**17**	--	--	**517**
Dec-08	--	--	N/A	--	--	--	--	--	--	**420**	--	--	--	--	--	--	--	**150**	--	N/A	--	--	**22**	--	--	**592**
Jan-09	--	--	N/A	--	--	--	--	--	--	**810**	--	--	--	--	**170**	--	--	**580**	--	N/A	**37**	**29**	**38**	**17**	**14**	**1,695**
Feb-09	--	--	N/A	--	--	--	--	--	--	**630**	--	--	--	--	**140**	--	--	**270**	--	N/A	**39**	**34**	**25**	**16**	**12**	**1,166**
Mar-09	--	--	N/A	--	--	--	--	--	--	**460**	--	--	--	--	**160**	--	--	**350**	--	N/A	**62**	**51**	**16**	**14**	**13**	**1,126**
Apr-09	--	--	N/A	--	--	--	--	--	--	**200**	--	--	--	--	**46**	--	--	**86**	--	N/A	**19**	**16**	**6.1**	--	--	**373.1**
May-09	--	--	N/A	--	--	--	--	--	--	**210**	--	--	--	--	**24**	--	--	**79**	--	N/A	**14**	**14**	**5.7**	--	--	**346.7**
Jun-09	--	--	N/A	--	--	--	--	--	--	**190**	--	--	--	--	--	--	--	**58**	--	N/A	--	--	--	--	--	**248**
Jul-09	--	--	N/A	--	--	--	--	--	--	**150**	--	--	--	--	--	--	--	**55**	--	N/A	--	--	--	--	--	**205**
Aug-09	--	--	N/A	--	--	--	--	--	--	**720**	--	--	**17**	--	--	--	--	**160**	--	N/A	--	--	**13**	--	--	**910**
Sep-09	--	--	N/A	--	--	--	--	--	--	**39**	--	--	**110**	--	--	--	--	**16**	--	N/A	--	--	--	--	--	**165**
Oct-09	--	--	N/A	--	--	--	--	--	--	**200**	--	--	--	--	--	--	--	**64**	--	N/A	--	--	--	--	--	**264**
Nov-09	--	--	N/A	--	--	--	--	--	--	**190**	--	--	--	--	--	--	--	**75**	--	N/A	--	--	--	--	--	**265**
Dec-09	--	--	N/A	--	--	--	--	--	--	**96**	--	--	--	--	--	**26**	--	**45**	--	N/A	--	--	--	**8.7**	--	**176**
Jan-10	--	--	N/A	--	--	--	--	--	--	**140**	--	--	--	--	--	--	--	**57**	--	N/A	--	--	--	--	--	**197**
Feb-10	--	--	N/A	--	--	--	--	--	--	**100**	--	--	--	--	--	--	--	**37**	--	N/A	--	--	--	--	--	**137**
Mar-10	--	--	N/A	--	--	--	--	--	--	**87**	--	--	--	--	--	--	--	**33**	--	N/A	--	--	--	--	--	**120**
Apr-10	--	--	N/A	--	--	--	--	--	--	**110**	--	--	--	--	--	--	--	**39**	--	N/A	--	--	--	--	--	**149**
May-10	**58**	--	N/A	--	--	--	--	--	--	**65**	--	**38**	**--**	--	--	**220**	--	**22**	--	N/A	**25**	--	--	**140**	**39**	**607**
Jun-10	--	--	N/A	--	--	--	--	--	--	**72**	--	--	--	--	--	--	--	**25**	--	N/A	**83**	**17**	--	**30**	**17**	**244**
Jul-10	--	--	N/A	--	--	--	--	--	--	**68**	--	--	--	--	--	--	--	**34**	--	N/A	--	--	--	--	--	**102**
Aug-10	--	--	N/A	--	--	--	--	--	--	**100**	--	--	--	--	--	--	--	**31**	--	N/A	--	--	--	--	--	**131**
Sep-10	--	--	N/A	--	--	--	--	--	--	**70**	--	--	--	--	--	--	--	**33**	--	N/A	--	--	--	--	--	**103**
Oct-10	**10**	--	N/A	--	--	--	--	--	--	**160**	--	**11**	--	--	--	**130**	**110.0**	**70**	--	N/A	--	--	--	**23**	--	**513.5**
Nov-10	--	--	N/A	--	--	--	--	--	--	**65**	--	--	--	--	--	--	--	**35**	--	N/A	--	--	--	--	--	**100**
Dec-10	--	--	N/A	--	--	--	--	--	--	**120**	--	--	--	--	**19**	--	--	**89**	--	N/A	--	--	--	--	--	**228**
Jan-11	--	--	N/A	--	--	--	--	--	--	**160**	--	--	--	--	**94**	**7.7**	--	**250**	--	N/A	--	--	**9**	--	--	**520**
Feb-11	--	--	N/A	--	--	--	--	--	--	**180**	--	--	--	--	**120**	--	--	**270**	--	N/A	--	--	--	--	--	**570**
Mar-11	--	--	N/A	--	--	--	--	--	--	**170**	--	--	--	--	**110**	**34**	--	**180**	--	N/A	--	--	--	--	--	**494**
Apr-11	--	--	N/A	--	--	--	--	--	--	**130**	--	--	--	--	**37**	**10**	--	**90**	--	N/A	--	--	--	--	--	**267**
May-11	**8**	--	N/A	--	--	--	--	--	--	**100**	--	**16**	--	--	**19**	--	--	**82**	--	N/A	--	--	--	**9**	--	**234**
Jun-11	**26**	--	N/A	--	--	--	--	--	--	**97**	--	--	--	--	--	**14**	--	**63**	--	N/A	--	--	--	--	--	**200**
Jul-11	**20**	--	N/A	--	--	--	--	--	--	**74**	--	--	**37**	--	--	**62**	--	**26**	--	N/A	--	--	--	**21**	--	**240**
Aug-11	**14**	--	N/A	--	--	--	--	--	--	**76**	--	--	--	--	--	--	--	**34**	--	N/A	--	--	--	--	--	**124**
Sep-11	**10**	--	N/A	--	--	--	--	--	--	**22**	--	--	--	--	--	--	--	--	--	N/A	--	--	--	--	--	**32**
Oct-11	--	--	N/A	--	--	--	--	--	--	**38**	--	--	**27**	--	--	**20**	--	--	--	N/A	--	--	--	**11**	--	**96**
Nov-11	**12**	--	N/A	--	--	--	--	--	--	**45**	--	--	--	--	--	--	--	**16**	--	N/A	--	--	--	--	--	**73**
Dec-11	--	--	N/A	--	--	--	--	--	--	**62**	--	--	--	--	--	--	--	**21**	--	N/A	--	--	--	--	--	**83**
Jan-12	--	--	N/A	--	--	--	--	--	--	**55**	--	--	--	--	--	--	--	**21**	--	N/A	--	--	--	--	--	**76**
Feb-12	--	--	N/A	--	--	--	--	--	--	**76**	--	--	--	--	--	--	--	**43**	--	N/A	--	--	--	--	--	**119**
Mar-12	--	--	N/A	--	--	--	--	--	--	**93**	--	--	--	--	**16**	--	--	**58**	--	N/A	--	--	--	--	--	**167**
Apr-12	--	--	N/A	--	--	--	--	--	--	**64**	--	--	--	--	**16**	--	--	**56**	--	N/A	--	--	--	--	--	**136**

Table 4-7B

Summary of VOC Detections in SSDS Influent, Building C
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

Building C - Influent Volatiles (µg/m^3)																								
Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	chloromethane	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	cis-1,2-dichloroethene	trans-1,2-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	1,1,1,-trichloroethane	trichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	m-xylene & p-xylene	o-xylene	Total VOCs
May-12	--	--	N/A	--	--	--	--	--	--	**72**	--	--	--	--	**20**	**9.8**	--	**65**	--	N/A	--	--	--	--	--	**167**
Jun-12	--	--	N/A	--	--	--	--	--	--	**71**	--	--	--	--	**17**	--	--	**50**	--	N/A	--	--	--	--	--	**138**
Aug-12	--	--	N/A	--	--	--	--	--	--	**39**	--	--	--	--	--	--	--	**19**	--	N/A	--	--	--	--	--	**58**
Sep-12	--	--	N/A	--	--	--	--	--	--	**41**	--	--	--	--	--	**23**	--	**22**	--	N/A	--	--	--	--	--	**86**
Oct-12	--	--	N/A	--	--	--	--	--	--	**95**	--	--	--	--	--	--	--	**45**	--	N/A	--	--	--	--	--	**140**
Nov-12	--	--	N/A	--	--	--	--	--	--	**18**	--	--	--	--	--	--	--	**270**	--	N/A	--	--	--	**31**	**16**	**335**
Dec-12	--	--	N/A	--	--	--	--	--	--	**70**	--	--	--	--	**22**	--	--	**91**	--	N/A	--	--	**5.3**	--	--	**188**
Jan-13	--	--	N/A	--	--	--	--	--	--	**66**	--	--	--	--	**42**	--	--	**110**	--	N/A	--	--	--	--	--	**218**
Feb-13	--	--	N/A	--	--	--	--	--	--	**49**	--	--	--	--	**29**	--	--	**91**	--	N/A	--	--	--	--	--	**169**
Mar-13	--	--	N/A	--	--	--	--	--	--	**60**	--	--	--	--	**45**	--	--	**100**	--	N/A	--	--	--	--	--	**205**
Apr-13	--	--	N/A	--	--	--	--	--	--	**44**	--	--	--	--	**21**	--	--	**52**	--	N/A	--	--	--	--	--	**117**
May-13	--	--	N/A	--	--	--	--	--	--	**120**	--	--	--	--	--	--	--	**2,900**	--	N/A	--	--	--	**80**	--	**3,100**
Jun-13	--	--	N/A	--	--	--	--	--	--	**10**	--	--	--	--	--	--	--	**460**	**50**	N/A	--	--	--	**31**	**15**	**566**
Jul-13	**12**	--	N/A	--	**12**	--	--	--	--	--	--	**9.4**	--	--	--	--	--	**290**	**16**	N/A	**11**	--	--	**43**	**23**	**416**
Aug-13	--	--	N/A	--	--	--	--	--	--	--	--	--	**20**	--	--	--	--	**210**	**18**	N/A	--	--	--	**20**	**11**	**279**
Sep-13	--	--	N/A	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**150**	--	N/A	--	--	--	--	--	**150**
Oct-13	**14**	--	N/A	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**200**	**16**	N/A	--	--	--	**20**	**10**	**260**
Nov-13	**13**	--	N/A	--	--	--	--	--	--	**18**	--	**9.8**	--	--	--	--	--	**280**	--	N/A	--	--	--	**45**	**24**	**390**
Dec-13	**6.3**	--	--	--	N/A	**6.6**	--	--	--	**13**	--	**7.3**	**4.1**	**33.9**	**5.4**	**4.0**	--	**228**	N/A	--	**4.8**	**2.4**	--	**30.4**	**16.1**	**362**
Jan-14	**13.7**	--	**4.7**	--	N/A	--	--	--	--	**5.7**	--	**10.3**	**3.4**	**22.6**	**5.6**	**49.6**	--	**298**	N/A	**5.5**	**17.8**	--	--	**49.1**	**19.3**	**505**
Feb-14	**1.8**	--	**4.5**	--	N/A	**2.2**	--	--	--	**2.3**	--	**2.1**	--	**5.3**	**2.2**	**2.7**	--	**157**	N/A	--	**2.8**	--	--	**8.9**	**4.7**	**197**
Mar-14	**9.1**	--	**3.0**	**3.2**	N/A	**2.2**	--	--	--	**4.9**	--	**5.9**	--	**11.5**	**3.3**	**6.0**	--	**261**	N/A	**1.6**	**6.0**	**3.0**	--	**25.3**	**12.3**	**358**
Apr-14	**10.0**	--	**7.1**	--	N/A	--	--	--	--	**7.0**	--	**67**	--	**12.1**	**5.1**	**50.7**	**6.6**	**266**	N/A	--	**6.9**	--	--	**218**	**67.4**	**724**
May-14	**11.8**	**1.2**	**5.8**	**1.5 J**	N/A	**2.9**	--	--	--	**7.6**	--	**4.7**	**1.2 J**	**12.7**	**3.6**	**30.6**	--	**236**	N/A	**2.1**	**6.8**	**3.5**	--	**20.9**	**11.3**	**364**
Jun-14	**12.8**	--	--	**2.7**	N/A	**2.1**	--	--	--	**2.7**	--	**4.1**	**24.5**	**13.1**	**23.1**	**11.6**	--	**154**	N/A	**6.1**	**18**	**6.1**	--	**27.0**	**12.1**	**320**
Jul-14	**14.4**	**0.77 J**	**11.2**	**5.6**	N/A	**1.4 J**	--	--	**0.88 J**	**4.1**	**0.81 J**	**6.3**	**147**	**16.9**	**7.1**	**5.7**	--	**183**	N/A	**2.8**	**7.3**	**4.7**	--	**19.4**	**9.8**	**449**
Aug-14	**10.8**	**1.7**	N/A	**66.2**	**1.5**	--	**7.6**	--	**4.8**	**4.7**	--	**7.5**	--	**20.6**	**7.0**	**5.0**	**33.6**	**289**	N/A	N/A	**7.8**	**3.9**	--	**30.2**	**16.0**	**518**
Sep-14	**8.0**	**1.1**	**5.6**	--	N/A	**2.9**	**7.0**	--	--	**5.3**	--	**2.9**	**0.76 J**	**31.2**	**2.1**	**3.4**	**37.9**	**124**	N/A	**2.1**	**5.4**	**2.1**	--	**17.2**	**10.8**	**270**
Oct-14	**6.6**	**1.2**	**10.1**	**0.98**	N/A	**2.0**	**6.1**	**2.7**	**3.0**	**6.6**	**0.71 J**	**3.2**	**2.1 J**	**13.3**	**2.7**	**5.1**	**38.6**	**137**	N/A	**2.6**	**4.7**	**2.0**	--	**15.8**	**9.5**	**277**
Nov-14	**5.2**	--	**7.5**	--	N/A	**2.3**	**3.5**	--	--	**5.7**	--	**3.2 J**	**6.0**	**10.5**	**5.4**	**4.3**	**22.6**	**111**	N/A	**3.5 J**	**5.4**	**3.2 J**	--	**11.0 J**	**6.4**	**217**
Dec-14	**5.3**	--	**8.1**	**1.3**	N/A	**2.8**	**1.9**	--	--	**7.0**	**1.6 J**	**3.2 J**	**3.3 J**	**8.7**	**7.8**	**5.0**	**9.1**	**106**	N/A	**3.6 J**	**4.7**	**3.7 J**	--	**8.6**	**5.8**	**198**
Jan-15	**6.2**	--	**8.3**	**1.7**	N/A	**3.1**	--	--	--	**5.9**	--	**1.2 J**	**2.5 J**	**3.1 J**	**2.8**	**3.1**	**3.0**	**87.5**	N/A	**1.2**	**5.5**	**2.0**	--	**4.8**	**2.9**	**145**
Feb-15	**5.6**	--	**3.8**	**0.94**	N/A	--	--	--	--	**4.6**	--	**1.3 J**	**0.61 J**	**2.3 J**	**1.7**	**3.7**		**75.3**	N/A	--	**3.8**	**1.7**	--	**5.3**	**3.2**	**114**
Mar-15	**5.3**	**2.8**	**4.0**	**0.82**	N/A	**1.5 J**	--	--	--	**3.7**	--	**1.3 J**	**0.62 J**	**3.0 J**	**2.1**	**2.5**	**0.94 J**	**80.5**	N/A	**0.97 J**	**4.0**	**1.7**	--	**4.4**	**2.9**	**123**
Apr-15	**6.5**	**1.1**	**4.6**	**1.20**	N/A	**1.8**	**2.0**	--	**1.1 J**	**3.6**	--	**2.0**	--	**6.1**	**2.3**	**2.3**	**14.6**	**107**	N/A	**1.5 J**	**5.8**	**2.4**	--	**8.0**	**4.3**	**178**
May-15	**6.1**	--	**10.4**	--	N/A	**2.3 J**	**1.7 J**	--	--	**2.6**	--	**5.3 J**	**4.0 J**	**7.8 J**	**2.1 J**	**5.2**	**14**	**128**	N/A	**5.1 J**	**10**	**5.3 J**	--	**13.3 J**	**6.5 J**	**230**
Jun-15	**7.4**	**1.2**	**8.3**	**1.00**	N/A	--	**4.9**	--	--	**4.0**	--	**2.5**	**6.3**	**14.4**	**3.2**	**4.3**	**32.1**	**132**	N/A	**3.7**	**11.1**	**4.9**	--	**11.4**	**7.1**	**260**
Jul-15	**3.2**	--	**6.6**	**4.90**	N/A	--	**3.2**	--	--	--	--	--	--	--	--	**2.5**	**22**	**20**	N/A	--	--	--	--	N/A	N/A	**62**
Aug-15	**5.1**	**2.1 J**	**15**	**0.74 J**	N/A	**2.4**	**5.9**	--	**2.0**	**2.7**	--	**1.3 J**	--	--	**1.1 J**	**15**	**45**	**41**	N/A	--	**2.0**	**0.8 J**	--	N/A	N/A	**142**
Sep-15	**8.0**	**1.3 J**	**12**	**1.10 J**	N/A	**2.3**	**7.7**	--	**2.8**	**2.4**	--	**2.0**	**8.7**	--	**1.2 J**	**6.2**	**58**	**73**	N/A	**1.1 J**	**3.5**	**1.3 J**	--	N/A	N/A	**193**
Oct-15	**5.5**	--	**3.3**	--	N/A	**2.1**	**2.0**	--	**1.0**	**0.7**	--	**0.6 J**	**3.4 J**	--	--	**8.7**	**18**	**14**	N/A	--	**1.2**	--	--	N/A	N/A	**60**
Nov-15	**5.1**	**0.7 J**	**8.6**	**0.93 J**	N/A	**3.2**	**3.7**	--	**1.4 J**	**2.3**	--	**1.2 J**	**3.4 J**	--	**3.5**	**3.0**	**32**	**50**	N/A	--	**2.1**	**0.9 J**	--	N/A	N/A	**122**
Dec-15	**4.5**	**0.6 J**	**14**	**0.51 J**	N/A	**2.4**	**1.5 J**	--	**0.5 J**	**2.1**	--	**0.6 J**	**2.4 J**	--	**0.9 J**	**3.9**	**14**	**43**	N/A	--	**1.9**	--	--	N/A	N/A	**93**
Jan-16	**4.4**	--	**4.8**	**0.43 J**	N/A	**2.0**	**0.3 J**	--	--	**0.8**	--	--	**2.4 J**	--	**1.0 J**	**5.0**	**2**	**30**	N/A	--	**1.3**	--	--	N/A	N/A	**55**
Mar-16	**6.4**	**0.6 J**	**12**	**0.88 J**	N/A	**2.3**	**0.7 J**	--	**0.3 J**	**1.9**	--	**0.8 J**	**3.3 J**	--	**0.9 J**	**10**	**11**	**41**	N/A	--	**2.6**	**0.9 J**	--	N/A	N/A	**96**
May-16	**2.9**	**0.5 J**	**6.6**	**1.00 J**	N/A	**2.9**	**0.4 J**	--	**0.5 J**	**1.6**	--	**1.1 J**	**2.8 J**	--	**0.7 J**	**73**	**5.4 B**	**31**	N/A	--	**1.6 J**	--	--	N/A	N/A	**132**

Table 4-7B

Summary of VOC Detections in SSDS Influent, Building C
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

Building C - Influent Volatiles (µg/m^3)																								
Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	chloromethane	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	cis-1,2-dichloroethene	trans-1,2-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	1,1,1,-trichloroethane	trichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	m-xylene & p-xylene	o-xylene	Total VOCs
Jul-16	**8.0**	**1.2 J**	**13**	**2.40**	N/A	**2.7**	**11**	--	**5.5**	**2.5**	--	**1.3 J**	**4.2**	--	**1.1 J**	**6.2**	**76.0 B**	**46**	N/A	**1.20 J**	**4.4**	**1.5 J**	--	N/A	N/A	**188**
Sep-16	**8.6**	**0.52 J**	**4**	**2.50**	N/A	**2.4**	**4.2**	--	**1.9**	**2.5**	--	**1.4 J**	**5.3**	--	**1.0 J**	**3.2**	**29**	**45**	N/A	**0.93 J**	**3.5**	**1.5 J**	--	N/A	N/A	**117**
Nov-16	**9.8**	**0.80 J**	**22**	**2.70**	N/A	**3.0**	**1.7**	--	**0.8 J**	**2.8**	--	**1.9**	**13**	--	**1.6 J**	**14**	**13**	**47**	N/A	**1.20 J**	**4.3**	**1.4 J**	--	**9.1 ***	N/A	**150**
Jan-17	**2.0**	--	**6.3**	**0.80 J**	N/A	**1.9 J**	--	--	--	**1.9**	--	**0.9 J**	**6.2**	--	**0.9 J**	**20**	**1.0 J**	**33**	N/A	--	**2.0**	**0.9 J**	--	**4.5 ***	N/A	**82**
Mar-17	**3.1**	**0.58 J**	**4.8**	**0.80 J**	N/A	**2.7**	**0.31 J**	--	--	**3.5**	--	**2.2**	**3.3 J**	--	**3.1**	**6.2**	**1.0 J**	**40**	N/A	--	**1.8 J**	--	--	**12 ***	N/A	**85**
May-17	**4.9**	**0.59 J**	**1.6**	**1.1 J**	N/A	**2.1**	**0.36 J**	--	--	**5.3**	**0.41 J**	**0.9 J**	**2.6 J**	--	**2.3 J**	**4.1**	**1.4 J**	**38**	N/A	--	**2.7**	**1.0 J**	--	**5.3 ***	N/A	**75**
Jul-17	**6.1**	**0.76 J**	**15.0**	**2.9**	N/A	**1.9 J**	**0.42 J**	--	--	**5.4**	--	**1.9**	**5.4**	**2.0**	**1.4 J**	**7.1**	**1.1 JB**	**31**	N/A	--	**2.5**	**0.9 J**	--	**7.0 ***	N/A	**93**
Sep-17	**6.5**	**0.90 J**	**2.7**	**1.5 J**	N/A	**1.8 J**	--	--	--	**2.3**	--	**0.91 J**	**5.9**	--	**0.67 J**	**5.6**	**1.1 J**	**38**	N/A	--	**3.5**	**1.5 J**	--	**3.7 ***	N/A	**77**
Nov-17	**4.8**	**0.55 J**	**4.1**	**1.0 J**	N/A	**2.2**	--	--	--	**3.2**	--	--	**5.0**	--	**1.4 J**	**2.8**	**0.66 J**	**43**	N/A	--	**2.2**	**0.9 J**	--	**2.5 J***	N/A	**74**
Jan-18	**6.4**	**0.60 J**	**11**	--	N/A	**2.2**	--	--	--	**2.7**	--	**0.74 J**	--	--	**2.5 J**	**4.2**	**1.7 J**	**33**	N/A	--	**2.6**	**1.0 J**	**0.54**	**4.8 J***	N/A	**74**
Mar-18	**1.1**	**0.57 J**	**4.5**	**0.63 J**	N/A	**2.0**	--	--	--	**4.9**	--	**0.70 J**	**2.5 J**	--	**5.0 J**	**2.8**	**0.44 J**	**47**	N/A	--	**2.6**	**1.0 J**	**0.54**	**3.3 J***	N/A	**80**
Previous 6-Month Average Apr-Sep 2017	**5.8**	**0.8 J**	**6.4 #**	**1.8 J**	**NA**	**1.9 J**	**0.4 J**	**--**	**--**	**4.3**	**0.4 J**	**1.2 J**	**4.6 J**	**2.0**	**1.5 J**	**5.6**	**1.2 JB**	**36**	**NA**	**--**	**2.9**	**1.1 J**	**--**	**5.3 ***	**NA**	**81**
Current 6-Month Average Oct 2017-Mar 2018	**4.1**	**0.57 J**	**6.5 #**	**0.82 J**	**NA**	**2.1 J**	**--**	**--**	**--**	**3.6**	**--**	**0.72 J**	**3.8 J**	**--**	**3.0 J**	**3.3**	**0.92 J**	**41**	**NA**	**--**	**2.5**	**0.94 J**	**0.54**	**3.5 ***	**NA**	**76**

SSD - sub-slab depressurization
SV - soil vapor
D - duplicate
J - estimated value
NA - not applicable (compound not analyzed/reported)
-- - non-detect (below detection limit); not included in total VOC calculation
* value reported is for total xylenes
B - compound was found in the blank and sample

APPENDICES

All Appendices appear on CD only

APPENDIX A—FEBRUARY 2018
SAMPLE LOG SHEETS/CHAIN OF CUSTODY

APPENDIX B—METHOD DETECTION LIMITS

APPENDIX C—LABORATORY ANALYTICAL REPORTS

APPENDIX D—DATA VALIDATION REPORTS

APPENDIX E—*REMEDIAL ACTION PROGRESS REPORT #31: OCTOBER 1, 2017 THROUGH MARCH 31, 2018, SUB-SLAB-DEPRESSURIZATION SYSTEMS, BUILDINGS A AND C, LOCKHEED MARTIN MIDDLE RIVER COMPLEX*

APPENDIX A—FEBRUARY 2018
SAMPLE LOG SHEETS/CHAIN OF CUSTODY

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 20, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-001-C-24
SV Canister #:	11829
SV Regulator #:	09654
SV Start Time:	9:33 AM
SV Start Pressure:	-30
SV Stop Time:	11:06 AM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-001-C-24
IAQ Canister #:	09589
IAQ Regulator #:	7107
IAQ Start Time:	8:04 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	4:09 PM
IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

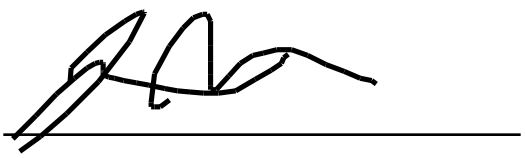
LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 20, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-004-C-24
SV Canister #:	11518
SV Regulator #:	10301
SV Start Time:	9:37 AM
SV Start Pressure:	-32
SV Stop Time:	11:08 AM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-004-C-24
IAQ Canister #:	09661
IAQ Regulator #:	8717
IAQ Start Time:	8:06 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	4:11 PM
IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

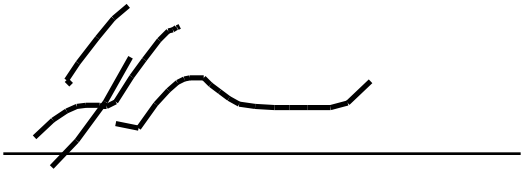
LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-015-A-24
SV Canister #:	10960
SV Regulator #:	10591
SV Start Time:	10:02 AM
SV Start Pressure:	-27
SV Stop Time:	11:48 AM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-015-A-24
IAQ Canister #:	10341
IAQ Regulator #:	7061
IAQ Start Time:	9:22 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	5:22 PM
IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	
SV Canister #:	
SV Regulator #:	
SV Start Time:	
SV Start Pressure:	
SV Stop Time:	
SV Stop Pressure:	

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-018-A-24
IAQ Canister #:	11268
IAQ Regulator #:	7633
IAQ Start Time:	8:36 AM
IAQ Start Pressure:	-24
IAQ Stop Time:	4:36 PM
IAQ Stop Pressure:	-20

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

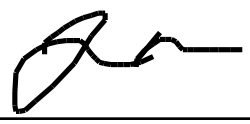
LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID: IA-DUP01-A-24

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	
SV Canister #:	
SV Regulator #:	
SV Start Time:	
SV Start Pressure:	
SV Stop Time:	
SV Stop Pressure:	

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-021-A-24
IAQ Canister #:	09633
IAQ Regulator #:	8751
IAQ Start Time:	9:18 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	5:18 PM
IAQ Stop Pressure:	-1

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 20, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-060-C-24
SV Canister #:	10604
SV Regulator #:	11305
SV Start Time:	10:04 AM
SV Start Pressure:	-30
SV Stop Time:	11:23 AM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-060-C-24
IAQ Canister #:	09793
IAQ Regulator #:	11499
IAQ Start Time:	8:30 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	4:45 PM
IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-075-A-24
SV Canister #:	09586
SV Regulator #:	09841
SV Start Time:	10:38 AM
SV Start Pressure:	-24
SV Stop Time:	12:10 PM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-075-A-24
IAQ Canister #:	11666
IAQ Regulator #:	11526
IAQ Start Time:	9:15 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	5:15 PM
IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	
SV Canister #:	
SV Regulator #:	
SV Start Time:	
SV Start Pressure:	
SV Stop Time:	
SV Stop Pressure:	

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-076-A-24
IAQ Canister #:	10922
IAQ Regulator #:	7273
IAQ Start Time:	9:11 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	5:11 PM
IAQ Stop Pressure:	-3.5

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

LOCATION:

SV location had water, replace with SV-095-A

OBSERVATIONS / NOTES:

IA- Large fan blowing near placement area

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-078-A-24
SV Canister #:	10744
SV Regulator #:	10863
SV Start Time:	10:19 AM
SV Start Pressure:	-30
SV Stop Time:	11:58 AM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-078-A-24
IAQ Canister #:	09643
IAQ Regulator #:	09950
IAQ Start Time:	8:59 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	4:59 PM
IAQ Stop Pressure:	-2

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-079-A-24
SV Canister #:	11615
SV Regulator #:	10292
SV Start Time:	10:13 AM
SV Start Pressure:	-30
SV Stop Time:	11:55 AM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-079-A-24
IAQ Canister #:	09750
IAQ Regulator #:	09854
IAQ Start Time:	8:54 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	4:55 PM
IAQ Stop Pressure:	-2

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

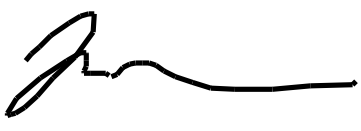
LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID: IA and SV-DUP02-A-24

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-081-A-24
SV Canister #:	11572
SV Regulator #:	10463
SV Start Time:	10:09 AM
SV Start Pressure:	-30
SV Stop Time:	11:53 AM
SV Stop Pressure:	-2

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-081-A-24
IAQ Canister #:	11692
IAQ Regulator #:	10174
IAQ Start Time:	8:50 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	4:53 PM
IAQ Stop Pressure:	-2

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 20, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-088-C-24
SV Canister #:	11558
SV Regulator #:	10021
SV Start Time:	10:14 AM
SV Start Pressure:	-30
SV Stop Time:	11:30 AM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-088-C-24
IAQ Canister #:	10942
IAQ Regulator #:	09861
IAQ Start Time:	8:45 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	4:57 PM
IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

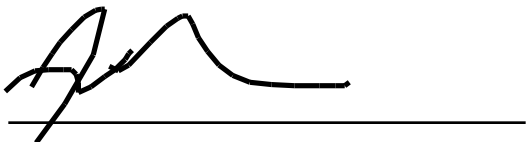
LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-093-A-24
SV Canister #:	11831
SV Regulator #:	10791
SV Start Time:	9:40 AM
SV Start Pressure:	-30
SV Stop Time:	11:36 AM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-093-A-24
IAQ Canister #:	11607
IAQ Regulator #:	8604
IAQ Start Time:	8:32 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	4:32 PM
IAQ Stop Pressure:	-2

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

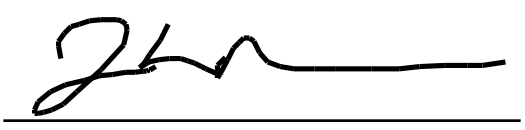
LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 20, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-100-B-24
SV Canister #:	10973
SV Regulator #:	09710
SV Start Time:	11:00 AM
SV Start Pressure:	-31
SV Stop Time:	12:00 PM
SV Stop Pressure:	-4

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-100-B-24
IAQ Canister #:	10782
IAQ Regulator #:	7059
IAQ Start Time:	9:14 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	5:15 PM
IAQ Stop Pressure:	-1

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

LOCATION:

OBSERVATIONS / NOTES:

Used in replacement of SV-140-B due to water

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 20, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-101-B-24
SV Canister #:	11821
SV Regulator #:	11505
SV Start Time:	10:40 AM
SV Start Pressure:	-30
SV Stop Time:	11:56 AM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-101-B-24
IAQ Canister #:	11704
IAQ Regulator #:	11587
IAQ Start Time:	9:13 AM
IAQ Start Pressure:	-28
IAQ Stop Time:	5:14 PM
IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

LOCATION:

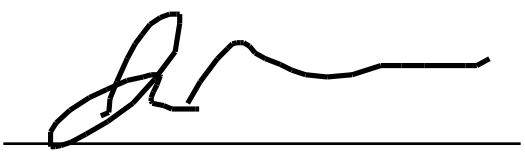
OBSERVATIONS / NOTES:

Used in replacement of SV-121-B due to water

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 20, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-102-C-24
SV Canister #:	09577
SV Regulator #:	11732
SV Start Time:	9:40 AM
SV Start Pressure:	-30
SV Stop Time:	11:11 AM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-102-C-24
IAQ Canister #:	11662
IAQ Regulator #:	7587
IAQ Start Time:	8:10 AM
IAQ Start Pressure:	-29
IAQ Stop Time:	4:12 PM
IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 20, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-113-C-24
SV Canister #:	10345
SV Regulator #:	11733
SV Start Time:	10:16 AM
SV Start Pressure:	-30
SV Stop Time:	11:31 AM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-113-C-24
IAQ Canister #:	10520
IAQ Regulator #:	7163
IAQ Start Time:	8:46 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	4:58 PM
IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	
SV Canister #:	
SV Regulator #:	
SV Start Time:	
SV Start Pressure:	
SV Stop Time:	
SV Stop Pressure:	

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-117-A-24
IAQ Canister #:	09833
IAQ Regulator #:	10450
IAQ Start Time:	8:56 AM
IAQ Start Pressure:	-28
IAQ Stop Time:	4:56 PM
IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-118-A-24
SV Canister #:	10923
SV Regulator #:	09714
SV Start Time:	10:04 AM
SV Start Pressure:	-30
SV Stop Time:	11:49 AM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-118-A-24
IAQ Canister #:	10760
IAQ Regulator #:	10619
IAQ Start Time:	8:45 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	4:49 PM
IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 20, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-126-C-24
SV Canister #:	11639
SV Regulator #:	11508
SV Start Time:	10:26 AM
SV Start Pressure:	-29
SV Stop Time:	11:37 AM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-126-C-24
IAQ Canister #:	10518
IAQ Regulator #:	8634
IAQ Start Time:	9:00 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	5:11 PM
IAQ Stop Pressure:	-6.5

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☒ No
		☐ Yes ☐ No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 20, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-133-C-24
SV Canister #:	10623
SV Regulator #:	10334
SV Start Time:	9:51 AM
SV Start Pressure:	-30
SV Stop Time:	11:17 AM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-133-C-24
IAQ Canister #:	11133
IAQ Regulator #:	7390
IAQ Start Time:	8:20 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	4:24 PM
IAQ Stop Pressure:	-1

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-136-A-24
SV Canister #:	11281
SV Regulator #:	09564
SV Start Time:	10:22 AM
SV Start Pressure:	-30
SV Stop Time:	12:00 PM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-136-A-24
IAQ Canister #:	11713
IAQ Regulator #:	7358
IAQ Start Time:	9:02 AM
IAQ Start Pressure:	-29
IAQ Stop Time:	5:02 PM
IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-138-A-24
SV Canister #:	09634
SV Regulator #:	10655
SV Start Time:	9:45 AM
SV Start Pressure:	-27
SV Stop Time:	11:39 AM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-138-A-24
IAQ Canister #:	11569
IAQ Regulator #:	7617
IAQ Start Time:	8:30 AM
IAQ Start Pressure:	-29
IAQ Stop Time:	4:30 PM
IAQ Stop Pressure:	-1

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date:

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID: SV-139-A-20

SV Canister #:

SV Regulator #:

SV Start Time:

SV Start Pressure:

SV Stop Time:

SV Stop Pressure:

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID: IA-139-A-20

IAQ Canister #:

IAQ Regulator #:

IAQ Start Time:

IAQ Start Pressure:

IAQ Stop Time:

IAQ Stop Pressure:

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☐ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 20, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-141-C-24
SV Canister #:	10344
SV Regulator #:	11527
SV Start Time:	10:07 AM
SV Start Pressure:	-27
SV Stop Time:	11:25 AM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-141-C-24
IAQ Canister #:	09641
IAQ Regulator #:	10304
IAQ Start Time:	8:36 AM
IAQ Start Pressure:	-24
IAQ Stop Time:	5:00 PM
IAQ Stop Pressure:	-3

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

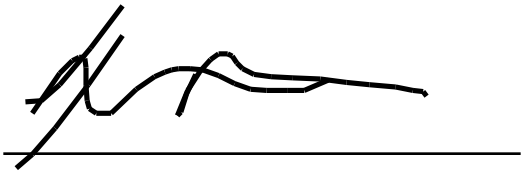
LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 20, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-142-C-24
SV Canister #:	09823
SV Regulator #:	11759
SV Start Time:	10:11 AM
SV Start Pressure:	-30
SV Stop Time:	11:28 AM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-142-C-24
IAQ Canister #:	7064
IAQ Regulator #:	09737
IAQ Start Time:	8:40 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	4:56 PM
IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

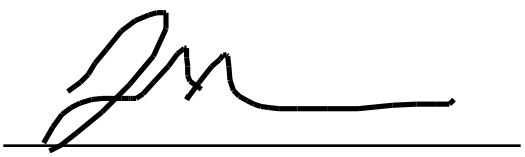
LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 20, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	
SV Canister #:	
SV Regulator #:	
SV Start Time:	
SV Start Pressure:	
SV Stop Time:	
SV Stop Pressure:	

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-144-C-24
IAQ Canister #:	11554
IAQ Regulator #:	7571
IAQ Start Time:	8:55 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	4:55 PM
IAQ Stop Pressure:	-2.5

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 20, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	
SV Canister #:	
SV Regulator #:	
SV Start Time:	
SV Start Pressure:	
SV Stop Time:	
SV Stop Pressure:	

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-145-C-24
IAQ Canister #:	09660
IAQ Regulator #:	7058
IAQ Start Time:	8:53 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	4:53 PM
IAQ Stop Pressure:	-1

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

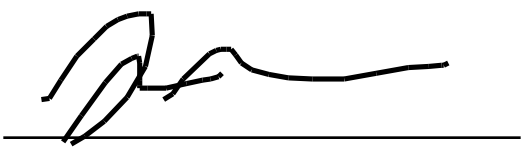
LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 20, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	
SV Canister #:	
SV Regulator #:	
SV Start Time:	
SV Start Pressure:	
SV Stop Time:	
SV Stop Pressure:	

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-146-C-24
IAQ Canister #:	11521
IAQ Regulator #:	7580
IAQ Start Time:	8:54 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	4:54 PM
IAQ Stop Pressure:	-3.5

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

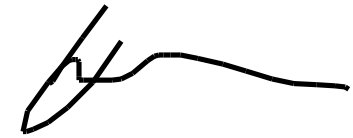
LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 20, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-149-C-24
SV Canister #:	11824
SV Regulator #:	10464
SV Start Time:	10:24 AM
SV Start Pressure:	-30
SV Stop Time:	11:36 AM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-149-C-24
IAQ Canister #:	09636
IAQ Regulator #:	7400
IAQ Start Time:	8:59 AM
IAQ Start Pressure:	-29
IAQ Stop Time:	5:02 PM
IAQ Stop Pressure:	-2

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

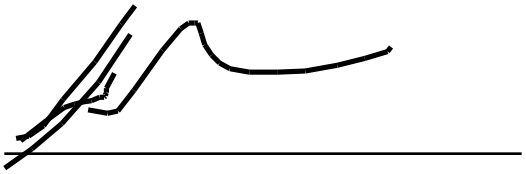
LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID: IA and SV-DUP02-C-24

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 20, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-150-C-24
SV Canister #:	09788
SV Regulator #:	01054
SV Start Time:	10:01 AM
SV Start Pressure:	-30
SV Stop Time:	12:06 PM
SV Stop Pressure:	-3

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-150-C-24
IAQ Canister #:	09735
IAQ Regulator #:	7146
IAQ Start Time:	8:33 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	4:48 PM
IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

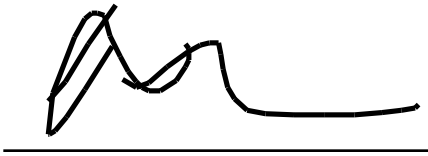
LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 20, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-152-C-24
SV Canister #:	10492
SV Regulator #:	10586
SV Start Time:	9:59 AM
SV Start Pressure:	-31
SV Stop Time:	11:20 AM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-152-C-24
IAQ Canister #:	11708
IAQ Regulator #:	8741
IAQ Start Time:	8:32 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	4:47 PM
IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

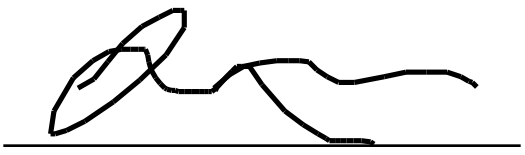
LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 20, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-153-C-24
SV Canister #:	11822
SV Regulator #:	09952
SV Start Time:	9:48 AM
SV Start Pressure:	-30
SV Stop Time:	11:16 AM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-153-C-24
IAQ Canister #:	09791
IAQ Regulator #:	7047
IAQ Start Time:	8:17 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	4:18 PM
IAQ Stop Pressure:	-2

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID: IA and SV-DUP01-C-24

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 20, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-155-C-24
SV Canister #:	10339
SV Regulator #:	10646
SV Start Time:	9:44 AM
SV Start Pressure:	-30
SV Stop Time:	11:15 AM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-155-C-24
IAQ Canister #:	11519
IAQ Regulator #:	10466
IAQ Start Time:	8:14 AM
IAQ Start Pressure:	-29
IAQ Stop Time:	4:16 PM
IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

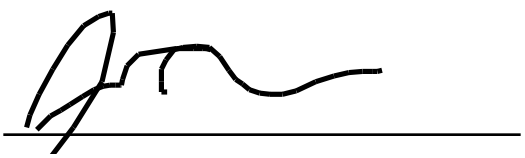
LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-168-A-24
SV Canister #:	11663
SV Regulator #:	09717
SV Start Time:	10:26 AM
SV Start Pressure:	-30
SV Stop Time:	12:07 PM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-168-A-24
IAQ Canister #:	11657
IAQ Regulator #:	10053
IAQ Start Time:	9:08 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	5:08 PM
IAQ Stop Pressure:	-3

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

LOCATION:

OBSERVATIONS / NOTES:

Construction activities nearby work area was surrounded by sheeting

MS/MSD:

Duplicate ID:

Signature:

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-174-A-24
SV Canister #:	09576
SV Regulator #:	10432
SV Start Time:	9:43 AM
SV Start Pressure:	-28
SV Stop Time:	11:38 AM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-174-A-24
IAQ Canister #:	11132
IAQ Regulator #:	11597
IAQ Start Time:	8:40 AM
IAQ Start Pressure:	-26
IAQ Stop Time:	4:40 PM
IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	
SV Canister #:	
SV Regulator #:	
SV Start Time:	
SV Start Pressure:	
SV Stop Time:	
SV Stop Pressure:	

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-BCK-1-24
IAQ Canister #:	11718
IAQ Regulator #:	11475
IAQ Start Time:	8:07 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	4:32 PM
IAQ Stop Pressure:	-3

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

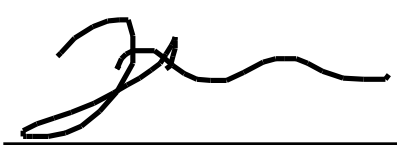
LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	
SV Canister #:	
SV Regulator #:	
SV Start Time:	
SV Start Pressure:	
SV Stop Time:	
SV Stop Pressure:	

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-BCK-2-24
IAQ Canister #:	09663
IAQ Regulator #:	7005
IAQ Start Time:	8:02 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	4:29 PM
IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	
SV Canister #:	
SV Regulator #:	
SV Start Time:	
SV Start Pressure:	
SV Stop Time:	
SV Stop Pressure:	

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-BCK-3-24
IAQ Canister #:	09886
IAQ Regulator #:	09866
IAQ Start Time:	7:58 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	4:26 PM
IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

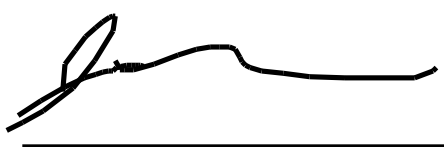
LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	
SV Canister #:	
SV Regulator #:	
SV Start Time:	
SV Start Pressure:	
SV Stop Time:	
SV Stop Pressure:	

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-BCK-4-24
IAQ Canister #:	11753
IAQ Regulator #:	11588
IAQ Start Time:	7:50 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	4:16 PM
IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

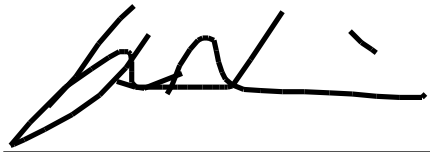
LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-095-A-24
SV Canister #:	11833
SV Regulator #:	10080
SV Start Time:	12:05 PM
SV Start Pressure:	-30
SV Stop Time:	1:05 PM
SV Stop Pressure:	-3

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	
IAQ Canister #:	
IAQ Regulator #:	
IAQ Start Time:	
IAQ Start Pressure:	
IAQ Stop Time:	
IAQ Stop Pressure:	

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

LOCATION:

OBSERVATIONS / NOTES:

Used in place of SV-076-A due to water

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-116-A 24
SV Canister #:	10753
SV Regulator #:	11535
SV Start Time:	9:48 AM
SV Start Pressure:	-30
SV Stop Time:	11:41 AM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	
IAQ Canister #:	
IAQ Regulator #:	
IAQ Start Time:	
IAQ Start Pressure:	
IAQ Stop Time:	
IAQ Stop Pressure:	

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

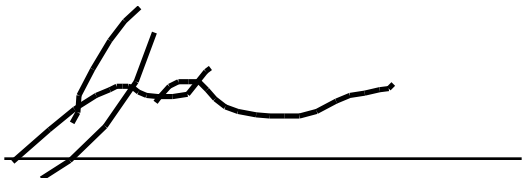
LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID: SV-DUP01-A-24

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-170-A-24
SV Canister #:	11832
SV Regulator #:	09859
SV Start Time:	9:57 AM
SV Start Pressure:	-30
SV Stop Time:	11:46 AM
SV Stop Pressure:	-1

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	
IAQ Canister #:	
IAQ Regulator #:	
IAQ Start Time:	
IAQ Start Pressure:	
IAQ Stop Time:	
IAQ Stop Pressure:	

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

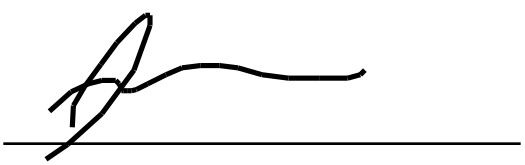
LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-171-A 24
SV Canister #:	9799
SV Regulator #:	11245
SV Start Time:	9:55 AM
SV Start Pressure:	-30
SV Stop Time:	11:44 AM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	
IAQ Canister #:	
IAQ Regulator #:	
IAQ Start Time:	
IAQ Start Pressure:	
IAQ Stop Time:	
IAQ Stop Pressure:	

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

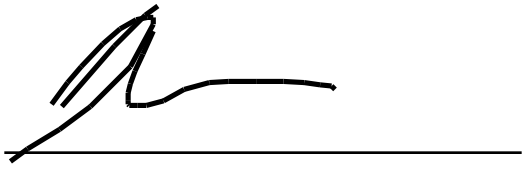
LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-173-A-24
SV Canister #:	11827
SV Regulator #:	09908
SV Start Time:	9:53 AM
SV Start Pressure:	-30
SV Stop Time:	11:43 AM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	
IAQ Canister #:	
IAQ Regulator #:	
IAQ Start Time:	
IAQ Start Pressure:	
IAQ Stop Time:	
IAQ Stop Pressure:	

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

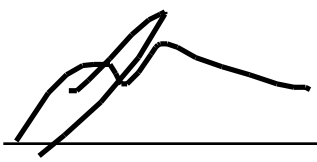
LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-178-MB 2
SV Canister #:	11825
SV Regulator #:	10140
SV Start Time:	10:58 AM
SV Start Pressure:	-30
SV Stop Time:	12:16 PM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	
IAQ Canister #:	
IAQ Regulator #:	
IAQ Start Time:	
IAQ Start Pressure:	
IAQ Stop Time:	
IAQ Stop Pressure:	

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

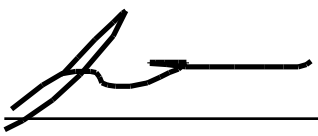
LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-179-MB	2
SV Canister #:	11820	
SV Regulator #:	10294	
SV Start Time:	11:08 AM	
SV Start Pressure:	-30	
SV Stop Time:	12:19 PM	
SV Stop Pressure:	0	

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:		
IAQ Canister #:		
IAQ Regulator #:		
IAQ Start Time:		
IAQ Start Pressure:		
IAQ Stop Time:		
IAQ Stop Pressure:		

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

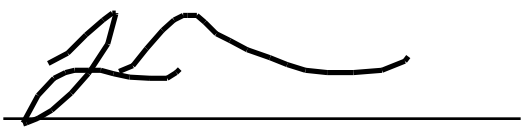
LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-180-MB 2
SV Canister #:	11830
SV Regulator #:	09753
SV Start Time:	11:02 AM
SV Start Pressure:	-30
SV Stop Time:	12:18 PM
SV Stop Pressure:	-5

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	
IAQ Canister #:	
IAQ Regulator #:	
IAQ Start Time:	
IAQ Start Pressure:	
IAQ Stop Time:	
IAQ Stop Pressure:	

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-181-MB 2
SV Canister #:	11828
SV Regulator #:	10665
SV Start Time:	11:08 AM
SV Start Pressure:	-29.5
SV Stop Time:	12:19 PM
SV Stop Pressure:	-1

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	
IAQ Canister #:	
IAQ Regulator #:	
IAQ Start Time:	
IAQ Start Pressure:	
IAQ Stop Time:	
IAQ Stop Pressure:	

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

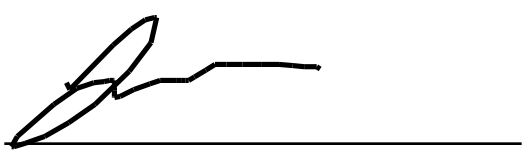
LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-182-MB 2
SV Canister #:	10494
SV Regulator #:	11550
SV Start Time:	11:12 AM
SV Start Pressure:	-30
SV Stop Time:	12:22 PM
SV Stop Pressure:	-6

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	
IAQ Canister #:	
IAQ Regulator #:	
IAQ Start Time:	
IAQ Start Pressure:	
IAQ Stop Time:	
IAQ Stop Pressure:	

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

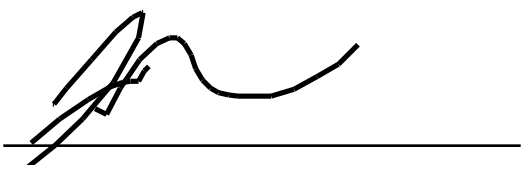
LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-184-MB 2
SV Canister #:	11645
SV Regulator #:	10845
SV Start Time:	11:18 AM
SV Start Pressure:	-29
SV Stop Time:	12:24 PM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	
IAQ Canister #:	
IAQ Regulator #:	
IAQ Start Time:	
IAQ Start Pressure:	
IAQ Stop Time:	
IAQ Stop Pressure:	

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

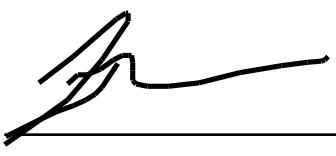
LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-185-MB 2
SV Canister #:	09736
SV Regulator #:	10583
SV Start Time:	11:32 AM
SV Start Pressure:	-26
SV Stop Time:	12:34 PM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	
IAQ Canister #:	
IAQ Regulator #:	
IAQ Start Time:	
IAQ Start Pressure:	
IAQ Stop Time:	
IAQ Stop Pressure:	

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-186-MB 2
SV Canister #:	11591
SV Regulator #:	10289
SV Start Time:	11:30 AM
SV Start Pressure:	-30
SV Stop Time:	12:33 PM
SV Stop Pressure:	-3

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	
IAQ Canister #:	
IAQ Regulator #:	
IAQ Start Time:	
IAQ Start Pressure:	
IAQ Stop Time:	
IAQ Stop Pressure:	

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

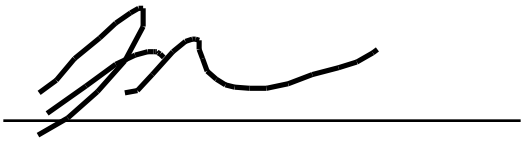
LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: February 21, 2018

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-187-MB 2
SV Canister #:	11710
SV Regulator #:	11515
SV Start Time:	11:22 AM
SV Start Pressure:	-30
SV Stop Time:	12:26 PM
SV Stop Pressure:	-2

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	
IAQ Canister #:	
IAQ Regulator #:	
IAQ Start Time:	
IAQ Start Pressure:	
IAQ Stop Time:	
IAQ Stop Pressure:	

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

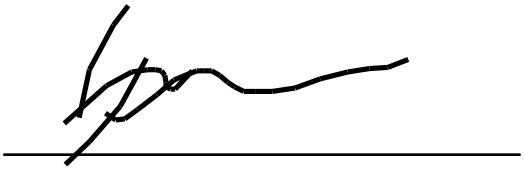
LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

Signature:



Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865.291.3000 fax 865.584.4315

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	**Project Manager: Tony Apanavage**	**Site Contact: Tony Apanavage**	**Date: 2/20/2018**	COC No:
Tera Tech	**Tel/Fax: (301)528-3021**	**Lab Contact: John McFadden**	**Carrier: Fedex**	___1___ of ___9__ COCs
20251 Century Blvd. Ste 200	**Analysis Turnaround Time**			Job No.
Germantown, Maryland 20874	Calendar (C) or Work Days (W) _____			
Phone: (301)528-5552	TAT if different from Below ___Standard_____			
	☐ 2 weeks			SDG No.
Project Name: 112IC08388	☐ 1 week			
Site: Middle River, MD	☐ 2 days			
P O #	☐ 1 day			Sampler: MULLIS/PRYOR

Sample Identification	Sample Date	Time Start	Time Stop	Canister Volume in Field "Hg (Start)	Canister Volume in Field "Hg (Stop)	Flow Controller ID	Canister ID	TO-15								Sample Specific Notes:
IA-001-C-24	2/20/2018	0804	1609	-30	0	7107	09589	X								
IA-004-C-24	2/20/2018	0806	1611	-30	0	8717	09661	X								
IA-102-C-24	2/20/2018	0810	1612	-29	0	7587	11662	X								
IA-155-C-24	2/20/2018	0814	1616	-29	0	10466	11519	X								
IA-153-C-24	2/20/2018	0817	1618	-30	-2	7047	09791	X								
IA-DUP01-C-24	2/20/2018	0000	0000	-30	-4	7197	11621	X								
IA-133-C-24	2/20/2018	0820	1624	-30	-1	7390	11133	X								
IA-060-C-24	2/20/2018	0830	1645	-30	0	11499	09793	X								
IA-152-C-24	2/20/2018	0832	1647	-30	0	8741	11708	X								
IA-150-C-24	2/20/2018	0833	1648	-30	0	7146	09735	X								
IA-141-C-24	2/20/2018	0836	1700	-24	-3	10304	09641	X								
IA-142-C-24	2/20/2018	0840	1656	-30	0	7064	09737	X								
IA-088-C-24	2/20/2018	0845	1657	-30	0	09861	10942	X								
IA-113-C-24	2/20/2018	0846	1658	-30	0	7163	10520	X								
IA-144-C-24	2/20/2018	0855	1655	-30	-2.5	7571	11554	X								

Special Instructions/QC Requirements & Comments: **Contracted Analyte List**

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865.291.3000 fax 865.584.4315

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	**Project Manager: Tony Apanavage**	**Site Contact: Tony Apanavage**	**Date: 2/20/2018**	COC No:
Tera Tech	**Tel/Fax: (301)528-3021**	**Lab Contact: John McFadden**	**Carrier: Fedex**	__2_____ of ___9___ COCs
20251 Century Blvd. Ste 200	**Analysis Turnaround Time**			Job No.
Germantown, Maryland 20874	Calendar (C) or Work Days (W) _____			
Phone: (301)528-5552	TAT if different from Below ___Standard_____			
	☐ 2 weeks			SDG No.
Project Name: 112IC08388	☐ 1 week			
Site: Middle River, MD	☐ 2 days			
P O #	☐ 1 day			Sampler: MULLIS/PRYOR

Sample Identification	**Sample Date**	**Time Start**	**Time Stop**	**Canister Volume in Field "Hg (Start)**	**Canister Volume in Field "Hg (Stop)**	**Flow Controller ID**	**Canister ID**	**TO-15**								Sample Specific Notes:
IA-146-C-24	2/20/2018	0854	1654	-30	-3.5	7580	11521	X								
IA-145-C-24	2/20/2018	0853	1653	-30	-1	7058	09660	X								
IA-149-C-24	2/20/2018	0859	1702	-29	-2	7400	09636	X								
IA-DUP02-C-24	2/20/2018	0000	0000	-30	-2	09551	09646	X								
IA-126-C-24	2/20/2018	0900	1711	-30	-6.5	8634	10518	X								
IA-101-B-24	2/20/2018	0913	1714	-28	0	11587	11704	X								
IA-100-B-24	2/20/2018	0914	1715	-30	-1	7059	10782	X								

Special Instructions/QC Requirements & Comments: **Contracted Analyte List**

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865.291.3000 fax 865.584.4315

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	**Project Manager: Tony Apanavage**	**Site Contact: Tony Apanavage**	**Date: 2/21/2018**	COC No:
Tera Tech	**Tel/Fax: (301)528-3021**	**Lab Contact: John McFadden**	**Carrier: Fedex**	___3___ of ___9__ COCs
20251 Century Blvd. Ste 200	**Analysis Turnaround Time**			Job No.
Germantown, Maryland 20874	Calendar (C) or Work Days (W) _____			
Phone: (301)528-5552	TAT if different from Below ___Standard_____			
	☐ 2 weeks			SDG No.
Project Name: 112IC08388	☐ 1 week			
Site: Middle River, MD	☐ 2 days			
P O #	☐ 1 day			Sampler: MULLIS/PRYOR

Sample Identification	**Sample Date**	**Time Start**	**Time Stop**	**Canister Volume in Field "Hg (Start)**	**Canister Volume in Field "Hg (Stop)**	**Flow Controller ID**	**Canister ID**	**TO-15**								Sample Specific Notes:
IA-138-A-24	2/21/2018	0830	1630	-29	-1	7617	11569	X								
IA-093-A-24	2/21/2018	0832	1632	-30	-2	8604	11607	X								
IA-018-A-24	2/21/2018	0836	1636	-24	-20	7633	11268	X								
IA-DUP01-A-24	2/21/2018	0000	0000	-30	-3	11601	11623	X								
IA-174-A-24	2/21/2018	0840	1640	-26	0	11597	11132	X								
IA-118-A-24	2/21/2018	0845	1649	-30	0	10619	10760	X								
IA-081-A-24	2/21/2018	0850	1653	-30	-2	10174	11692	X								
IA-079-A-24	2/21/2018	0854	1655	-30	-2	09854	09750	X								
IA-DUP02-A-24	2/21/2018	0000	0000	-26	-2	10079	11706	X								
IA-117-A-24	2/21/2018	0856	1656	-28	0	10450	9833	X								
IA-078-A-24	2/21/2018	0859	1659	-30	-2	09950	09643	X								
IA-136-A-24	2/21/2018	0902	1702	-29	0	7358	11713	X								
IA-168-A-24	2/21/2018	0908	1708	-30	-3	10053	11657	X								
IA-076-A-24	2/21/2018	0911	1711	-30	-3.5	7273	10922	X								
IA-075-A-24	2/21/2018	0915	1715	-30	0	11526	11666	X								

Special Instructions/QC Requirements & Comments: **Contracted Analyte List**

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865.291.3000 fax 865.584.4315

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	**Project Manager: Tony Apanavage**	**Site Contact: Tony Apanavage**	**Date: 2/21/2018**	COC No:
Tera Tech	**Tel/Fax: (301)528-3021**	**Lab Contact: John McFadden**	**Carrier: Fedex**	___4___ of ___9__ COCs
20251 Century Blvd. Ste 200	**Analysis Turnaround Time**			Job No.
Germantown, Maryland 20874	Calendar (C) or Work Days (W) _____			
Phone: (301)528-5552	TAT if different from Below ___Standard_____			
	☐ 2 weeks			SDG No.
Project Name: 112IC08388	☐ 1 week			
Site: Middle River, MD	☐ 2 days			
P O #	☐ 1 day			Sampler: MULLIS/PRYOR

Sample Identification	**Sample Date**	**Time Start**	**Time Stop**	**Canister Volume in Field "Hg (Start)**	**Canister Volume in Field "Hg (Stop)**	**Flow Controller ID**	**Canister ID**	**TO-15**								Sample Specific Notes:
IA-021-A-24	2/21/2018	0918	1718	-30	-1	8751	09633	X								
IA-015-A-24	2/21/2018	0922	1722	-30	0	7061	10341	X								

Special Instructions/QC Requirements & Comments: **Contracted Analyte List**

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	**Project Manager: Tony Apanavage**	**Site Contact: Tony Apanavage**	**Date: 2/21/2018**	COC No:
Tera Tech	**Tel/Fax: (301)528-3021**	**Lab Contact: John McFadden**	**Carrier: Fedex**	___5____ of ____9__ COCs
20251 Century Blvd. Ste 200	**Analysis Turnaround Time**			Job No.
Germantown, Maryland 20874	Calendar (C) or Work Days (W) _____			
Phone: (301)528-5552	TAT if different from Below ___Standard_____			
	☐ 2 weeks			SDG No.
Project Name: 112IC08388	☐ 1 week			
Site: Middle River, MD	☐ 2 days			
P O #	☐ 1 day			Sampler: MULLIS/PRYOR

Sample Identification	**Sample Date**	**Time Start**	**Time Stop**	**Canister Volume in Field "Hg (Start)**	**Canister Volume in Field "Hg (Stop)**	**Flow Controller ID**	**Canister ID**	**TO-15**								Sample Specific Notes:
IA-BCK-1-24	2/21/2018	0807	1632	-30	-3	11475	11718	X								
IA-BCK-2-24	2/21/2018	0802	1629	-30	0	7005	09663	X								
IA-BCK-3-24	2/21/2018	0758	1626	-30	0	09866	09886	X								
IA-BCK-4-24	2/21/2018	0750	1616	-30	0	11588	11753	X								

Special Instructions/QC Requirements & Comments: **Contracted Analyte List**

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Tony Apanavage	Site Contact: Tony Apanavage	Date: 2/20/2018	COC No:
Tera Tech	Tel/Fax: (301)528-3021	Lab Contact: John McFadden	Carrier: Fedex	___6___ of ___9___ COCs
20251 Century Blvd. Ste 200	Analysis Turnaround Time			Job No.
Germantown, Maryland 20874	Calendar (C) or Work Days (W) _____			
Phone: (301)528-5552	TAT if different from Below ___Standard_____			SDG No.
	☐ 2 weeks			
Project Name: 112IC08388	☐ 1 week			
Site: Middle River, MD	☐ 2 days			
P O #	☐ 1 day			Sampler: MULLIS/PRYOR

Sample Identification	Sample Date	Time Start	Time Stop	Canister Volume in Field "Hg (Start)	Canister Volume in Field "Hg (Stop)	Flow Controller ID	Canister ID	TO-15								Sample Specific Notes:
SV-001-C-24	2/20/2018	0933	1106	-30	0	09654	11829	X								
SV-004-C-24	2/20/2018	0937	1108	-32	0	10301	11518	X								
SV-102-C-24	2/20/2018	0940	1111	-30	0	11732	9577	X								
SV-155-C-24	2/20/2018	0944	1115	-30	0	10646	10339	X								
SV-153-C-24	2/20/2018	0948	1116	-30	0	09952	11822	X								
SV-DUP01-C-24	2/20/2018	0000	0000	-30	0	11648	11826	X								
SV-133-C-24	2/20/2018	0951	1117	-30	0	10623	10334	X								
SV-060-C-24	2/20/2018	1004	1123	-30	0	11305	10604	X								
SV-150-C-24	2/20/2018	1001	1206	-30	-3	01054	09788	X								
SV-152-C-24	2/20/2018	0959	1120	-31	0	10586	10492	X								
SV-141-C-24	2/20/2018	1007	1125	-27	0	11527	10344	X								
SV-142-C-24	2/20/2018	1011	1128	-30	0	11759	9823	X								
SV-088-C-24	2/20/2018	1014	1130	-30	0	10021	11558	X								
SV-113-C-24	2/20/2018	1016	1131	-30	0	11733	10345	X								
SV-149-C-24	2/20/2018	1024	1136	-30	0	10464	11824	X								

Special Instructions/QC Requirements & Comments: **Contracted Analyte List**

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Knoxville
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Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	**Project Manager: Tony Apanavage**	**Site Contact: Tony Apanavage**	**Date: 2/20/2018**	COC No:
Tera Tech	**Tel/Fax: (301)528-3021**	**Lab Contact: John McFadden**	**Carrier: Fedex**	___7____ of ____9__ COCs
20251 Century Blvd. Ste 200	**Analysis Turnaround Time**			Job No.
Germantown, Maryland 20874	Calendar (C) or Work Days (W) _____			
Phone: (301)528-5552	TAT if different from Below ___Standard_____			
	☐ 2 weeks			SDG No.
Project Name: 112IC08388	☐ 1 week			
Site: Middle River, MD	☐ 2 days			
P O #	☐ 1 day			Sampler: MULLIS/PRYOR

Sample Identification	Sample Date	Time Start	Time Stop	Canister Volume in Field "Hg (Start)	Canister Volume in Field "Hg (Stop)	Flow Controller ID	Canister ID	TO-15								Sample Specific Notes:
SV-DUP02-C-24	2/20/2018	0000	0000	-30	0	10592	11823	X								
SV-126-C-24	2/20/2018	1026	1137	-29	0	11508	11639	X								
SV-101-B-24	2/20/2018	1040	1156	-30	0	11505	11821	X								
SV-100-B-24	2/20/2018	1100	1200	-31	-4	9710	10973	X								

Special Instructions/QC Requirements & Comments: **Contracted Analyte List**

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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TestAmerica Laboratories, Inc.

Client Contact	**Project Manager: Tony Apanavage**	**Site Contact: Tony Apanavage**	**Date: 2/21/2018**	COC No:
Tera Tech	**Tel/Fax: (301)528-3021**	**Lab Contact: John McFadden**	**Carrier: Fedex**	___8____ of ___9__ COCs
20251 Century Blvd. Ste 200	**Analysis Turnaround Time**			Job No.
Germantown, Maryland 20874	Calendar (C) or Work Days (W) _____			
Phone: (301)528-5552	TAT if different from Below ___Standard_____			
	☐ 2 weeks			SDG No.
Project Name: 112IC08388	☐ 1 week			
Site: Middle River, MD	☐ 2 days			
P O #	☐ 1 day			Sampler: MULLIS/PRYOR

Sample Identification	Sample Date	Time Start	Time Stop	Canister Volume in Field "Hg (Start)	Canister Volume in Field "Hg (Stop)	Flow Controller ID	Canister ID	TO-15								Sample Specific Notes:
SV-093-A-24	2/21/2018	0940	1136	-30	0	10791	11831	X								
SV-174-A-24	2/21/2018	0943	1138	-28	0	10432	09576	X								
SV-138-A-24	2/21/2018	0945	1139	-27	0	10655	09634	X								
SV-116-A-24	2/21/2018	0948	1141	-30	0	11535	10753	X								
SV-DUP01-A-24	2/21/2018	0000	0000	-30	0	10440	09593	X								
SV-173-A-24	2/21/2018	0953	1143	-30	0	09908	11827	X								
SV-171-A-24	2/21/2018	0955	1144	-30	0	11245	9799	X								
SV-170-A-24	2/21/2018	0957	1146	-30	-1	09859	11832	X								
SV-015-A-24	2/21/2018	1002	1148	-27	0	10591	10960	X								
SV-118-A-24	2/21/2018	1004	1149	-30	0	09714	10923	X								
SV-081-A-24	2/21/2018	1009	1153	-30	-2	10463	11572	X								
SV-079-A-24	2/21/2018	1013	1155	-30	0	10292	11615	X								
SV-DUP02-A-24	2/21/2018	0000	0000	-30	0	11497	11537	X								
SV-078-A-24	2/21/2018	1019	1158	-30	0	10863	10744	X								
SV-136-A-24	2/21/2018	1022	1200	-30	0	09564	11281	X								

Special Instructions/QC Requirements & Comments: **Contracted Analyte List**

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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Chain of Custody Record

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TestAmerica Laboratories, Inc.

Client Contact	**Project Manager: Tony Apanavage**	**Site Contact: Tony Apanavage**	**Date: 2/21/2018**	COC No:
Tera Tech	**Tel/Fax: (301)528-3021**	**Lab Contact: John McFadden**	**Carrier: Fedex**	___9____ of ___9___ COCs
20251 Century Blvd. Ste 200	**Analysis Turnaround Time**			Job No.
Germantown, Maryland 20874	Calendar (C) or Work Days (W) _____			
Phone: (301)528-5552	TAT if different from Below ___Standard_____			SDG No.
Project Name: 112IC08388	☐ 2 weeks			
Site: Middle River, MD	☐ 1 week			
P O #	☐ 2 days			Sampler: MULLIS/PRYOR
	☐ 1 day			

Sample Identification	**Sample Date**	**Time Start**	**Time Stop**	**Canister Volume in Field "Hg (Start)**	**Canister Volume in Field "Hg (Stop)**	**Flow Controller ID**	**Canister ID**	**TO-15**								Sample Specific Notes:
SV-168-A-24	2/21/2018	1026	1207	-30	0	09717	11663	X								
SV-095-A-24	2/21/2018	1205	1305	-30	-3	10080	11833	X								
SV-075-A-24	2/21/2018	1038	1210	-24	0	09841	09586	X								
SV-178-MB-2	2/21/2018	1058	1216	-30	0	10140	11825	X								
SV-180-MB-2	2/21/2018	1102	1218	-30	-5	09753	11830	X								
SV-179-MB-2	2/21/2018	1108	1219	-30	0	10294	11820	X								
SV-181-MB-2	2/21/2018	1108	1219	-29.5	-1	10665	11828	X								
SV-182-MB-2	2/21/2018	1112	1222	-30	-6	11550	10494	X								
SV-184-MB-2	2/21/2018	1118	1224	-29	0	10845	11645	X								
SV-187-MB-2	2/21/2018	1122	1226	-30	-2	11515	11710	X								
SV-186-MB-2	2/21/2018	1130	1233	-30	-3	10289	11591	X								
SV-185-MB-2	2/21/2018	1132	1234	-26	0	10583	09736	X								

Special Instructions/QC Requirements & Comments: **Contracted Analyte List**

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

APPENDIX B—METHOD DETECTION LIMITS

TestAmerica Laboratories - Knoxville, TN
Method Detection Limits and Reporting Limits for TO-15

Analyte	CAS #	MW	MDL (PPBV)	REPORTING LIMIT (PPBV)	MDL (UG/M$^{3)}$	REPORTING LIMIT (UG/M3)	LCS LOWER QC LIMIT	LCS UPPER QC LIMIT	DUPLICATE RPD
1,1,1-TRICHLOROETHANE	71-55-6	133.40	0.06	0.4	0.33	2.2	70	130	25
1,1,2-TRICHLOROETHANE	79-00-5	133.40	0.11	0.4	0.57	2.2	70	130	25
1,1-DICHLOROETHANE	75-34-3	98.96	0.05	0.4	0.2	1.6	70	130	25
1,1-DICHLOROETHENE	75-35-4	96.94	0.07	0.4	0.28	1.6	70	130	25
1,2,3-TRIMETHYLBENZENE	526-73-8	120.19	0.17	0.4	0.84	2	70	130	25
1,2,4-TRICHLOROBENZENE	120-82-1	181.45	0.2	0.4	1.4	3	60	140	25
1,2,4-TRIMETHYLBENZENE	95-63-6	120.19	0.13	0.4	0.61	2	70	130	25
1,2-DICHLOROETHANE	107-06-2	187.86	0.095	0.4	0.38	1.6	70	130	25
1,3,5-TRIMETHYLBENZENE	108-67-8	120.19	0.13	0.4	0.64	2	70	130	25
BENZENE	71-43-2	78.11	0.12	0.4	0.37	1.3	70	130	25
CARBON TETRACHLORIDE	56-23-5	153.82	0.075	0.4	0.47	2.5	70	130	25
CHLORODIFLUOROMETHANE	75-45-6	86.46	0.075	0.4	0.27	1.4	60	140	25
CHLOROFORM	67-66-3	119.37	0.075	0.4	0.37	2	70	130	25
CIS-1,2-DICHLOROETHENE	156-59-2	96.94	0.12	0.4	0.48	1.6	70	130	25
DICHLORODIFLUOROMETHANE	75-71-8	120.91	0.14	0.4	0.67	2	60	140	25
ETHYLBENZENE	100-41-4	106.16	0.14	0.4	0.59	1.7	70	130	25
METHYL TERT-BUTYL ETHER	1634-04-4	88.14	0.34	2	1.2	7.2	60	140	25
METHYLENE CHLORIDE	75-09-2	84.93	0.65	1	2.3	3.5	70	130	25
NAPHTHALENE	91-20-3	128.17	0.2	0.2	1	1	60	140	25
TETRACHLOROETHENE	127-18-4	165.83	0.08	0.4	0.54	2.7	70	130	25
TOLUENE	108-88-3	92.14	0.6	0.6	2.3	2.3	70	130	25
TOTAL XYLENES	1330-20-7	106.16	0.12	0.8	0.52	3.5	70	130	25
TRANS-1,2-DICHLOROETHENE	156-60-5	96.94	0.1	0.4	0.4	1.6	70	130	25
TRICHLOROETHENE	79-01-6	131.38	0.07	0.2	0.38	1.1	70	130	25
VINYL CHLORIDE	75-01-4	62.49	0.15	0.4	0.37	1	70	130	25

APPENDIX C—LABORATORY ANALYTICAL REPORTS

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-001-C-24 Lab Sample ID: 140-10788-1

Matrix: Air Lab File ID: RB26P101.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 16:09

Sample wt/vol: 100(mL) Date Analyzed: 02/26/2018 14:01

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18348 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.49		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.36	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.84	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.54	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-001-C-24 | Lab Sample ID: 140-10788-1

Matrix: Air | Lab File ID: RB26P101.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:09

Sample wt/vol: 100(mL) | Date Analyzed: 02/26/2018 14:01

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.50	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.8	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.9	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-004-C-24 | Lab Sample ID: 140-10788-2

Matrix: Air | Lab File ID: RB26P102.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:11

Sample wt/vol: 100(mL) | Date Analyzed: 02/26/2018 14:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.076	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.61		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.89	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.53	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-004-C-24 | Lab Sample ID: 140-10788-2

Matrix: Air | Lab File ID: RB26P102.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:11

Sample wt/vol: 100(mL) | Date Analyzed: 02/26/2018 14:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.51	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.2		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.1	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-060-C-24 Lab Sample ID: 140-10788-8

Matrix: Air Lab File ID: RB26P108.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 16:45

Sample wt/vol: 100(mL) Date Analyzed: 02/26/2018 19:31

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18348 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.21	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.075	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	4.3		0.40	0.075
67-66-3	Chloroform	119.38	0.096	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.25	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.081	J	0.40	0.080
108-88-3	Toluene	92.14	0.79		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.083	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.30	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.7		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-060-C-24 Lab Sample ID: 140-10788-8

Matrix: Air Lab File ID: RB26P108.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 16:45

Sample wt/vol: 100(mL) Date Analyzed: 02/26/2018 19:31

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18348 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.67	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.47	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	15		1.4	0.27
67-66-3	Chloroform	119.38	0.47	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.1	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.2		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.55	J	2.7	0.54
108-88-3	Toluene	92.14	3.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.45	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.5	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.3		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-088-C-24 | Lab Sample ID: 140-10788-13

Matrix: Air | Lab File ID: RB26P113.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:57

Sample wt/vol: 100(mL) | Date Analyzed: 02/26/2018 23:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.078	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.56		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.38	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.14	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.99	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.80		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.76	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-088-C-24 | Lab Sample ID: 140-10788-13

Matrix: Air | Lab File ID: RB26P113.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:57

Sample wt/vol: 100(mL) | Date Analyzed: 02/26/2018 23:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.56	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.49	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.0		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.61	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.70	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-100-B-24 | Lab Sample ID: 140-10788-22

Matrix: Air | Lab File ID: JB27P107.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 17:15

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 19:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18439 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.89		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.51		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.52		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.5		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	17		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.15	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-100-B-24 | Lab Sample ID: 140-10788-22

Matrix: Air | Lab File ID: JB27P107.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 17:15

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 19:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18439 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.56	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.2		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.3		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.1		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	65		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.73	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	9.5		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-101-B-24 | Lab Sample ID: 140-10788-21

Matrix: Air | Lab File ID: JB27P106.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 17:14

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 19:00

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18439 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.22	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.079	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.3		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.58		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.59		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	19		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.13	J B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.18	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.6		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-101-B-24 Lab Sample ID: 140-10788-21

Matrix: Air Lab File ID: JB27P106.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 17:14

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 19:00

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18439 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.70	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.50	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.6		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.5		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.3		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	70		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.71	J B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.89	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	11		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-102-C-24 | Lab Sample ID: 140-10788-3

Matrix: Air | Lab File ID: RB26P103.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:12

Sample wt/vol: 100(mL) | Date Analyzed: 02/26/2018 15:35

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.076	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.6		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.18	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.90		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.11	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.16	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-102-C-24 Lab Sample ID: 140-10788-3

Matrix: Air Lab File ID: RB26P103.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 16:12

Sample wt/vol: 100(mL) Date Analyzed: 02/26/2018 15:35

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18348 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.56	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	5.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.79	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.1		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.60	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.80	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.0		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-113-C-24 | Lab Sample ID: 140-10788-14

Matrix: Air | Lab File ID: RB26P114.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:58

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 00:14

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.64		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.42		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.26	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.93	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.28	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.6		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-113-C-24 | Lab Sample ID: 140-10788-14

Matrix: Air | Lab File ID: RB26P114.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:58

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 00:14

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.53	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.3		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.1	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.2	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.4	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.0		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-126-C-24 | Lab Sample ID: 140-10788-20

Matrix: Air | Lab File ID: JB27P105.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 17:11

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 18:16

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18439 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.77		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.50		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.3		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.070	J B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-126-C-24 Lab Sample ID: 140-10788-20

Matrix: Air Lab File ID: JB27P105.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 17:11

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 18:16

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18439 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.55	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.6		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.38	J B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-133-C-24 Lab Sample ID: 140-10788-7

Matrix: Air Lab File ID: RB26P107.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 16:24

Sample wt/vol: 100(mL) Date Analyzed: 02/26/2018 18:44

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18348 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.3		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.36	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.40		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.43	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-133-C-24 Lab Sample ID: 140-10788-7

Matrix: Air Lab File ID: RB26P107.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 16:24

Sample wt/vol: 100(mL) Date Analyzed: 02/26/2018 18:44

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18348 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.50	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.4		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.8	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.8		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	2.7		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.9	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-141-C-24 Lab Sample ID: 140-10788-11

Matrix: Air Lab File ID: RB26P111.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 17:00

Sample wt/vol: 100(mL) Date Analyzed: 02/26/2018 21:52

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18348 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.20	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.081	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.4		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.80	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.63	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-141-C-24 | Lab Sample ID: 140-10788-11

Matrix: Air | Lab File ID: RB26P111.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 17:00

Sample wt/vol: 100(mL) | Date Analyzed: 02/26/2018 21:52

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.63	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.51	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.7	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-142-C-24 Lab Sample ID: 140-10788-12

Matrix: Air Lab File ID: RB26P112.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 16:56

Sample wt/vol: 100(mL) Date Analyzed: 02/26/2018 22:39

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18348 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.076	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.59		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.38	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.19	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.85	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.19	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-142-C-24 | Lab Sample ID: 140-10788-12

Matrix: Air | Lab File ID: RB26P112.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:56

Sample wt/vol: 100(mL) | Date Analyzed: 02/26/2018 22:39

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.57	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.1		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.81	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.9	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.94	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.7		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-144-C-24 Lab Sample ID: 140-10788-15

Matrix: Air Lab File ID: RB26P115.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 16:55

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 01:01

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18348 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	4.9		0.40	0.075
67-66-3	Chloroform	119.38	0.12	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.40		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.29	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.12	J	0.40	0.080
108-88-3	Toluene	92.14	0.80		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.071	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.35	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-144-C-24 Lab Sample ID: 140-10788-15

Matrix: Air Lab File ID: RB26P115.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 16:55

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 01:01

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18348 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.61	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	17		1.4	0.27
67-66-3	Chloroform	119.38	0.58	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.3	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.9		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.83	J	2.7	0.54
108-88-3	Toluene	92.14	3.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.39	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.7	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	8.9		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-145-C-24 | Lab Sample ID: 140-10788-17

Matrix: Air | Lab File ID: JB27P102.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:53

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 16:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18439 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.081	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	19		0.40	0.075
67-66-3	Chloroform	119.38	0.085	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.53		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.16	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.18	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-145-C-24 | Lab Sample ID: 140-10788-17

Matrix: Air | Lab File ID: JB27P102.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:53

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 16:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18439 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.58	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.51	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	67		1.4	0.27
67-66-3	Chloroform	119.38	0.41	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.69	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.1		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.87	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.4		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-146-C-24 | Lab Sample ID: 140-10788-16

Matrix: Air | Lab File ID: JB27P101.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:54

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 15:17

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18439 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.20	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.076	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	19		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.58		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.16	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.19	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-146-C-24 Lab Sample ID: 140-10788-16

Matrix: Air Lab File ID: JB27P101.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 16:54

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 15:17

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18439 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.64	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	66		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.68	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.9		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.95	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.5		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-149-C-24 Lab Sample ID: 140-10788-18

Matrix: Air Lab File ID: JB27P103.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 17:02

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 16:47

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18439 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.94		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.50		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.5		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.27	J	0.40	0.080
108-88-3	Toluene	92.14	1.5		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.29	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-149-C-24 | Lab Sample ID: 140-10788-18

Matrix: Air | Lab File ID: JB27P103.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 17:02

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 16:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18439 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.61	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.3		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.1		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.8	J	2.7	0.54
108-88-3	Toluene	92.14	5.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-150-C-24 | Lab Sample ID: 140-10788-10

Matrix: Air | Lab File ID: RB26P110.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:48

Sample wt/vol: 100(mL) | Date Analyzed: 02/26/2018 21:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.20	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	17		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.18	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.83	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.23	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-150-C-24 | Lab Sample ID: 140-10788-10

Matrix: Air | Lab File ID: RB26P110.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:48

Sample wt/vol: 100(mL) | Date Analyzed: 02/26/2018 21:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.65	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	60		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.78	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.9	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.1	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.0		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-152-C-24 | Lab Sample ID: 140-10788-9

Matrix: Air | Lab File ID: RB26P109.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:47

Sample wt/vol: 100(mL) | Date Analyzed: 02/26/2018 20:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.24	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.079	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	6.7		0.40	0.075
67-66-3	Chloroform	119.38	0.091	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.38	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.25	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.82		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.11	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.35	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.7		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-152-C-24 | Lab Sample ID: 140-10788-9

Matrix: Air | Lab File ID: RB26P109.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:47

Sample wt/vol: 100(mL) | Date Analyzed: 02/26/2018 20:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.76	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.49	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	24		1.4	0.27
67-66-3	Chloroform	119.38	0.44	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.1	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.61	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.7	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-153-C-24 Lab Sample ID: 140-10788-5

Matrix: Air Lab File ID: RB26P105.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 16:18

Sample wt/vol: 100(mL) Date Analyzed: 02/26/2018 17:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18348 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.20	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.4		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.14	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.69	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.61		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.31	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.85		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-153-C-24 Lab Sample ID: 140-10788-5

Matrix: Air Lab File ID: RB26P105.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 16:18

Sample wt/vol: 100(mL) Date Analyzed: 02/26/2018 17:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18348 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.63	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.59	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.5	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.7		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-155-C-24 | Lab Sample ID: 140-10788-4

Matrix: Air | Lab File ID: RB26P104.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:16

Sample wt/vol: 100(mL) | Date Analyzed: 02/26/2018 16:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.076	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.4		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.34	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.85		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.061	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.15	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.87		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-155-C-24 Lab Sample ID: 140-10788-4

Matrix: Air Lab File ID: RB26P104.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 16:16

Sample wt/vol: 100(mL) Date Analyzed: 02/26/2018 16:22

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18348 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.60	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.7	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.64	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	5.0		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.33	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.75	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.8		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-DUP01-C-24 | Lab Sample ID: 140-10788-6

Matrix: Air | Lab File ID: RB26P106.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 02/26/2018 17:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.21	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.077	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.3		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.40		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.73		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.30	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.92		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-DUP01-C-24 Lab Sample ID: 140-10788-6

Matrix: Air Lab File ID: RB26P106.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 00:00

Sample wt/vol: 100(mL) Date Analyzed: 02/26/2018 17:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18348 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.66	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.49	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.66	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.8		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.5	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.0		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-DUP02-C-24 Lab Sample ID: 140-10788-19

Matrix: Air Lab File ID: JB27P104.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 00:00

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 17:31

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18439 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.23	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.081	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.1		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.61		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.7		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.5		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.28	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-DUP02-C-24 Lab Sample ID: 140-10788-19

Matrix: Air Lab File ID: JB27P104.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 00:00

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 17:31

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18439 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.72	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.51	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	6.0		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.6		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-138-A-24 | Lab Sample ID: 140-10789-1

Matrix: Air | Lab File ID: RB27P101.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:30

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 14:45

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.23	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.15	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.37	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.11	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.97	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.075	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.41		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-138-A-24 Lab Sample ID: 140-10789-1

Matrix: Air Lab File ID: RB27P101.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 16:30

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 14:45

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18442 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.74	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.96	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.45	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.41	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.2		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-093-A-24 | Lab Sample ID: 140-10789-2

Matrix: Air | Lab File ID: RB27P102.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:32

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 15:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.25	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.16	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.44		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.13	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.33	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.12	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.82	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.14	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.63		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-093-A-24 | Lab Sample ID: 140-10789-2

Matrix: Air | Lab File ID: RB27P102.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:32

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 15:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.79	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.98	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	0.50	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.6	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.47	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.9	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.79	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	3.4		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-018-A-24 | Lab Sample ID: 140-10789-3

Matrix: Air | Lab File ID: RB27P103.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:36

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 16:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.26	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.098	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.37	J	0.40	0.075
67-66-3	Chloroform	119.38	0.20	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.36	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.18	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.16	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.3		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	1.1		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.87		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.39		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.65	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-018-A-24 | Lab Sample ID: 140-10789-3

Matrix: Air | Lab File ID: RB27P103.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:36

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 16:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.84	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.61	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	1.0	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.8	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.72	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	0.67	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	7.9		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	5.7		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.1		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.8	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-DUP01-A-24 Lab Sample ID: 140-10789-4

Matrix: Air Lab File ID: RB27P104.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 00:00

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 17:08

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18442 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.22	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.094	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.36	J	0.40	0.075
67-66-3	Chloroform	119.38	0.24	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.32	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.20	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.82	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.91		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.46		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-DUP01-A-24 Lab Sample ID: 140-10789-4

Matrix: Air Lab File ID: RB27P104.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 00:00

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 17:08

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18442 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.69	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.59	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	1.2	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.6	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.80	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	4.8		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-174-A-24 Lab Sample ID: 140-10789-5

Matrix: Air Lab File ID: RB27P105.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 16:40

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 17:56

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18442 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.28	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.14	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.38	J	0.40	0.075
67-66-3	Chloroform	119.38	0.088	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.34	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.094	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.3		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.75		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.10	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.51		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.49	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-174-A-24 Lab Sample ID: 140-10789-5

Matrix: Air Lab File ID: RB27P105.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 16:40

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 17:56

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18442 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.89	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.88	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	0.43	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.7	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.37	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.4		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.55	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.7		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.1	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-118-A-24 | Lab Sample ID: 140-10789-6

Matrix: Air | Lab File ID: RB27P106.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:49

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 18:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.078	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.8		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.34	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.20	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.99	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.14	J	0.40	0.080
108-88-3	Toluene	92.14	2.0		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-118-A-24 | Lab Sample ID: 140-10789-6

Matrix: Air | Lab File ID: RB27P106.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:49

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 18:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.47	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.49	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	9.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.7	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.88	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.97	J	2.7	0.54
108-88-3	Toluene	92.14	7.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.1		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-081-A-24 | Lab Sample ID: 140-10789-7

Matrix: Air | Lab File ID: RB27P107.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:53

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 19:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.078	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.2		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.28	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	4.2		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	5.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.13	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.6		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-081-A-24 Lab Sample ID: 140-10789-7

Matrix: Air Lab File ID: RB27P107.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 16:53

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 19:30

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18442 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.46	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.49	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.4		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.2	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	14		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	20		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.62	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	6.9		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-079-A-24 | Lab Sample ID: 140-10789-8

Matrix: Air | Lab File ID: RB27P108.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:55

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 20:17

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.076	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.54		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.34	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.28	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.95	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	9.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.21	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-079-A-24 Lab Sample ID: 140-10789-8

Matrix: Air Lab File ID: RB27P108.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 16:55

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 20:17

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18442 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.61	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.7	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.2	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	35		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.0	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.4		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-DUP02-A-24 | Lab Sample ID: 140-10789-9

Matrix: Air | Lab File ID: RB27P109.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 21:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	3.2		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.077	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.52		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.38	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.79		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.97	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.33	J	0.40	0.080
108-88-3	Toluene	92.14	12		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.42		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-DUP02-A-24 Lab Sample ID: 140-10789-9

Matrix: Air Lab File ID: RB27P109.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 00:00

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 21:04

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18442 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	10		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	3.4		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	2.2	J	2.7	0.54
108-88-3	Toluene	92.14	44		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	2.1		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	14		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-117-A-24 Lab Sample ID: 140-10789-10

Matrix: Air Lab File ID: RB27P110.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 16:56

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 21:52

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18442 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.084	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.40		0.40	0.075
67-66-3	Chloroform	119.38	0.16	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.22	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	10		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.33	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-117-A-24 | Lab Sample ID: 140-10789-10

Matrix: Air | Lab File ID: RB27P110.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:56

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 21:52

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.53	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4		1.4	0.27
67-66-3	Chloroform	119.38	0.77	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.98	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	38		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.6	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.4		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-078-A-24 | Lab Sample ID: 140-10789-11

Matrix: Air | Lab File ID: RB27P111.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:59

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 22:39

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.44		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.24	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.3		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	10		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.33	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-078-A-24 Lab Sample ID: 140-10789-11

Matrix: Air Lab File ID: RB27P111.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 16:59

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 22:39

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18442 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.44	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.1	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.4		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	39		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.6	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.0		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-136-A-24 | Lab Sample ID: 140-10789-12

Matrix: Air | Lab File ID: RB27P112.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 17:02

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 23:26

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.12	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.48		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.26	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.87	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.53		0.40	0.080
108-88-3	Toluene	92.14	12		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.11	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.21	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-136-A-24 | Lab Sample ID: 140-10789-12

Matrix: Air | Lab File ID: RB27P112.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 17:02

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 23:26

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.38	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.1	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.0	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	3.6		2.7	0.54
108-88-3	Toluene	92.14	44		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.57	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.0	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-168-A-24 | Lab Sample ID: 140-10789-13

Matrix: Air | Lab File ID: RB27P113.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 17:08

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 00:13

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.40		0.40	0.075
67-66-3	Chloroform	119.38	0.092	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.31	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.22	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.97	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.54		0.40	0.080
108-88-3	Toluene	92.14	8.3		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.15	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.35	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-168-A-24 | Lab Sample ID: 140-10789-13

Matrix: Air | Lab File ID: RB27P113.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 17:08

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 00:13

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.44	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4		1.4	0.27
67-66-3	Chloroform	119.38	0.45	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.5	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.93	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	3.7		2.7	0.54
108-88-3	Toluene	92.14	31		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.82	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.7	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.5		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-076-A-24 | Lab Sample ID: 140-10789-14

Matrix: Air | Lab File ID: RB27P114.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 17:11

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 01:00

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.40		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.26	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	9.9		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.25	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-076-A-24 Lab Sample ID: 140-10789-14

Matrix: Air Lab File ID: RB27P114.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 17:11

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 01:00

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18442 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.42	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.1	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	37		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.3	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.1		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-075-A-24 | Lab Sample ID: 140-10789-15

Matrix: Air | Lab File ID: RB27P115.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 17:15

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 01:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.079	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.98		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.35	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.38	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.79	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.16	J	0.40	0.080
108-88-3	Toluene	92.14	9.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.31	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-075-A-24 | Lab Sample ID: 140-10789-15

Matrix: Air | Lab File ID: RB27P115.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 17:15

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 01:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.41	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.50	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.7	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.7	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.7	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.1	J	2.7	0.54
108-88-3	Toluene	92.14	35		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.5	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	8.6		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-021-A-24 | Lab Sample ID: 140-10789-16

Matrix: Air | Lab File ID: RB27P116D.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 17:18

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 02:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.078	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.50		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.36	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.20	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.87	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	8.0		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.080	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.20	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.89		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-021-A-24 | Lab Sample ID: 140-10789-16

Matrix: Air | Lab File ID: RB27P116D.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 17:18

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 02:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.42	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.49	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.8	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.88	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.0	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	30		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.43	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.97	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.9		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-015-A-24 | Lab Sample ID: 140-10789-17

Matrix: Air | Lab File ID: RB27P201.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 17:22

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 04:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.21	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.78		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.43		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.87	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.8		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.63	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-015-A-24 | Lab Sample ID: 140-10789-17

Matrix: Air | Lab File ID: RB27P201.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 17:22

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 04:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.66	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.0	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	6.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.7	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-DUP02-C-24 Lab Sample ID: 140-10790-1

Matrix: Air Lab File ID: GB28P101.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 00:00

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 14:32

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.25	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.077	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.66		0.40	0.075
67-66-3	Chloroform	119.38	2.1		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.59		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.34	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	B	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.9		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.67		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.32	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.8		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	108		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-DUP02-C-24 Lab Sample ID: 140-10790-1

Matrix: Air Lab File ID: GB28P101.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 00:00

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 14:32

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.81	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.3		1.4	0.27
67-66-3	Chloroform	119.38	10		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.5	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.7	B	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	11		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	3.6		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.6	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.6		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	108		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-126-C-24 | Lab Sample ID: 140-10790-2

Matrix: Air | Lab File ID: GB28P102.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:37

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 15:14

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18437 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	64		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.19	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.29	J	0.40	0.075
67-66-3	Chloroform	119.38	0.13	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	75		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.59		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.36	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	*1,1-Dichloroethene*	*96.94*	*160*	*E*	*0.40*	*0.070*
100-41-4	Ethylbenzene	106.17	0.35	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4	B	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.37		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.7		0.40	0.080
108-88-3	Toluene	92.14	3.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	7.5		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	*Trichloroethene*	*131.39*	*110*	*E*	*0.20*	*0.070*
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.29	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.14	J	0.40	0.13
75-01-4	*Vinyl chloride*	*62.50*	*600*	*E*	*0.20*	*0.15*
1330-20-7	Xylenes, Total	106.17	1.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	109		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-126-C-24 Lab Sample ID: 140-10790-2

Matrix: Air Lab File ID: GB28P102.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 11:37

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 15:14

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	210		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	1.2	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.0	J	1.4	0.27
67-66-3	Chloroform	119.38	0.62	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	300		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	1.5	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	*1,1-Dichloroethene*	*96.94*	*650*	*E*	*1.6*	*0.28*
100-41-4	Ethylbenzene	106.17	1.5	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.8	B	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.9		1.0	1.0
127-18-4	Tetrachloroethene	165.83	11		2.7	0.54
108-88-3	Toluene	92.14	13		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	30		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	*Trichloroethene*	*131.39*	*590*	*E*	*1.1*	*0.38*
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.4	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.69	J	2.0	0.64
75-01-4	*Vinyl chloride*	*62.50*	*1500*	*E*	*0.51*	*0.37*
1330-20-7	Xylenes, Total	106.17	5.1		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	109		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-126-C-24 DL Lab Sample ID: 140-10790-2 DL

Matrix: Air Lab File ID: GC02P101.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 11:37

Sample wt/vol: 11(mL) Date Analyzed: 03/02/2018 15:47

Soil Aliquot Vol: Dilution Factor: 4.02

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18524 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	96.94	140		15	2.6
79-01-6	Trichloroethene	131.39	100		7.3	2.6
75-01-4	Vinyl chloride	62.50	1100		7.3	5.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-126-C-24 DL Lab Sample ID: 140-10790-2 DL

Matrix: Air Lab File ID: GC02P101.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 11:37

Sample wt/vol: 11(mL) Date Analyzed: 03/02/2018 15:47

Soil Aliquot Vol: Dilution Factor: 4.02

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18524 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	96.94	540		58	10
79-01-6	Trichloroethene	131.39	540		39	14
75-01-4	Vinyl chloride	62.50	2700		19	14

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-101-B-24 Lab Sample ID: 140-10790-3

Matrix: Air Lab File ID: GB28P103R.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 11:56

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 03:51

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.61		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.61		0.40	0.075
67-66-3	Chloroform	119.38	0.13	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	1.6		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.16	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.80	J B	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.81		0.20	0.20
127-18-4	Tetrachloroethene	165.83	8.6		0.40	0.080
108-88-3	Toluene	92.14	2.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	36		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	18		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.46		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.88		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.42		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.92		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-101-B-24 | Lab Sample ID: 140-10790-3

Matrix: Air | Lab File ID: GB28P103R.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:56

Sample wt/vol: 100(mL) | Date Analyzed: 03/01/2018 03:51

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18437 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	3.8		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.1		1.4	0.27
67-66-3	Chloroform	119.38	0.62	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	7.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.71	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J B	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	4.2		1.0	1.0
127-18-4	Tetrachloroethene	165.83	58		2.7	0.54
108-88-3	Toluene	92.14	8.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	200		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	94		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	2.2		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	4.3		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	2.0		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.0		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-100-B-24 Lab Sample ID: 140-10790-4

Matrix: Air Lab File ID: GB28P104.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 12:00

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 16:40

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.46		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.52		0.40	0.075
67-66-3	Chloroform	119.38	0.47		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.81		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.3	B	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.84		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.10	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.2		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.13	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-100-B-24 | Lab Sample ID: 140-10790-4

Matrix: Air | Lab File ID: GB28P104.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 12:00

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 16:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18437 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	2.9		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.8		1.4	0.27
67-66-3	Chloroform	119.38	2.3		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	4.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.6	B	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	5.7		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.56	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	6.4		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.63	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-093-A-24 Lab Sample ID: 140-10790-5

Matrix: Air Lab File ID: GB28P105.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:36

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 17:21

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.24	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.10	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.38	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.18	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.52		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.36	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.26	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.81	J B	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.17	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.46		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-093-A-24 | Lab Sample ID: 140-10790-5

Matrix: Air | Lab File ID: GB28P105.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 11:36

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 17:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18437 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.78	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.66	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	0.69	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	1.5	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.0	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J B	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.94	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-174-A-24 | Lab Sample ID: 140-10790-6

Matrix: Air | Lab File ID: GB28P106.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 11:38

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 18:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18437 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.12	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.078	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	0.98		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	2.3		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.55		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	4.4		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	11		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.17	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.97	J B	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.15	J	0.40	0.080
108-88-3	Toluene	92.14	0.80		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.12	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	6.2		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	50		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.20	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.95		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-174-A-24 Lab Sample ID: 140-10790-6

Matrix: Air Lab File ID: GB28P106.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:38

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 18:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.38	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.49	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	4.8		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	9.1		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	18		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	43		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.75	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.4	J B	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.0	J	2.7	0.54
108-88-3	Toluene	92.14	3.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	0.49	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	34		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	270		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.98	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.1		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-138-A-24 Lab Sample ID: 140-10790-7

Matrix: Air Lab File ID: GB28P107.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:39

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 18:44

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.23	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.13	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.42		0.40	0.075
67-66-3	Chloroform	119.38	0.076	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	1.8		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.59		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.63		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	3.0		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.92	J B	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.7		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.079	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	15		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-138-A-24 | Lab Sample ID: 140-10790-7

Matrix: Air | Lab File ID: GB28P107.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 11:39

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 18:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18437 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.74	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.79	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	0.37	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	7.0		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	2.5		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	12		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.2	J B	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	12		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.43	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	83		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-116-A-24 Lab Sample ID: 140-10790-8

Matrix: Air Lab File ID: GB28P108.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:41

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 19:26

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.089	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.38	J	0.40	0.075
67-66-3	Chloroform	119.38	0.17	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.52		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.085	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.79	J B	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	2.3		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.061	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.65		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-116-A-24 Lab Sample ID: 140-10790-8

Matrix: Air Lab File ID: GB28P108.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:41

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 19:26

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.53	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.56	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	0.82	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.34	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J B	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	16		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.33	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	3.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-DUP01-A-24 Lab Sample ID: 140-10790-9

Matrix: Air Lab File ID: GB28P109.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 00:00

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 20:07

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.095	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.40		0.40	0.075
67-66-3	Chloroform	119.38	0.18	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.55		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.11	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.89	J B	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.26		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.8		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.068	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.86		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-DUP01-A-24 Lab Sample ID: 140-10790-9

Matrix: Air Lab File ID: GB28P109.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 00:00

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 20:07

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.59	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.60	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4		1.4	0.27
67-66-3	Chloroform	119.38	0.89	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.45	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.1	J B	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.4		1.0	1.0
127-18-4	Tetrachloroethene	165.83	12		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.37	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	4.6		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-173-A-24 | Lab Sample ID: 140-10790-10

Matrix: Air | Lab File ID: GB28P110.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 11:43

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 20:49

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18437 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.33	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.53		0.40	0.075
67-66-3	Chloroform	119.38	2.9		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	77		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.69		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	18		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	0.31	J	0.40	0.095
75-35-4	*1,1-Dichloroethene*	*96.94*	*370*	*E*	*0.40*	*0.070*
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.3	B	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.58		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	3.3		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	1.6		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	0.13	J	0.40	0.11
79-01-6	*Trichloroethene*	*131.39*	*900*	*E*	*0.20*	*0.070*
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	0.51		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.31	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	108		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-173-A-24 Lab Sample ID: 140-10790-10

Matrix: Air Lab File ID: GB28P110.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:43

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 20:49

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.0	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9		1.4	0.27
67-66-3	Chloroform	119.38	14		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	310		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	71		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	1.3	J	1.6	0.38
75-35-4	*1,1-Dichloroethene*	*96.94*	*1500*	*E*	*1.6*	*0.28*
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.5	B	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	4.0		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	13		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	8.5		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	0.70	J	2.2	0.57
79-01-6	*Trichloroethene*	*131.39*	*4800*	*E*	*1.1*	*0.38*
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.68	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	1.3		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	108		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-173-A-24 DL Lab Sample ID: 140-10790-10 DL

Matrix: Air Lab File ID: GC02P102.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:43

Sample wt/vol: 11(mL) Date Analyzed: 03/02/2018 16:28

Soil Aliquot Vol: Dilution Factor: 3.42

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18524 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	96.94	320		12	2.2
79-01-6	Trichloroethene	131.39	2200		6.2	2.2

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-173-A-24 DL Lab Sample ID: 140-10790-10 DL

Matrix: Air Lab File ID: GC02P102.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:43

Sample wt/vol: 11(mL) Date Analyzed: 03/02/2018 16:28

Soil Aliquot Vol: Dilution Factor: 3.42

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18524 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	96.94	1300		49	8.6
79-01-6	Trichloroethene	131.39	12000		33	12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-171-A-24 | Lab Sample ID: 140-10790-11

Matrix: Air | Lab File ID: GB28P111.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 11:44

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 21:32

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18437 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.27	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.39	J	0.40	0.075
67-66-3	Chloroform	119.38	1.7		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	23		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.51		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	5.6		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	0.13	J	0.40	0.095
75-35-4	*1,1-Dichloroethene*	*96.94*	*150*	*E*	*0.40*	*0.070*
100-41-4	Ethylbenzene	106.17	0.19	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.7	B	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.7		0.40	0.080
108-88-3	Toluene	92.14	1.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	1.3		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.35	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	*Trichloroethene*	*131.39*	*500*	*E*	*0.20*	*0.070*
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.19	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	0.15	J	0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.98		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-171-A-24 | Lab Sample ID: 140-10790-11

Matrix: Air | Lab File ID: GB28P111.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 11:44

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 21:32

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18437 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.86	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4	J	1.4	0.27
67-66-3	Chloroform	119.38	8.5		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	92		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	23		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	0.52	J	1.6	0.38
75-35-4	*1,1-Dichloroethene*	*96.94*	*580*	*E*	*1.6*	*0.28*
100-41-4	Ethylbenzene	106.17	0.84	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	5.8	B	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	11		2.7	0.54
108-88-3	Toluene	92.14	4.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	5.0		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.9	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	*Trichloroethene*	*131.39*	*2700*	*E*	*1.1*	*0.38*
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.95	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	0.37	J	0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.3		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-171-A-24 DL Lab Sample ID: 140-10790-11 DL

Matrix: Air Lab File ID: GC02P103.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:44

Sample wt/vol: 11(mL) Date Analyzed: 03/02/2018 17:09

Soil Aliquot Vol: Dilution Factor: 3.38

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18524 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	96.94	130		12	2.2
79-01-6	Trichloroethene	131.39	580		6.1	2.2

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	108		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-171-A-24 DL Lab Sample ID: 140-10790-11 DL

Matrix: Air Lab File ID: GC02P103.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:44

Sample wt/vol: 11(mL) Date Analyzed: 03/02/2018 17:09

Soil Aliquot Vol: Dilution Factor: 3.38

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18524 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	96.94	510		49	8.5
79-01-6	Trichloroethene	131.39	3100		33	12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	108		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-170-A-24 | Lab Sample ID: 140-10790-12

Matrix: Air | Lab File ID: GC02P104.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 11:46

Sample wt/vol: 100(mL) | Date Analyzed: 03/02/2018 18:32

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18524 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.25	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.082	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.65		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.51		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.12	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	2.1		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.20	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.86	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.3		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.21	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	4.8		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.19	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-170-A-24 | Lab Sample ID: 140-10790-12

Matrix: Air | Lab File ID: GC02P104.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 11:46

Sample wt/vol: 100(mL) | Date Analyzed: 03/02/2018 18:32

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18524 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.81	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.52	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	2.6		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.50	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	8.4		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.87	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.0	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.2	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	26		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.93	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.3		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-015-A-24 Lab Sample ID: 140-10790-13

Matrix: Air Lab File ID: GB28P113.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:48

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 22:56

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.67		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.076	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.81		0.40	0.075
67-66-3	Chloroform	119.38	0.10	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.29	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.70		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.68		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	2.2		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.23	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	B	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.32	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.2		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.13	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.96		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-015-A-24 | Lab Sample ID: 140-10790-13

Matrix: Air | Lab File ID: GB28P113.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 11:48

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 22:56

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18437 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.2		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.9		1.4	0.27
67-66-3	Chloroform	119.38	0.49	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	1.2	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	2.7		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	8.9		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.99	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.7	B	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	9.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.7	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	6.3		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.62	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-118-A-24 | Lab Sample ID: 140-10790-14

Matrix: Air | Lab File ID: GB28P114.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 11:49

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 23:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18437 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.081	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.2		0.40	0.075
67-66-3	Chloroform	119.38	0.53		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	23		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.59		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	7.5		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	57		0.40	0.070
100-41-4	Ethylbenzene	106.17	2.3		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.5	B	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	2.4		0.40	0.080
108-88-3	Toluene	92.14	0.65		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	2.0		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	2.1		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	*Trichloroethene*	*131.39*	*290*	*E*	*0.20*	*0.070*
526-73-8	1,2,3-Trimethylbenzene	120.19	0.76		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	2.0		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	1.2		0.40	0.13
75-01-4	Vinyl chloride	62.50	0.44		0.20	0.15
1330-20-7	Xylenes, Total	106.17	21		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-118-A-24 | Lab Sample ID: 140-10790-14

Matrix: Air | Lab File ID: GB28P114.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 11:49

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 23:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18437 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.61	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.51	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.1		1.4	0.27
67-66-3	Chloroform	119.38	2.6		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	91		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	30		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	230		1.6	0.28
100-41-4	Ethylbenzene	106.17	9.8		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.4	B	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	16		2.7	0.54
108-88-3	Toluene	92.14	2.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	8.0		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	11		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	*Trichloroethene*	*131.39*	*1600*	*E*	*1.1*	*0.38*
526-73-8	1,2,3-Trimethylbenzene	120.19	3.8		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	9.6		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	6.1		2.0	0.64
75-01-4	Vinyl chloride	62.50	1.1		0.51	0.37
1330-20-7	Xylenes, Total	106.17	91		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-118-A-24 DL Lab Sample ID: 140-10790-14 DL

Matrix: Air Lab File ID: RC05P106.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:49

Sample wt/vol: 25(mL) Date Analyzed: 03/05/2018 18:39

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18533 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	131.39	280		0.80	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-118-A-24 DL Lab Sample ID: 140-10790-14 DL

Matrix: Air Lab File ID: RC05P106.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:49

Sample wt/vol: 25(mL) Date Analyzed: 03/05/2018 18:39

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18533 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	131.39	1500		4.3	1.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-081-A-24 Lab Sample ID: 140-10790-15

Matrix: Air Lab File ID: GB28P115.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:53

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 00:20

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.087	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.1		0.40	0.075
67-66-3	Chloroform	119.38	0.44		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.58		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.47		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.99	J B	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.91		0.20	0.20
127-18-4	Tetrachloroethene	165.83	2.0		0.40	0.080
108-88-3	Toluene	92.14	1.5		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.71		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.10	J	0.20	0.070
526-73-8	*1,2,3-Trimethylbenzene*	*120.19*	*180*	*E*	*0.40*	*0.17*
95-63-6	1,2,4-Trimethylbenzene	120.20	14		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	44		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	4.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-081-A-24 Lab Sample ID: 140-10790-15

Matrix: Air Lab File ID: GB28P115.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:53

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 00:20

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.55	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.0		1.4	0.27
67-66-3	Chloroform	119.38	2.1		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.1		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.4	J B	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	4.8		1.0	1.0
127-18-4	Tetrachloroethene	165.83	13		2.7	0.54
108-88-3	Toluene	92.14	5.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	3.9		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.54	J	1.1	0.38
526-73-8	*1,2,3-Trimethylbenzene*	*120.19*	*900*	*E*	*2.0*	*0.84*
95-63-6	1,2,4-Trimethylbenzene	120.20	67		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	220		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	19		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-081-A-24 DL Lab Sample ID: 140-10790-15 DL

Matrix: Air Lab File ID: RC05P107.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:53

Sample wt/vol: 30(mL) Date Analyzed: 03/05/2018 19:27

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18533 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
526-73-8	1,2,3-Trimethylbenzene	120.19	180		1.3	0.57

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-081-A-24 DL Lab Sample ID: 140-10790-15 DL

Matrix: Air Lab File ID: RC05P107.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:53

Sample wt/vol: 30(mL) Date Analyzed: 03/05/2018 19:27

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18533 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
526-73-8	1,2,3-Trimethylbenzene	120.19	880		6.6	2.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-079-A-24 Lab Sample ID: 140-10790-16

Matrix: Air Lab File ID: GB28P116D.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:55

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 01:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	5.7		0.40	0.075
67-66-3	Chloroform	119.38	0.082	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.58		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.74		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.80	J B	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	3.7		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.13	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.23	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	16		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.32	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.24	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-079-A-24 Lab Sample ID: 140-10790-16

Matrix: Air Lab File ID: GB28P116D.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:55

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 01:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.41	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	20		1.4	0.27
67-66-3	Chloroform	119.38	0.40	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	3.2		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J B	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	25		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	0.53	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.3	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	87		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	1.5	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.2	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	15		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-DUP02-A-24 Lab Sample ID: 140-10790-17

Matrix: Air Lab File ID: RC05P108.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 00:00

Sample wt/vol: 100(mL) Date Analyzed: 03/05/2018 20:14

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18533 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	4.8		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.75		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	4.5		0.40	0.080
108-88-3	Toluene	92.14	0.61		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.13	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.20	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	18		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	1.6		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.35	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.40		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-DUP02-A-24 Lab Sample ID: 140-10790-17

Matrix: Air Lab File ID: RC05P108.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 00:00

Sample wt/vol: 100(mL) Date Analyzed: 03/05/2018 20:14

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18533 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.41	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	17		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	3.3		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.9		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	30		2.7	0.54
108-88-3	Toluene	92.14	2.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	0.53	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.1	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	96		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	7.6		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.7	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	2.0		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	15		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-078-A-24 | Lab Sample ID: 140-10790-18

Matrix: Air | Lab File ID: RC05P109.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 11:58

Sample wt/vol: 100(mL) | Date Analyzed: 03/05/2018 21:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18533 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.082	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.38	J	0.40	0.075
67-66-3	Chloroform	119.38	0.098	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.38	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.32	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	3.2		0.40	0.080
108-88-3	Toluene	92.14	1.8		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.16	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	2.2		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.35	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.6		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-078-A-24 Lab Sample ID: 140-10790-18

Matrix: Air Lab File ID: RC05P109.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:58

Sample wt/vol: 100(mL) Date Analyzed: 03/05/2018 21:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18533 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.43	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.51	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4	J	1.4	0.27
67-66-3	Chloroform	119.38	0.48	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.4	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.9		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	22		2.7	0.54
108-88-3	Toluene	92.14	6.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.85	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	12		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.7	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.0		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-136-A-24 | Lab Sample ID: 140-10790-19

Matrix: Air | Lab File ID: RC05P110.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 12:00

Sample wt/vol: 50(mL) | Date Analyzed: 03/05/2018 21:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18533 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.61	J	0.80	0.23
56-23-5	Carbon tetrachloride	153.81	ND		0.80	0.15
75-45-6	Chlorodifluoromethane	86.47	0.49	J	0.80	0.15
67-66-3	Chloroform	119.38	1.6		0.80	0.15
156-59-2	cis-1,2-Dichloroethene	96.94	0.46	J	0.80	0.24
75-71-8	Dichlorodifluoromethane	120.91	0.59	J	0.80	0.27
75-34-3	1,1-Dichloroethane	98.96	ND		0.80	0.10
107-06-2	1,2-Dichloroethane	98.96	ND		0.80	0.19
75-35-4	1,1-Dichloroethene	96.94	ND		0.80	0.14
100-41-4	Ethylbenzene	106.17	1.2		0.80	0.27
75-09-2	Methylene Chloride	84.93	ND		2.0	1.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		4.0	0.68
91-20-3	Naphthalene	128.17	ND		0.40	0.40
127-18-4	Tetrachloroethene	165.83	ND		0.80	0.16
108-88-3	Toluene	92.14	13		1.2	1.2
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.80	0.20
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.80	0.39
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.80	0.12
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.80	0.21
79-01-6	Trichloroethene	131.39	70		0.40	0.14
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.80	0.34
95-63-6	1,2,4-Trimethylbenzene	120.20	0.89		0.80	0.25
108-67-8	1,3,5-Trimethylbenzene	120.20	0.34	J	0.80	0.26
75-01-4	Vinyl chloride	62.50	ND		0.40	0.29
1330-20-7	Xylenes, Total	106.17	7.5		1.6	0.24

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-136-A-24 Lab Sample ID: 140-10790-19

Matrix: Air Lab File ID: RC05P110.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:00

Sample wt/vol: 50(mL) Date Analyzed: 03/05/2018 21:48

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18533 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.0	J	2.6	0.73
56-23-5	Carbon tetrachloride	153.81	ND		5.0	0.94
75-45-6	Chlorodifluoromethane	86.47	1.7	J	2.8	0.53
67-66-3	Chloroform	119.38	8.0		3.9	0.73
156-59-2	cis-1,2-Dichloroethene	96.94	1.8	J	3.2	0.95
75-71-8	Dichlorodifluoromethane	120.91	2.9	J	4.0	1.3
75-34-3	1,1-Dichloroethane	98.96	ND		3.2	0.40
107-06-2	1,2-Dichloroethane	98.96	ND		3.2	0.77
75-35-4	1,1-Dichloroethene	96.94	ND		3.2	0.56
100-41-4	Ethylbenzene	106.17	5.4		3.5	1.2
75-09-2	Methylene Chloride	84.93	ND		6.9	4.5
1634-04-4	Methyl tert-butyl ether	88.15	ND		14	2.5
91-20-3	Naphthalene	128.17	ND		2.1	2.1
127-18-4	Tetrachloroethene	165.83	ND		5.4	1.1
108-88-3	Toluene	92.14	50		4.5	4.5
156-60-5	trans-1,2-Dichloroethene	96.94	ND		3.2	0.79
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		5.9	2.9
71-55-6	1,1,1-Trichloroethane	133.41	ND		4.4	0.65
79-00-5	1,1,2-Trichloroethane	133.41	ND		4.4	1.1
79-01-6	Trichloroethene	131.39	380		2.1	0.75
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		3.9	1.7
95-63-6	1,2,4-Trimethylbenzene	120.20	4.4		3.9	1.2
108-67-8	1,3,5-Trimethylbenzene	120.20	1.7	J	3.9	1.3
75-01-4	Vinyl chloride	62.50	ND		1.0	0.74
1330-20-7	Xylenes, Total	106.17	33		6.9	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: IA-BCK-1-24 Lab Sample ID: 140-10791-16

Matrix: Air Lab File ID: JB28P116.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 16:32

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 02:04

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.12	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.080	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.40		0.40	0.075
67-66-3	Chloroform	119.38	0.11	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.48		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: IA-BCK-1-24 | Lab Sample ID: 140-10791-16

Matrix: Air | Lab File ID: JB28P116.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:32

Sample wt/vol: 100(mL) | Date Analyzed: 03/01/2018 02:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.39	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.50	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4		1.4	0.27
67-66-3	Chloroform	119.38	0.55	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: IA-BCK-2-24 Lab Sample ID: 140-10791-17

Matrix: Air Lab File ID: JB28P201.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 16:29

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 02:51

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.085	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.40		0.40	0.075
67-66-3	Chloroform	119.38	0.19	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.68		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: IA-BCK-2-24 | Lab Sample ID: 140-10791-17

Matrix: Air | Lab File ID: JB28P201.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:29

Sample wt/vol: 100(mL) | Date Analyzed: 03/01/2018 02:51

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.44	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.54	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4		1.4	0.27
67-66-3	Chloroform	119.38	0.92	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.8		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: IA-BCK-3-24 | Lab Sample ID: 140-10791-18

Matrix: Air | Lab File ID: JB28P202.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:26

Sample wt/vol: 100(mL) | Date Analyzed: 03/01/2018 03:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.079	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	ND		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.54		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.13	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.82	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.071	J B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.44	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: IA-BCK-3-24 Lab Sample ID: 140-10791-18

Matrix: Air Lab File ID: JB28P202.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 16:26

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 03:37

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.53	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.50	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	ND		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.54	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.38	J B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.9	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: IA-BCK-4-24 Lab Sample ID: 140-10791-19

Matrix: Air Lab File ID: JB28P205.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 16:16

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 05:56

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.54		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.79		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.39	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.41		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.91	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.085	J	0.40	0.080
108-88-3	Toluene	92.14	4.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.36	J B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.13	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: IA-BCK-4-24 | Lab Sample ID: 140-10791-19

Matrix: Air | Lab File ID: JB28P205.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:16

Sample wt/vol: 100(mL) | Date Analyzed: 03/01/2018 05:56

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.52	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	3.2		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.6	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	1.8		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.2	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.58	J	2.7	0.54
108-88-3	Toluene	92.14	15		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.9	J B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.72	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	8.9		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-001-C-24 | Lab Sample ID: 140-10791-1

Matrix: Air | Lab File ID: JB28P101.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:06

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 13:51

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.41		0.40	0.075
67-66-3	Chloroform	119.38	0.62		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	18		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.53		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.84	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.25	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	3.9		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	37		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-001-C-24 Lab Sample ID: 140-10791-1

Matrix: Air Lab File ID: JB28P101.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 11:06

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 13:51

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	3.0		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	72		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.9	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.7	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	15		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	200		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-004-C-24 | Lab Sample ID: 140-10791-2

Matrix: Air | Lab File ID: JB28P102.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:08

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 14:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.32	J	0.40	0.075
67-66-3	Chloroform	119.38	1.1		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	5.6		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.55		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.79	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.3		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.25	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	13		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-004-C-24 | Lab Sample ID: 140-10791-2

Matrix: Air | Lab File ID: JB28P102.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:08

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 14:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.1	J	1.4	0.27
67-66-3	Chloroform	119.38	5.5		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	22		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.7	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	8.7		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	1.0	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	69		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-060-C-24 Lab Sample ID: 140-10791-8

Matrix: Air Lab File ID: JB28P108.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 11:23

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 19:12

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.076	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.9		0.40	0.075
67-66-3	Chloroform	119.38	2.4		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	2.8		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.56		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	2.3		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.52		0.40	0.070
100-41-4	Ethylbenzene	106.17	3.1		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.68		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.8		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.25	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	4.3	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	75		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.33	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.17	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	29		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-060-C-24 | Lab Sample ID: 140-10791-8

Matrix: Air | Lab File ID: JB28P108.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:23

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 19:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.54	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	10		1.4	0.27
67-66-3	Chloroform	119.38	12		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	11		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	9.3		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	2.1		1.6	0.28
100-41-4	Ethylbenzene	106.17	14		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.9		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	3.6		1.0	1.0
127-18-4	Tetrachloroethene	165.83	12		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	0.99	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	23	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	400		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.6	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.85	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	120		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-088-C-24 | Lab Sample ID: 140-10791-13

Matrix: Air | Lab File ID: JB28P113.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:30

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 23:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.081	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.54		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	1.8		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.52		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.89	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.21		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.5		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	7.0		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.91		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-088-C-24 | Lab Sample ID: 140-10791-13

Matrix: Air | Lab File ID: JB28P113.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:30

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 23:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.40	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.51	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	7.3		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.1	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.1		1.0	1.0
127-18-4	Tetrachloroethene	165.83	10		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	37		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.68	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.0		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-102-C-24 | Lab Sample ID: 140-10791-3

Matrix: Air | Lab File ID: JB28P103.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:11

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 15:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.7		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.48		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.68		0.40	0.075
67-66-3	Chloroform	119.38	11		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	14		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	1.0		0.40	0.14
75-34-3	*1,1-Dichloroethane*	*98.96*	*710*	*E*	*0.40*	*0.050*
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	*1,1-Dichloroethene*	*96.94*	*460*	*E*	*0.40*	*0.070*
100-41-4	*Ethylbenzene*	*106.17*	*100*	*E*	*0.40*	*0.14*
75-09-2	Methylene Chloride	84.93	0.93	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	34		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.5		0.40	0.080
108-88-3	Toluene	92.14	13		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	1.1		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	*1,1,1-Trichloroethane*	*133.41*	*470*	*E B*	*0.40*	*0.060*
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	*Trichloroethene*	*131.39*	*190*	*E*	*0.20*	*0.070*
526-73-8	1,2,3-Trimethylbenzene	120.19	3.7		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	4.5		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	2.3		0.40	0.13
75-01-4	Vinyl chloride	62.50	3.3		0.20	0.15
1330-20-7	Xylenes, Total	106.17	590		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-102-C-24 | Lab Sample ID: 140-10791-3

Matrix: Air | Lab File ID: JB28P103.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:11

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 15:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	5.3		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	3.0		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.4		1.4	0.27
67-66-3	Chloroform	119.38	52		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	57		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	5.0		2.0	0.67
75-34-3	*1,1-Dichloroethane*	*98.96*	*2900*	*E*	*1.6*	*0.20*
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	*1,1-Dichloroethene*	*96.94*	*1800*	*E*	*1.6*	*0.28*
100-41-4	*Ethylbenzene*	*106.17*	*440*	*E*	*1.7*	*0.59*
75-09-2	Methylene Chloride	84.93	3.2	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	180		1.0	1.0
127-18-4	Tetrachloroethene	165.83	10		2.7	0.54
108-88-3	Toluene	92.14	51		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	4.4		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	*1,1,1-Trichloroethane*	*133.41*	*2600*	*E B*	*2.2*	*0.33*
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	*Trichloroethene*	*131.39*	*1000*	*E*	*1.1*	*0.38*
526-73-8	1,2,3-Trimethylbenzene	120.19	18		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	22		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	11		2.0	0.64
75-01-4	Vinyl chloride	62.50	8.4		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2600		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-102-C-24 DL Lab Sample ID: 140-10791-3 DL

Matrix: Air Lab File ID: JB28P103DL.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 11:11

Sample wt/vol: 20(mL) Date Analyzed: 03/01/2018 04:23

Soil Aliquot Vol: Dilution Factor: 4.03

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	98.96	1400		8.1	1.0
75-35-4	1,1-Dichloroethene	96.94	610		8.1	1.4
100-41-4	Ethylbenzene	106.17	180		8.1	2.7
71-55-6	1,1,1-Trichloroethane	133.41	700	B	8.1	1.2
79-01-6	Trichloroethene	131.39	280		4.0	1.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-102-C-24 DL Lab Sample ID: 140-10791-3 DL

Matrix: Air Lab File ID: JB28P103DL.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 11:11

Sample wt/vol: 20(mL) Date Analyzed: 03/01/2018 04:23

Soil Aliquot Vol: Dilution Factor: 4.03

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	98.96	5600		33	4.1
75-35-4	1,1-Dichloroethene	96.94	2400		32	5.6
100-41-4	Ethylbenzene	106.17	790		35	12
71-55-6	1,1,1-Trichloroethane	133.41	3800	B	44	6.6
79-01-6	Trichloroethene	131.39	1500		22	7.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-113-C-24 | Lab Sample ID: 140-10791-14

Matrix: Air | Lab File ID: JB28P114.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:31

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 23:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.64		0.40	0.075
67-66-3	Chloroform	119.38	0.31	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	6.8		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.88	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	28		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.56	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-113-C-24 | Lab Sample ID: 140-10791-14

Matrix: Air | Lab File ID: JB28P114.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:31

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 23:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.3		1.4	0.27
67-66-3	Chloroform	119.38	1.5	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	27		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.1	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	150		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.4	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-133-C-24 | Lab Sample ID: 140-10791-7

Matrix: Air | Lab File ID: JB28P107.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:17

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 18:26

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.11	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.4		0.40	0.075
67-66-3	Chloroform	119.38	1.8		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.17	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.58		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.97	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	7.8		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.37	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	*Trichloroethene*	*131.39*	*320*	*E*	*0.20*	*0.070*
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.48	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-133-C-24 | Lab Sample ID: 140-10791-7

Matrix: Air | Lab File ID: JB28P107.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:17

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 18:26

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.69	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	5.0		1.4	0.27
67-66-3	Chloroform	119.38	8.8		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	0.66	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	53		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	1.5	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	*Trichloroethene*	*131.39*	*1700*	*E*	*1.1*	*0.38*
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.1	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-133-C-24 DL Lab Sample ID: 140-10791-7 DL

Matrix: Air Lab File ID: JB28P107DL.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 11:17

Sample wt/vol: 11(mL) Date Analyzed: 03/01/2018 09:50

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	131.39	370		1.8	0.64

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-133-C-24 DL Lab Sample ID: 140-10791-7 DL

Matrix: Air Lab File ID: JB28P107DL.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 11:17

Sample wt/vol: 11(mL) Date Analyzed: 03/01/2018 09:50

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	131.39	2000		9.8	3.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-141-C-24 Lab Sample ID: 140-10791-11

Matrix: Air Lab File ID: JB28P111.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 11:25

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 21:30

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.34	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.10	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.7		0.40	0.075
67-66-3	Chloroform	119.38	0.17	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	3.1		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.55		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.79		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.98	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	3.2		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.59		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.085	J B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	57		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.86		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-141-C-24 | Lab Sample ID: 140-10791-11

Matrix: Air | Lab File ID: JB28P111.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:25

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 21:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.66	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	6.2		1.4	0.27
67-66-3	Chloroform	119.38	0.85	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	12		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	3.1		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	22		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	2.3		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.47	J B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	310		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.7		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-142-C-24 | Lab Sample ID: 140-10791-12

Matrix: Air | Lab File ID: JB28P112.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:28

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 22:16

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.098	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.50		0.40	0.075
67-66-3	Chloroform	119.38	0.42		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.52		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.94	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.7		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.65	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-142-C-24 | Lab Sample ID: 140-10791-12

Matrix: Air | Lab File ID: JB28P112.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:28

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 22:16

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.62	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.8		1.4	0.27
67-66-3	Chloroform	119.38	2.1		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	9.4		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.8	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-149-C-24 | Lab Sample ID: 140-10791-15

Matrix: Air | Lab File ID: JB28P115.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:36

Sample wt/vol: 100(mL) | Date Analyzed: 03/01/2018 01:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.36	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.11	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.61		0.40	0.075
67-66-3	Chloroform	119.38	2.2		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.58		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.39	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	3.7		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.1		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.39	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-149-C-24 | Lab Sample ID: 140-10791-15

Matrix: Air | Lab File ID: JB28P115.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:36

Sample wt/vol: 100(mL) | Date Analyzed: 03/01/2018 01:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.66	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.2		1.4	0.27
67-66-3	Chloroform	119.38	11		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.7	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.1		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	14		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	5.7		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.9	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	8.7		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-150-C-24 Lab Sample ID: 140-10791-9

Matrix: Air Lab File ID: JB28P109.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 12:06

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 19:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.36	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.083	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	15		0.40	0.075
67-66-3	Chloroform	119.38	0.11	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.58		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.095	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.45		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	2.2		0.40	0.080
108-88-3	Toluene	92.14	1.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.22	J B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.17	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.21	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.9		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-150-C-24 Lab Sample ID: 140-10791-9

Matrix: Air Lab File ID: JB28P109.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 12:06

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 19:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.2	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.52	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	51		1.4	0.27
67-66-3	Chloroform	119.38	0.51	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.38	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.9		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.0		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	15		2.7	0.54
108-88-3	Toluene	92.14	5.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.2	J B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.94	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.0	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	8.1		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-152-C-24 | Lab Sample ID: 140-10791-10

Matrix: Air | Lab File ID: JB28P110.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:20

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 20:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.30	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	4.9		0.40	0.075
67-66-3	Chloroform	119.38	0.28	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	1.8		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.53		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.26	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.0		0.40	0.080
108-88-3	Toluene	92.14	1.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.36	J B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	39		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.26	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.5		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-152-C-24 | Lab Sample ID: 140-10791-10

Matrix: Air | Lab File ID: JB28P110.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:20

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 20:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.95	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	17		1.4	0.27
67-66-3	Chloroform	119.38	1.3	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	7.0		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.1	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	7.1		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	7.1		2.7	0.54
108-88-3	Toluene	92.14	4.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	2.0	J B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	210		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.3	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	6.3		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-153-C-24 Lab Sample ID: 140-10791-5

Matrix: Air Lab File ID: JB28P105.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 11:16

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 16:56

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.091	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.94		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.60		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.88	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.31		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.091	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.2		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.15	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.79	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-153-C-24 | Lab Sample ID: 140-10791-5

Matrix: Air | Lab File ID: JB28P105.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:16

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 16:56

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.57	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.3		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.1	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.6		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.62	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	6.3		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.74	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.4	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-155-C-24 | Lab Sample ID: 140-10791-4

Matrix: Air | Lab File ID: JB28P104R.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:15

Sample wt/vol: 100(mL) | Date Analyzed: 03/01/2018 05:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.12	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.15	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.5		0.40	0.075
67-66-3	Chloroform	119.38	0.14	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.53		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.70		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.30	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.22	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.85	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.35	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.41	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.20		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.17	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-155-C-24 Lab Sample ID: 140-10791-4

Matrix: Air Lab File ID: JB28P104R.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 11:15

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 05:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.37	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.92	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	5.3		1.4	0.27
67-66-3	Chloroform	119.38	0.70	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	2.8		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.2	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	0.94	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.0	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	2.4	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	2.3	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.1		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.85	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.9		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-DUP01-C-24 | Lab Sample ID: 140-10791-6

Matrix: Air | Lab File ID: JB28P106.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 17:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.078	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.78		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.55		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.87	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.87		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.13	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.82		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-DUP01-C-24 Lab Sample ID: 140-10791-6

Matrix: Air Lab File ID: JB28P106.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 00:00

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 17:40

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.49	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.0	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	4.7		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.65	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.6		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-075-A-24 Lab Sample ID: 140-10792-3

Matrix: Air Lab File ID: RC01P103.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:10

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 15:39

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.41		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.28	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.96	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	16		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.16	J	0.40	0.080
108-88-3	Toluene	92.14	1.3		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.49		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	5.8		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	19		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	11		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-075-A-24 Lab Sample ID: 140-10792-3

Matrix: Air Lab File ID: RC01P103.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:10

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 15:39

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.51	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.2	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	84		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.1	J	2.7	0.54
108-88-3	Toluene	92.14	4.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.6		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	29		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	94		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	52		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	13		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-095-A-24 Lab Sample ID: 140-10792-2

Matrix: Air Lab File ID: RC01P102.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 13:05

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 14:52

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.0		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.40		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.69	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.25	J	0.40	0.080
108-88-3	Toluene	92.14	0.86		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.1		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.61		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.24	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-095-A-24 Lab Sample ID: 140-10792-2

Matrix: Air Lab File ID: RC01P102.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 13:05

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 14:52

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.7		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.7	J	2.7	0.54
108-88-3	Toluene	92.14	3.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	6.0		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	3.0		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.2	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	9.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-168-A-24 | Lab Sample ID: 140-10792-1

Matrix: Air | Lab File ID: RC01P101.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 12:07

Sample wt/vol: 20(mL) | Date Analyzed: 03/01/2018 14:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18444 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		2.0	0.58
56-23-5	Carbon tetrachloride	153.81	ND		2.0	0.38
75-45-6	Chlorodifluoromethane	86.47	0.42	J	2.0	0.38
67-66-3	Chloroform	119.38	0.74	J	2.0	0.38
156-59-2	cis-1,2-Dichloroethene	96.94	1.5	J	2.0	0.60
75-71-8	Dichlorodifluoromethane	120.91	0.71	J	2.0	0.68
75-34-3	1,1-Dichloroethane	98.96	0.88	J	2.0	0.25
107-06-2	1,2-Dichloroethane	98.96	ND		2.0	0.48
75-35-4	1,1-Dichloroethene	96.94	130		2.0	0.35
100-41-4	Ethylbenzene	106.17	ND		2.0	0.68
75-09-2	Methylene Chloride	84.93	3.9	J	5.0	3.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		10	1.7
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	3.5		2.0	0.40
108-88-3	Toluene	92.14	ND		3.0	3.0
156-60-5	trans-1,2-Dichloroethene	96.94	ND		2.0	0.50
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		2.0	0.98
71-55-6	1,1,1-Trichloroethane	133.41	1.7	J	2.0	0.30
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.0	0.53
79-01-6	Trichloroethene	131.39	250		1.0	0.35
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.85
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.63
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.65
75-01-4	Vinyl chloride	62.50	ND		1.0	0.73
1330-20-7	Xylenes, Total	106.17	ND		4.0	0.60

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-168-A-24 Lab Sample ID: 140-10792-1

Matrix: Air Lab File ID: RC01P101.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:07

Sample wt/vol: 20(mL) Date Analyzed: 03/01/2018 14:05

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		6.4	1.8
56-23-5	Carbon tetrachloride	153.81	ND		13	2.4
75-45-6	Chlorodifluoromethane	86.47	1.5	J	7.1	1.3
67-66-3	Chloroform	119.38	3.6	J	9.8	1.8
156-59-2	cis-1,2-Dichloroethene	96.94	6.1	J	7.9	2.4
75-71-8	Dichlorodifluoromethane	120.91	3.5	J	9.9	3.3
75-34-3	1,1-Dichloroethane	98.96	3.6	J	8.1	1.0
107-06-2	1,2-Dichloroethane	98.96	ND		8.1	1.9
75-35-4	1,1-Dichloroethene	96.94	500		7.9	1.4
100-41-4	Ethylbenzene	106.17	ND		8.7	2.9
75-09-2	Methylene Chloride	84.93	14	J	17	11
1634-04-4	Methyl tert-butyl ether	88.15	ND		36	6.1
91-20-3	Naphthalene	128.17	ND		5.2	5.2
127-18-4	Tetrachloroethene	165.83	23		14	2.7
108-88-3	Toluene	92.14	ND		11	11
156-60-5	trans-1,2-Dichloroethene	96.94	ND		7.9	2.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		15	7.2
71-55-6	1,1,1-Trichloroethane	133.41	9.3	J	11	1.6
79-00-5	1,1,2-Trichloroethane	133.41	ND		11	2.9
79-01-6	Trichloroethene	131.39	1300		5.4	1.9
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		9.8	4.2
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		9.8	3.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		9.8	3.2
75-01-4	Vinyl chloride	62.50	ND		2.6	1.9
1330-20-7	Xylenes, Total	106.17	ND		17	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-178-MB-2 | Lab Sample ID: 140-10792-4

Matrix: Air | Lab File ID: RC01P104.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 12:16

Sample wt/vol: 100(mL) | Date Analyzed: 03/01/2018 16:26

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18444 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.12	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.089	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.38	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.42		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.081	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.21	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.68	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.26		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.93		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.19	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.42		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-178-MB-2 Lab Sample ID: 140-10792-4

Matrix: Air Lab File ID: RC01P104.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:16

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 16:26

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.37	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.56	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.33	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.93	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.3		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.0	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	2.1		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.3		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-179-MB-2 | Lab Sample ID: 140-10792-6

Matrix: Air | Lab File ID: RC01P106.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 12:19

Sample wt/vol: 100(mL) | Date Analyzed: 03/01/2018 18:00

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18444 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.30	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	11		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.45		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.19	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.66	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.79		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.33	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-179-MB-2 Lab Sample ID: 140-10792-6

Matrix: Air Lab File ID: RC01P106.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:19

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 18:00

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.1	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	44		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.8		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.84	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.6	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.8		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-180-MB-2 Lab Sample ID: 140-10792-5

Matrix: Air Lab File ID: RC01P105.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:18

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 17:13

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.080	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.33	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.35	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.30	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.69	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.084	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.34	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.7		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-180-MB-2 | Lab Sample ID: 140-10792-5

Matrix: Air | Lab File ID: RC01P105.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 12:18

Sample wt/vol: 100(mL) | Date Analyzed: 03/01/2018 17:13

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18444 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.51	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.51	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.7	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.3	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.46	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.7	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-181-MB-2 | Lab Sample ID: 140-10792-7

Matrix: Air | Lab File ID: RC01P107.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 12:19

Sample wt/vol: 100(mL) | Date Analyzed: 03/01/2018 18:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18444 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.33	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.42		0.40	0.14
75-34-3	*1,1-Dichloroethane*	*98.96*	*150*	*E*	*0.40*	*0.050*
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	13		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.21	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.93		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	5.2		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.37	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-181-MB-2 Lab Sample ID: 140-10792-7

Matrix: Air Lab File ID: RC01P107.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:19

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 18:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.53	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	*1,1-Dichloroethane*	*98.96*	*600*	*E*	*1.6*	*0.20*
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	53		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.89	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.7		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	28		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.8	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.3		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-181-MB-2 DL Lab Sample ID: 140-10792-7 DL

Matrix: Air Lab File ID: RC02P116.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:19

Sample wt/vol: 20(mL) Date Analyzed: 03/03/2018 04:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18530 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	98.96	150		2.0	0.25

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-181-MB-2 DL Lab Sample ID: 140-10792-7 DL

Matrix: Air Lab File ID: RC02P116.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:19

Sample wt/vol: 20(mL) Date Analyzed: 03/03/2018 04:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18530 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	98.96	610		8.1	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-182-MB-2 Lab Sample ID: 140-10792-8

Matrix: Air Lab File ID: RC01P108.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:22

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 19:33

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.25	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.29	J	0.40	0.075
67-66-3	Chloroform	119.38	0.12	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.37	J	0.40	0.14
75-34-3	*1,1-Dichloroethane*	*98.96*	*260*	*E*	*0.40*	*0.050*
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	12		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.26	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.81	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	2.4		0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	11		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.28		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.36	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.5		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	109		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-182-MB-2 | Lab Sample ID: 140-10792-8

Matrix: Air | Lab File ID: RC01P108.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 12:22

Sample wt/vol: 100(mL) | Date Analyzed: 03/01/2018 19:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18444 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.81	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.0	J	1.4	0.27
67-66-3	Chloroform	119.38	0.58	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.8	J	2.0	0.67
75-34-3	*1,1-Dichloroethane*	*98.96*	*1100*	*E*	*1.6*	*0.20*
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	49		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.1	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	17		2.7	0.54
108-88-3	Toluene	92.14	4.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	59		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.8	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	6.4		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	109		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-182-MB-2 DL Lab Sample ID: 140-10792-8 DL

Matrix: Air Lab File ID: RC02P201.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:22

Sample wt/vol: 10(mL) Date Analyzed: 03/03/2018 05:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18530 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	98.96	360		4.0	0.50

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-182-MB-2 DL Lab Sample ID: 140-10792-8 DL

Matrix: Air Lab File ID: RC02P201.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:22

Sample wt/vol: 10(mL) Date Analyzed: 03/03/2018 05:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18530 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	98.96	1500		16	2.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-184-MB-2 | Lab Sample ID: 140-10792-9

Matrix: Air | Lab File ID: RC01P109.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 12:24

Sample wt/vol: 100(mL) | Date Analyzed: 03/01/2018 20:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18444 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.32	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.40		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.19	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.18	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.67	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.79		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.074	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.34	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-184-MB-2 Lab Sample ID: 140-10792-9

Matrix: Air Lab File ID: RC01P109.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:24

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 20:20

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.1	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.75	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.77	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.40	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.7	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.6		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-185-MB-2 | Lab Sample ID: 140-10792-12

Matrix: Air | Lab File ID: RC01P112D.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 12:34

Sample wt/vol: 100(mL) | Date Analyzed: 03/01/2018 22:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18444 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.25	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.083	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.32	J	0.40	0.075
67-66-3	Chloroform	119.38	0.11	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	12		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	1.8		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.26	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.3		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	5.8		0.40	0.080
108-88-3	Toluene	92.14	1.7		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	1.1		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.38		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.35	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.5		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-185-MB-2 | Lab Sample ID: 140-10792-12

Matrix: Air | Lab File ID: RC01P112D.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 12:34

Sample wt/vol: 100(mL) | Date Analyzed: 03/01/2018 22:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18444 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.79	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.52	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.1	J	1.4	0.27
67-66-3	Chloroform	119.38	0.55	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	48		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	7.2		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.1	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	8.0		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	39		2.7	0.54
108-88-3	Toluene	92.14	6.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	5.8		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.0		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.7	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	6.4		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-186-MB-2 Lab Sample ID: 140-10792-11

Matrix: Air Lab File ID: RC01P111.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:33

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 21:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.28	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.080	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.29	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.39	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.31	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.8		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.9		0.40	0.080
108-88-3	Toluene	92.14	1.7		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.36	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.7		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-186-MB-2 Lab Sample ID: 140-10792-11

Matrix: Air Lab File ID: RC01P111.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:33

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 21:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.90	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.50	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.0	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	1.6	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.4	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	6.2		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	13		2.7	0.54
108-88-3	Toluene	92.14	6.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.7	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-187-MB-2 Lab Sample ID: 140-10792-10

Matrix: Air Lab File ID: RC01P110.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:26

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 21:08

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.20	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.58		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.29	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.35	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.22	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.73	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.10	J	0.40	0.080
108-88-3	Toluene	92.14	1.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.24	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.40		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-187-MB-2 Lab Sample ID: 140-10792-10

Matrix: Air Lab File ID: RC01P110.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:26

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 21:08

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.64	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	3.6		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.0	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	1.4	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.94	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.5	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.70	J	2.7	0.54
108-88-3	Toluene	92.14	4.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.3	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	2.0		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	6.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

APPENDIX D—DATA VALIDATION REPORTS

TETRA TECH

INTERNAL CORRESPONDENCE

TO: **A. APANAVAGE** **DATE:** **APRIL 9, 2018**

FROM: **LEIGH A. CIOFANI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
LOCKHEED MARTIN CORPORATION (LMC) – MIDDLE RIVER COMPLEX (MRC)
SAMPLE DELIVERY GROUP (SDG) 140-10788-1

SAMPLES: 22 / Air / VOC

IA-001-C-24	IA-004-C-24	IA-060-C-24
IA-088-C-24	IA-100-B-24	IA-101-B-24
IA-102-C-24	IA-113-C-24	IA-126-C-24
IA-133-C-24	IA-141-C-24	IA-142-C-24
IA-144-C-24	IA-145-C-24	IA-146-C-24
IA-149-C-24	IA-150-C-24	IA-152-C-24
IA-153-C-24	IA-155-C-24	IA-DUP01-C-24
IA-DUP02-C-24		

OVERVIEW

The sample set for LMC – MRC, SDG 140-10788-1, consists of twenty-two (22) indoor air (IA) environmental samples. All samples were analyzed for select volatile organic compounds (VOCs). Two (2) field duplicate pairs are included in this SDG: IA-153-C-24 (original) / IA-DUP01-C-24 (duplicate); IA-149-C-24 (original) / IA-DUP02-C-24 (duplicate).

The samples were collected by Tetra Tech on February 20, 2018, and analyzed by TestAmerica. All analyses were conducted in accordance with EPA Method TO-15 analytical and reporting protocols.

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

MAJOR PROBLEMS

- None.

MINOR PROBLEMS

- The following analyte was detected in the method blanks at the following maximum concentration:

Analyte	Maximum Concentration	Action Level
1,1,1-Trichloroethane	0.123 ug/m^3 (1)	3.075 ug/m^3

1 – Maximum concentration detected in method blank associated with preparation batch 140-18439 affecting samples IA-100-B-24, IA-101-B-24, IA-126-C-24, IA-145-C-24, IA-146-C-24, IA-149-C-24, and IA-DUP02-C-24.

An action level of 5x the maximum concentration was used to evaluate sample data for blank contamination. Also, because samples are diluted approximately 5x as compared to the method blank, this 5x dilution factor was also applied to calculate the action level. Additional sample-specific dilution factors, if applicable, were also considered in applying

the action level. Detected concentrations of 1,1,1-trichloroethane in the associated samples that were less than the action level were qualified as non-detected (U) due to method blank contamination.

- Detected results reported below the reporting limit (RL) but above the method detection limit (MDL) were qualified as estimated (J).

NOTES

Twenty-five VOC target compounds were reported for the TO-15 analysis of the samples.

Non-detected results were reported to the MDL.

EXECUTIVE SUMMARY

Laboratory Performance: Two 1,1,1-trichloroethane results were qualified as non-detected due to method blank contamination.

Other Factors Affecting Data Quality: Results above the MDL but below the RL were qualified as estimated.

The data for these analyses were reviewed with reference to the USEPA "National Functional Guidelines for Organic Superfund Methods Data Review" (January 2017) and USEPA Method TO-15 analytical and reporting protocols. The text of this report has been formulated to address only those areas affecting data quality.

Leigh A. Ciofani

Tetra Tech, Inc.
Leigh A. Ciofani
Environmental Scientist/Data Validator

Joseph A. Samchuck

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

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

Appendix A

Qualified Analytical Results

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted method detection limit for sample and method.
J	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

Qualifier Codes:

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

PROJ_NO: 08388	NSAMPLE	IA-001-C-24			IA-004-C-24			IA-060-C-24			IA-088-C-24		
SDG: 140-10788-1	LAB_ID	140-10788-1			140-10788-2			140-10788-8			140-10788-13		
FRACTION: OV-M3	SAMP_DATE	2/20/2018			2/20/2018			2/20/2018			2/20/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.33	U		0.45	J	P	0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.61	U		0.61	U		1.5	J	P	0.7	J	P
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		0.5	J	P	0.51	J	P	0.67	J	P	0.56	J	P
CARBON TETRACHLORIDE		0.47	U		0.48	J	P	0.47	J	P	0.49	J	P
CHLORODIFLUOROMETHANE		1.7			2.2			15			2		
CHLOROFORM		0.37	U		0.37	U		0.47	J	P	0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		1.8	J	P	2	J	P	1.9	J	P	1.9	J	P
ETHYLBENZENE		0.59	U		0.59	U		1.1	J	P	0.61	J	P
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		2.9	J	P	3.1	J	P	4.2			3.5	J	P
NAPHTHALENE		1	U		1	U		1	U		1	U	
TETRACHLOROETHENE		0.54	U		0.54	U		0.55	J	P	0.54	U	
TOLUENE		2.3	U		2.3	U		3			3		
TOTAL XYLENES		2.3	J	P	2.3	J	P	7.3			3.3	J	P
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.38	U		0.38	U		0.38	U		0.38	U	
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 08388	NSAMPLE	IA-100-B-24			IA-101-B-24			IA-102-C-24			IA-113-C-24		
SDG: 140-10788-1	LAB_ID	140-10788-22			140-10788-21			140-10788-3			140-10788-14		
FRACTION: OV-M3	SAMP_DATE	2/20/2018			2/20/2018			2/20/2018			2/20/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.71	U	A	0.6	J	P	0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.73	J	P	0.89	J	P	0.8	J	P	1.4	J	P
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		0.56	J	P	0.7	J	P	0.56	J	P	0.53	J	P
CARBON TETRACHLORIDE		0.47	U		0.5	J	P	0.48	J	P	0.47	U	
CHLORODIFLUOROMETHANE		3.2			4.6			5.8			2.3		
CHLOROFORM		0.37	U		0.37	U		0.37	U		0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		2.5			2.9			2			2.1		
ETHYLBENZENE		2.3			2.5			0.79	J	P	1.1	J	P
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		5.1			4.3			4.1			3.2	J	P
NAPHTHALENE		1	U		1	U		1	U		1	U	
TETRACHLOROETHENE		0.54	U		0.54	U		0.54	U		0.54	U	
TOLUENE		65			70			3.4			2.3	U	
TOTAL XYLENES		9.5			11			5			7		
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.38	U		0.38	U		0.38	U		0.38	U	
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 08388	NSAMPLE	IA-126-C-24			IA-133-C-24			IA-141-C-24			IA-142-C-24		
SDG: 140-10788-1	LAB_ID	140-10788-20			140-10788-7			140-10788-11			140-10788-12		
FRACTION: OV-M3	SAMP_DATE	2/20/2018			2/20/2018			2/20/2018			2/20/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.38	U	A	0.33	U		0.33	U		0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.61	U		0.61	U		0.61	U		0.94	J	P
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		0.55	J	P	0.5	J	P	0.63	J	P	0.57	J	P
CARBON TETRACHLORIDE		0.47	U		0.47	U		0.51	J	P	0.48	J	P
CHLORODIFLUOROMETHANE		2.7			4.4			4.9			2.1		
CHLOROFORM		0.37	U		0.37	U		0.37	U		0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		2.5			1.8	J	P	2			1.9	J	P
ETHYLBENZENE		0.59	U		0.59	U		0.59	U		0.81	J	P
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		4.6			3.8			2.8	J	P	2.9	J	P
NAPHTHALENE		1	U		1	U		1	U		1	U	
TETRACHLOROETHENE		0.54	U		2.7			0.54	U		0.54	U	
TOLUENE		5.4			2.3	U		2.3	U		2.3	U	
TOTAL XYLENES		0.52	U		1.9	J	P	2.7	J	P	4.7		
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.38	U		0.38	U		0.38	U		0.38	U	
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 08388	NSAMPLE	IA-144-C-24			IA-145-C-24			IA-146-C-24			IA-149-C-24		
SDG: 140-10788-1	LAB_ID	140-10788-15			140-10788-17			140-10788-16			140-10788-18		
FRACTION: OV-M3	SAMP_DATE	2/20/2018			2/20/2018			2/20/2018			2/20/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.39	J	P	0.33	U		0.33	U		0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		1.7	J	P	0.87	J	P	0.95	J	P	0.61	U	
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		0.61	J	P	0.58	J	P	0.64	J	P	0.61	J	P
CARBON TETRACHLORIDE		0.47	U		0.51	J	P	0.48	J	P	0.47	U	
CHLORODIFLUOROMETHANE		17			67			66			3.3		
CHLOROFORM		0.58	J	P	0.41	J	P	0.37	U		0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		2			2.6			2.8			2.5		
ETHYLBENZENE		1.3	J	P	0.69	J	P	0.68	J	P	0.59	U	
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		3.9			4.1			3.9			5.1		
NAPHTHALENE		1	U		1	U		1	U		1	U	
TETRACHLOROETHENE		0.83	J	P	0.54	U		0.54	U		1.8	J	P
TOLUENE		3			2.3	U		2.3	U		5.8		
TOTAL XYLENES		8.9			4.4			4.5			1.3	J	P
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.38	U		0.38	U		0.38	U		0.38	U	
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 08388	NSAMPLE	IA-150-C-24			IA-152-C-24			IA-153-C-24			IA-155-C-24		
SDG: 140-10788-1	LAB_ID	140-10788-10			140-10788-9			140-10788-5			140-10788-4		
FRACTION: OV-M3	SAMP_DATE	2/20/2018			2/20/2018			2/20/2018			2/20/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.61	J	P	0.33	U		0.33	J	P
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		1.1	J	P	1.7	J	P	1.5	J	P	0.75	J	P
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		0.65	J	P	0.76	J	P	0.63	J	P	0.6	J	P
CARBON TETRACHLORIDE		0.47	U		0.49	J	P	0.47	U		0.48	J	P
CHLORODIFLUOROMETHANE		60			24			4.9			4.8		
CHLOROFORM		0.37	U		0.44	J	P	0.37	U		0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		1.9	J	P	1.9	J	P	1.9	J	P	1.7	J	P
ETHYLBENZENE		0.78	J	P	1.1	J	P	0.59	J	P	0.64	J	P
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		2.9	J	P	3.5			2.4	J	P	5		
NAPHTHALENE		1	U		1	U		1	U		1	U	
TETRACHLOROETHENE		0.54	U		0.54	U		0.54	U		0.54	U	
TOLUENE		2.3	U		3.1			2.3			3.2		
TOTAL XYLENES		5			7.2			3.7			3.8		
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.38	U		0.38	U		0.38	U		0.38	U	
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 08388	NSAMPLE	IA-DUP01-C-24			IA-DUP02-C-24		
SDG: 140-10788-1	LAB_ID	140-10788-6			140-10788-19		
FRACTION: OV-M3	SAMP_DATE	2/20/2018			2/20/2018		
MEDIA: AIR	QC_TYPE	FD			FD		
	UNITS	UG/M3			UG/M3		
	PCT_SOLIDS						
	DUP_OF	IA-153-C-24			IA-149-C-24		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		1.5	J	P	0.61	U	
1,2-DICHLOROETHANE		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U	
BENZENE		0.66	J	P	0.72	J	P
CARBON TETRACHLORIDE		0.49	J	P	0.51	J	P
CHLORODIFLUOROMETHANE		4.7			3.8		
CHLOROFORM		0.37	U		0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		2			3		
ETHYLBENZENE		0.66	J	P	0.59	U	
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U	
METHYLENE CHLORIDE		4.8			6		
NAPHTHALENE		1	U		1	U	
TETRACHLOROETHENE		0.54	U		0.54	U	
TOLUENE		2.8			5.6		
TOTAL XYLENES		4			1.2	J	P
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U	
TRICHLOROETHENE		0.38	U		0.38	U	
VINYL CHLORIDE		0.37	U		0.37	U	

Appendix B

Results as Reported by the Laboratory

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-001-C-24 Lab Sample ID: 140-10788-1

Matrix: Air Lab File ID: RB26P101.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 16:09

Sample wt/vol: 100(mL) Date Analyzed: 02/26/2018 14:01

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18348 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.49		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.36	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.84	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.54	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-001-C-24 | Lab Sample ID: 140-10788-1

Matrix: Air | Lab File ID: RB26P101.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:09

Sample wt/vol: 100(mL) | Date Analyzed: 02/26/2018 14:01

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.50	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.8	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.9	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-004-C-24 | Lab Sample ID: 140-10788-2

Matrix: Air | Lab File ID: RB26P102.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:11

Sample wt/vol: 100(mL) | Date Analyzed: 02/26/2018 14:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.076	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.61		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.89	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.53	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-004-C-24 | Lab Sample ID: 140-10788-2

Matrix: Air | Lab File ID: RB26P102.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:11

Sample wt/vol: 100(mL) | Date Analyzed: 02/26/2018 14:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.51	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.2		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.1	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-060-C-24 Lab Sample ID: 140-10788-8

Matrix: Air Lab File ID: RB26P108.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 16:45

Sample wt/vol: 100(mL) Date Analyzed: 02/26/2018 19:31

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18348 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.21	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.075	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	4.3		0.40	0.075
67-66-3	Chloroform	119.38	0.096	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.25	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.081	J	0.40	0.080
108-88-3	Toluene	92.14	0.79		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.083	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.30	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.7		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-060-C-24 Lab Sample ID: 140-10788-8

Matrix: Air Lab File ID: RB26P108.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 16:45

Sample wt/vol: 100(mL) Date Analyzed: 02/26/2018 19:31

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18348 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.67	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.47	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	15		1.4	0.27
67-66-3	Chloroform	119.38	0.47	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.1	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.2		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.55	J	2.7	0.54
108-88-3	Toluene	92.14	3.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.45	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.5	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.3		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-088-C-24 | Lab Sample ID: 140-10788-13

Matrix: Air | Lab File ID: RB26P113.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:57

Sample wt/vol: 100(mL) | Date Analyzed: 02/26/2018 23:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.078	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.56		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.38	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.14	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.99	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.80		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.76	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-088-C-24 | Lab Sample ID: 140-10788-13

Matrix: Air | Lab File ID: RB26P113.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:57

Sample wt/vol: 100(mL) | Date Analyzed: 02/26/2018 23:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.56	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.49	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.0		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.61	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.70	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-100-B-24 | Lab Sample ID: 140-10788-22

Matrix: Air | Lab File ID: JB27P107.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 17:15

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 19:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18439 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.89		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.51		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.52		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.5		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	17		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.15	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-100-B-24 | Lab Sample ID: 140-10788-22

Matrix: Air | Lab File ID: JB27P107.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 17:15

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 19:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18439 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.56	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.2		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.3		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.1		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	65		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.73	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	9.5		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-101-B-24 | Lab Sample ID: 140-10788-21

Matrix: Air | Lab File ID: JB27P106.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 17:14

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 19:00

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18439 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.22	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.079	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.3		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.58		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.59		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	19		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.13	J B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.18	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.6		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-101-B-24 Lab Sample ID: 140-10788-21

Matrix: Air Lab File ID: JB27P106.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 17:14

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 19:00

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18439 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.70	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.50	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.6		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.5		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.3		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	70		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.71	J B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.89	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	11		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-102-C-24 | Lab Sample ID: 140-10788-3

Matrix: Air | Lab File ID: RB26P103.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:12

Sample wt/vol: 100(mL) | Date Analyzed: 02/26/2018 15:35

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.076	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.6		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.18	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.90		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.11	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.16	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-102-C-24 Lab Sample ID: 140-10788-3

Matrix: Air Lab File ID: RB26P103.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 16:12

Sample wt/vol: 100(mL) Date Analyzed: 02/26/2018 15:35

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18348 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.56	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	5.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.79	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.1		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.60	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.80	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.0		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-113-C-24 | Lab Sample ID: 140-10788-14

Matrix: Air | Lab File ID: RB26P114.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:58

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 00:14

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.64		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.42		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.26	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.93	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.28	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.6		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-113-C-24 | Lab Sample ID: 140-10788-14

Matrix: Air | Lab File ID: RB26P114.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:58

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 00:14

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.53	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.3		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.1	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.2	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.4	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.0		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-126-C-24 | Lab Sample ID: 140-10788-20

Matrix: Air | Lab File ID: JB27P105.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 17:11

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 18:16

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18439 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.77		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.50		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.3		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.070	J B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-126-C-24 Lab Sample ID: 140-10788-20

Matrix: Air Lab File ID: JB27P105.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 17:11

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 18:16

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18439 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.55	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.6		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.38	J B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-133-C-24 Lab Sample ID: 140-10788-7

Matrix: Air Lab File ID: RB26P107.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 16:24

Sample wt/vol: 100(mL) Date Analyzed: 02/26/2018 18:44

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18348 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.3		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.36	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.40		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.43	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-133-C-24 Lab Sample ID: 140-10788-7

Matrix: Air Lab File ID: RB26P107.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 16:24

Sample wt/vol: 100(mL) Date Analyzed: 02/26/2018 18:44

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18348 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.50	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.4		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.8	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.8		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	2.7		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.9	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-141-C-24 Lab Sample ID: 140-10788-11

Matrix: Air Lab File ID: RB26P111.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 17:00

Sample wt/vol: 100(mL) Date Analyzed: 02/26/2018 21:52

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18348 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.20	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.081	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.4		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.80	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.63	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-141-C-24 | Lab Sample ID: 140-10788-11

Matrix: Air | Lab File ID: RB26P111.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 17:00

Sample wt/vol: 100(mL) | Date Analyzed: 02/26/2018 21:52

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.63	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.51	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.7	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-142-C-24 Lab Sample ID: 140-10788-12

Matrix: Air Lab File ID: RB26P112.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 16:56

Sample wt/vol: 100(mL) Date Analyzed: 02/26/2018 22:39

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18348 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.076	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.59		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.38	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.19	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.85	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.19	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-142-C-24 | Lab Sample ID: 140-10788-12

Matrix: Air | Lab File ID: RB26P112.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:56

Sample wt/vol: 100(mL) | Date Analyzed: 02/26/2018 22:39

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.57	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.1		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.81	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.9	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.94	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.7		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-144-C-24 Lab Sample ID: 140-10788-15

Matrix: Air Lab File ID: RB26P115.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 16:55

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 01:01

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18348 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	4.9		0.40	0.075
67-66-3	Chloroform	119.38	0.12	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.40		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.29	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.12	J	0.40	0.080
108-88-3	Toluene	92.14	0.80		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.071	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.35	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-144-C-24 Lab Sample ID: 140-10788-15

Matrix: Air Lab File ID: RB26P115.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 16:55

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 01:01

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18348 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.61	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	17		1.4	0.27
67-66-3	Chloroform	119.38	0.58	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.3	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.9		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.83	J	2.7	0.54
108-88-3	Toluene	92.14	3.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.39	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.7	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	8.9		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-145-C-24 | Lab Sample ID: 140-10788-17

Matrix: Air | Lab File ID: JB27P102.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:53

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 16:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18439 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.081	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	19		0.40	0.075
67-66-3	Chloroform	119.38	0.085	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.53		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.16	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.18	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-145-C-24 | Lab Sample ID: 140-10788-17

Matrix: Air | Lab File ID: JB27P102.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:53

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 16:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18439 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.58	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.51	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	67		1.4	0.27
67-66-3	Chloroform	119.38	0.41	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.69	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.1		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.87	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.4		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-146-C-24 | Lab Sample ID: 140-10788-16

Matrix: Air | Lab File ID: JB27P101.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:54

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 15:17

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18439 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.20	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.076	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	19		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.58		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.16	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.19	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-146-C-24 Lab Sample ID: 140-10788-16

Matrix: Air Lab File ID: JB27P101.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 16:54

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 15:17

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18439 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.64	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	66		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.68	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.9		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.95	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.5		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-149-C-24 Lab Sample ID: 140-10788-18

Matrix: Air Lab File ID: JB27P103.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 17:02

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 16:47

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18439 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.94		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.50		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.5		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.27	J	0.40	0.080
108-88-3	Toluene	92.14	1.5		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.29	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-149-C-24 | Lab Sample ID: 140-10788-18

Matrix: Air | Lab File ID: JB27P103.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 17:02

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 16:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18439 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.61	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.3		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.1		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.8	J	2.7	0.54
108-88-3	Toluene	92.14	5.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-150-C-24 | Lab Sample ID: 140-10788-10

Matrix: Air | Lab File ID: RB26P110.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:48

Sample wt/vol: 100(mL) | Date Analyzed: 02/26/2018 21:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.20	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	17		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.18	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.83	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.23	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-150-C-24 | Lab Sample ID: 140-10788-10

Matrix: Air | Lab File ID: RB26P110.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:48

Sample wt/vol: 100(mL) | Date Analyzed: 02/26/2018 21:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.65	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	60		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.78	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.9	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.1	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.0		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-152-C-24 | Lab Sample ID: 140-10788-9

Matrix: Air | Lab File ID: RB26P109.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:47

Sample wt/vol: 100(mL) | Date Analyzed: 02/26/2018 20:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.24	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.079	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	6.7		0.40	0.075
67-66-3	Chloroform	119.38	0.091	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.38	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.25	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.82		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.11	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.35	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.7		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-152-C-24 | Lab Sample ID: 140-10788-9

Matrix: Air | Lab File ID: RB26P109.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:47

Sample wt/vol: 100(mL) | Date Analyzed: 02/26/2018 20:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.76	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.49	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	24		1.4	0.27
67-66-3	Chloroform	119.38	0.44	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.1	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.61	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.7	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-153-C-24 Lab Sample ID: 140-10788-5

Matrix: Air Lab File ID: RB26P105.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 16:18

Sample wt/vol: 100(mL) Date Analyzed: 02/26/2018 17:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18348 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.20	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.4		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.14	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.69	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.61		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.31	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.85		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-153-C-24 Lab Sample ID: 140-10788-5

Matrix: Air Lab File ID: RB26P105.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 16:18

Sample wt/vol: 100(mL) Date Analyzed: 02/26/2018 17:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18348 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.63	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.59	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.5	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.7		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-155-C-24 | Lab Sample ID: 140-10788-4

Matrix: Air | Lab File ID: RB26P104.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 16:16

Sample wt/vol: 100(mL) | Date Analyzed: 02/26/2018 16:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.076	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.4		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.34	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.85		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.061	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.15	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.87		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-155-C-24 Lab Sample ID: 140-10788-4

Matrix: Air Lab File ID: RB26P104.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 16:16

Sample wt/vol: 100(mL) Date Analyzed: 02/26/2018 16:22

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18348 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.60	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.7	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.64	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	5.0		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.33	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.75	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.8		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-DUP01-C-24 | Lab Sample ID: 140-10788-6

Matrix: Air | Lab File ID: RB26P106.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 02/26/2018 17:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.21	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.077	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.3		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.40		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.73		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.30	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.92		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-DUP01-C-24 Lab Sample ID: 140-10788-6

Matrix: Air Lab File ID: RB26P106.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 00:00

Sample wt/vol: 100(mL) Date Analyzed: 02/26/2018 17:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18348 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.66	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.49	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.66	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.8		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.5	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.0		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-DUP02-C-24 Lab Sample ID: 140-10788-19

Matrix: Air Lab File ID: JB27P104.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 00:00

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 17:31

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18439 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.23	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.081	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.1		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.61		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.7		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.5		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.28	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Client Sample ID: IA-DUP02-C-24 Lab Sample ID: 140-10788-19

Matrix: Air Lab File ID: JB27P104.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 00:00

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 17:31

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18439 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.72	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.51	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	6.0		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.6		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

Appendix C

Support Documentation

Job Narrative
140-10788-1

Receipt
The samples were received on 2/23/2018 at 10:30 AM. The samples arrived in good condition and properly preserved.

Air - GC/MS VOA - Method TO-15 LL
EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

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

Comments
No additional comments.

Definitions/Glossary

Client: Tetra Tech, Inc.
Project/Site: Middle River, MD

TestAmerica Job ID: 140-10788-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: Tetra Tech, Inc.
Project/Site: Middle River, MD

TestAmerica Job ID: 140-10788-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: Middle River, MD

TestAmerica Job ID: 140-10788-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-10788-1	IA-001-C-24	Air	02/20/18 16:09	02/23/18 10:30
140-10788-2	IA-004-C-24	Air	02/20/18 16:11	02/23/18 10:30
140-10788-3	IA-102-C-24	Air	02/20/18 16:12	02/23/18 10:30
140-10788-4	IA-155-C-24	Air	02/20/18 16:16	02/23/18 10:30
140-10788-5	IA-153-C-24	Air	02/20/18 16:18	02/23/18 10:30
140-10788-6	IA-DUP01-C-24	Air	02/20/18 00:00	02/23/18 10:30
140-10788-7	IA-133-C-24	Air	02/20/18 16:24	02/23/18 10:30
140-10788-8	IA-060-C-24	Air	02/20/18 16:45	02/23/18 10:30
140-10788-9	IA-152-C-24	Air	02/20/18 16:47	02/23/18 10:30
140-10788-10	IA-150-C-24	Air	02/20/18 16:48	02/23/18 10:30
140-10788-11	IA-141-C-24	Air	02/20/18 17:00	02/23/18 10:30
140-10788-12	IA-142-C-24	Air	02/20/18 16:56	02/23/18 10:30
140-10788-13	IA-088-C-24	Air	02/20/18 16:57	02/23/18 10:30
140-10788-14	IA-113-C-24	Air	02/20/18 16:58	02/23/18 10:30
140-10788-15	IA-144-C-24	Air	02/20/18 16:55	02/23/18 10:30
140-10788-16	IA-146-C-24	Air	02/20/18 16:54	02/23/18 10:30
140-10788-17	IA-145-C-24	Air	02/20/18 16:53	02/23/18 10:30
140-10788-18	IA-149-C-24	Air	02/20/18 17:02	02/23/18 10:30
140-10788-19	IA-DUP02-C-24	Air	02/20/18 00:00	02/23/18 10:30
140-10788-20	IA-126-C-24	Air	02/20/18 17:11	02/23/18 10:30
140-10788-21	IA-101-B-24	Air	02/20/18 17:14	02/23/18 10:30
140-10788-22	IA-100-B-24	Air	02/20/18 17:15	02/23/18 10:30

Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865.291.3000 fax 865.584.4315

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
BALTIMORE
TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Tony Apanavage	Site Contact: Tony Apanavage	Date: 2/20/2018	COC No:
Tera Tech	Tel/Fax: (301)528-3021	Lab Contact: John McFadden	Carrier: Fedex	9 of 9 COCs
20251 Century Blvd. Ste 200	Analysis Turnaround Time			Job No. 681
Germantown, Maryland 20874	Calendar (C) or Work Days (W) _____			
Phone: (301)528-5552	TAT if different from Below ___Standard_____			
	☐ 2 weeks			SDG No.
Project Name: 112IC08388	☐ 1 week	140-10788 Chain of Custody		
Site: Middle River, MD	☐ 2 days			
P O #	☐ 1 day			Sampler: MULLIS/PRYOR

Sample Identification	Sample Date	Time Start	Time Stop	Canister Volume in Field "Hg (Start)	Canister Volume in Field "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	Sample Specific Notes:
IA-001-C-24	2/20/2018	0804	1609	-30	0	7107	09589	X	
IA-004-C-24	2/20/2018	0806	1611	-30	0	8717	09661	X	
IA-102-C-24	2/20/2018	0810	1612	-29	0	7587	11662	X	Received @ ambient, 2 boxes Fedex SO, No custody seal trk# 7715 4919 2033 " 4906 0057
IA-155-C-24	2/20/2018	0814	1616	-29	0	10466	11519	X	
IA-153-C-24	2/20/2018	0817	1618	-30	-2	7047	09791	X	
IA-DUP01-C-24	2/20/2018	0000	0000	-30	-4	7197	11621	X	
IA-133-C-24	2/20/2018	0820	1624	-30	-1	7390	11133	X	KL 2/23/18
IA-060-C-24	2/20/2018	0830	1645	-30	0	11499	09793	X	
IA-152-C-24	2/20/2018	0832	1647	-30	0	8741	11708	X	
IA-150-C-24	2/20/2018	0833	1648	-30	0	7146	09735	X	
IA-141-C-24	2/20/2018	0836	1700	-24	-3	10304	09641	X	
IA-142-C-24	2/20/2018	0840	1656	-30	0	7064	09737	X	2Ts
IA-088-C-24	2/20/2018	0845	1657	-30	0	09861	10942	X	22 conv
IA-113-C-24	2/20/2018	0846	1658	-30	0	7163	10520	X	22 flow
IA-144-C-24	2/20/2018	0855	1655	-30	-2.5	7571	11554	X	

Special Instructions/QC Requirements & Comments: **Contracted Analyte List**

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Walt Fryer	TT INC	2/22/18 1150	[illegible]	2/22/18	1150
[illegible]		2/22/18		TA-BAL	2/23/18 1030

Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865.291.3000 fax 865.584.4315

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	**Project Manager: Tony Apanavage**	**Site Contact: Tony Apanavage**	**Date: 2/20/2018**	COC No:
Tera Tech	**Tel/Fax: (301)528-3021**	**Lab Contact: John McFadden**	**Carrier: Fedex**	2 of 9 COCs
20251 Century Blvd. Ste 200	**Analysis Turnaround Time**			Job No. BALTIMORE
Germantown, Maryland 20874	Calendar (C) or Work Days (W) _____			
Phone: (301)528-5552	TAT if different from Below ___Standard_____			SDG No. 180325
	☐ 2 weeks			
Project Name: 112IC08388	☐ 1 week			
Site: Middle River, MD	☐ 2 days			Sampler: MULLIS/PRYOR
P O #	☐ 1 day			

Sample Identification	Sample Date	Time Start	Time Stop	Canister Volume in Field "Hg (Start)	Canister Volume in Field "Hg (Stop)	Flow Controller ID	Canister ID	TO-15								Sample Specific Notes:
IA-146-C-24	2/20/2018	0854	1654	-30	-3.5	7580	11521	X								
IA-145-C-24	2/20/2018	0853	1653	-30	-1	7058	09660	X								
IA-149-C-24	2/20/2018	0859	1702	-29	-2	7400	09636	X								
IA-DUP02-C-24	2/20/2018	0000	0000	-30	-2	09551	09646	X								
IA-126-C-24	2/20/2018	0900	1711	-30	-6.5	8634	10518	X								
IA-101-B-24	2/20/2018	0913	1714	-28	0	11587	11704	X								
IA-100-B-24	2/20/2018	0914	1715	-30	-1	7059	10782	X								

Special Instructions/QC Requirements & Comments: **Contracted Analyte List**

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Walt Payon	TT Inc	2/22/18/1150			2/22/18/1150
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
		2/22/18		TA-Knx	2/23/18 1030
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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

Loc: 140
10788

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST **Log In Number:**

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	✓			☐ **Containers, Broken**
2. Were ambient air containers received intact?			✓	☑ Checked in lab
3. The coolers/containers custody seal if present, is it intact?			✓	☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			✓	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	✓			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	✓			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	✓			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	✓			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?	✓			☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	✓			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	✓			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	✓			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	✓			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			✓	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			✓	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			✓	☐ If no, lab will adjust
20. For rad samples was sample activity info. Provided?			✓	☐ Project missing info

Comments/Actions Taken

* sample TA-101-R-24 in 10788 and TA-100-R-24 in in 11764.

Labeling Verified by: **Date:**

pH test strip lot number:

Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:	
Lot Number:	
Exp Date:	
Analyst:	
Date:	
Time:	

Project #: 1400295 PM Instructions: _____

Sample Receiving Associate: KL Date: 2/23/18

QA026R30.doc, 080916

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 2/26/2018

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
HMT	140-10788-a-1	09589	10579	B	1	0.0	11:35	
HMT	140-10788-a-2	09661	10579	B	1	0.0	11:36	
HMT	140-10788-a-3	11662	10579	B	1	0.0	11:37	
HMT	140-10788-a-4	11519	10465	B	1	-1.4	11:38	
HMT	140-10788-a-5	09791	10622	B	1	0.0	11:39	
HMT	140-10788-a-6	11621	10524	B	1	-1.6	11:40	
HMT	140-10788-a-7	11133	10579	B	1	0.0	11:41	
HMT	140-10788-a-8	09793	10429	B	1	0.0	11:42	
HMT	140-10788-a-9	11708	10524	B	1	0.0	11:43	
HMT	140-10788-a-10	09735	10579	B	1	0.0	11:44	
HMT	140-10788-a-11	09641	10524	B	1	0.0	11:45	
HMT	140-10788-a-12	09737	10579	B	1	0.0	11:46	
HMT	140-10788-a-13	10942	10579	B	1	0.0	11:47	
HMT	140-10788-a-14	10520	10579	B	1	0.0	11:48	
HMT	140-10788-a-15	11554	10579	B	1	0.0	11:49	
HMT	140-10788-a-16	11521	10579	B	1	-1.6	11:50	
HMT	140-10788-a-17	09660	10622	B	1	-1.9	11:51	
HMT	140-10788-a-18	09636	10577	B	1	0.0	11:52	
HMT	140-10788-a-19	09646	10622	B	1	0.0	11:53	
HMT	140-10788-a-20	10518	10579	B	1	-4.0	11:54	
HMT	140-10788-a-21	10782	10524	B	1	0.0	11:55	
HMT	140-10788-a-22	11704	10577	B	1	0.0	11:56	

FIELD DUPLICATE PRECISION

ORIGINAL ID	DUP ID	FRACTION	ANALYTE	ORIGINAL	DUPLICATE	RL	RPD	RPD > 50%	ORIGINAL SAMPLE CONC >RL	DUPLICATE SAMPLE CONC >RL	DIFFERENCE >2XRL
IA-153-C-24	IA-DUP01-C-24	OV-M3	1,2,4-TRIMETHYLBENZENE	1.5 J	1.5 J	2	0.00	FALSE	FALSE	FALSE	FALSE
IA-153-C-24	IA-DUP01-C-24	OV-M3	BENZENE	0.63 J	0.66 J	1.3	4.65	FALSE	FALSE	FALSE	FALSE
IA-153-C-24	IA-DUP01-C-24	OV-M3	CARBON TETRACHLORIDE	0.47 U	0.49 J	2.5	4.17	FALSE	FALSE	FALSE	FALSE
IA-153-C-24	IA-DUP01-C-24	OV-M3	CHLORODIFLUOROMETHANE	4.9	4.7	1.4	4.17	FALSE	TRUE	TRUE	FALSE
IA-153-C-24	IA-DUP01-C-24	OV-M3	DICHLORODIFLUOROMETHANE	1.9 J	2	2	5.13	FALSE	FALSE	FALSE	FALSE
IA-153-C-24	IA-DUP01-C-24	OV-M3	ETHYLBENZENE	0.59 J	0.66 J	1.7	11.20	FALSE	FALSE	FALSE	FALSE
IA-153-C-24	IA-DUP01-C-24	OV-M3	METHYLENE CHLORIDE	2.4 J	4.8	3.5	~~66.67~~	~~TRUE~~	FALSE	TRUE	FALSE ✓
IA-153-C-24	IA-DUP01-C-24	OV-M3	TOLUENE	2.3	2.8	2.3	19.61	FALSE	FALSE	TRUE	FALSE
IA-153-C-24	IA-DUP01-C-24	OV-M3	TOTAL XYLENES	3.7	4	3.5	7.79	FALSE	TRUE	TRUE	FALSE

FIELD DUPLICATE PRECISION

ORIGINAL ID	DUP ID	FRACTION	ANALYTE	ORIGINAL	DUPLICATE	RL	RPD	RPD > 50%	ORIGINAL SAMPLE CONC >RL	DUPLICATE SAMPLE CONC >RL	DIFFERENCE >2XRL
IA-149-C-24	IA-DUP02-C-24	OV-M3	BENZENE	0.61 J	0.72 J	1.3	16.54	FALSE	FALSE	FALSE	FALSE
IA-149-C-24	IA-DUP02-C-24	OV-M3	CARBON TETRACHLORIDE	0.47 U	0.51 J	2.5	8.16	FALSE	FALSE	FALSE	FALSE
IA-149-C-24	IA-DUP02-C-24	OV-M3	CHLORODIFLUOROMETHANE	3.3	3.8	1.4	14.08	FALSE	TRUE	TRUE	FALSE
IA-149-C-24	IA-DUP02-C-24	OV-M3	DICHLORODIFLUOROMETHANE	2.5	3	2	18.18	FALSE	TRUE	TRUE	FALSE
IA-149-C-24	IA-DUP02-C-24	OV-M3	METHYLENE CHLORIDE	5.1	6	3.5	16.22	FALSE	TRUE	TRUE	FALSE
IA-149-C-24	IA-DUP02-C-24	OV-M3	TETRACHLOROETHENE	1.8 J	0.54 U	2.7	~~107.69~~	~~TRUE~~	FALSE	FALSE	FALSE ✓
IA-149-C-24	IA-DUP02-C-24	OV-M3	TOLUENE	5.8	5.6	2.3	3.51	FALSE	TRUE	TRUE	FALSE
IA-149-C-24	IA-DUP02-C-24	OV-M3	TOTAL XYLENES	1.3 J	1.2 J	3.5	8.00	FALSE	FALSE	FALSE	FALSE

Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Lab File ID: JBFBB15.D BFB Injection Date: 02/15/2018

Instrument ID: MJ BFB Injection Time: 14:16

Analysis Batch No.: 18185

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.2	
75	30.0 - 60.0 % of mass 95	52.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	104.0	
175	5.0 - 9.0 % of mass 174	7.7	(7.4) 1
176	95.0 - 101.0 % of mass 174	102.5	(98.5) 1
177	5.0 - 9.0 % of mass 176	6.9	(6.8) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-18185/3	JB15ICL01.D	02/15/2018	15:35
	IC 140-18185/4	JB15ICL02.D	02/15/2018	16:21
	IC 140-18185/5	JB15ICL03.D	02/15/2018	17:07
	IC 140-18185/6	JB15ICL04.D	02/15/2018	17:52
	IC 140-18185/7	JB15ICL05.D	02/15/2018	18:37
	IC 140-18185/8	JB15ICL06.D	02/15/2018	19:22
	ICIS 140-18185/9	JB15ICISL07.D	02/15/2018	20:08
	IC 140-18185/10	JB15ICL08.D	02/15/2018	20:53
	IC 140-18185/11	JB15ICL09.D	02/15/2018	21:39
	IC 140-18185/12	JB15ICL10.D	02/15/2018	22:24
	ICV 140-18185/15	JLCSB16.D	02/16/2018	00:43

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-18185/3	JB15ICL01.D
Level 2	IC 140-18185/4	JB15ICL02.D
Level 3	IC 140-18185/5	JB15ICL03.D
Level 4	IC 140-18185/6	JB15ICL04.D
Level 5	IC 140-18185/7	JB15ICL05.D
Level 6	IC 140-18185/8	JB15ICL06.D
Level 7	ICIS 140-18185/9	JB15ICISL07.D
Level 8	IC 140-18185/10	JB15ICL08.D
Level 9	IC 140-18185/11	JB15ICL09.D
Level 10	IC 140-18185/12	JB15ICL10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Chlorodifluoromethane	+++++ 0.3914	+++++ 0.3824	0.6302 0.3743	0.4722 0.3630	0.4279 0.3774	Ave		0.4274				20.9		30.0			
Propene	+++++ 1.1645	+++++ 1.1300	1.3108 1.1715	1.1837 1.0943	1.1738 1.0836	Ave		1.1640				6.0		30.0			
Dichlorodifluoromethane	3.3176 3.5951	3.3925 3.7021	3.7269 3.7985	3.5660 3.4882	3.7705 3.5233	Ave		3.5881				4.5		30.0			
Chloromethane	+++++ 0.4205	+++++ 0.4168	+++++ 0.4071	0.4724 0.3864	0.4596 0.3768	Ave		0.4199				8.4		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	2.1309 2.3962	2.1623 2.4267	2.4453 2.3778	2.3770 2.3294	2.5632 2.3092	Ave		2.3518				5.5		30.0			
Vinyl chloride	0.9082 1.3858	1.0603 1.4136	1.4400 1.3859	1.3679 1.3144	1.4774 1.3153	Ave		1.3069				13.8		30.0			
1,3-Butadiene	+++++ 1.0489	+++++ 1.0425	1.1500 1.0266	1.1067 0.9909	1.1086 0.9783	Ave		1.0566				5.7		30.0			
Butane	+++++ 1.9486	+++++ 2.0128	2.2836 1.9906	1.9974 1.8616	2.0933 1.8465	Ave		2.0043				6.9		30.0			
Bromomethane	1.1032 1.3116	1.2081 1.3214	1.4474 1.3073	1.3410 1.2837	1.3831 1.3116	Ave		1.3018				7.2		30.0			
Chloroethane	+++++ 0.6702	0.6755 0.6774	0.6991 0.6771	0.6748 0.6561	0.7002 0.6756	Ave		0.6785				2.0		30.0			
Ethanol	+++++ 0.4776	+++++ 0.4727	+++++ 0.5295	0.5377 0.4327	0.5682 0.3737	Ave		0.4846				13.8		30.0			
Vinyl bromide	+++++ 1.2267	1.1089 1.2671	1.2671 1.2513	1.2154 1.2222	1.3143 1.2605	Ave		1.2371				4.6		30.0			
2-Methylbutane	+++++ 1.4324	+++++ 1.5281	+++++ 1.4517	1.4899 1.3965	1.6262 1.4156	Ave		1.4772				5.4		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Trichlorofluoromethane	2.9333 3.5426	3.1213 3.6245	3.6584 3.4955	3.5125 3.4973	3.7881 3.5333	Ave		3.4707				7.3		30.0			
Acrolein	+++++ 0.2927	+++++ 0.3494	+++++ 0.3794	+++++ 0.3089	0.4013 0.3486	Ave		0.3467				11.8		30.0			
Acetonitrile	+++++ 0.3732	+++++ 0.4191	+++++ 0.4863	+++++ 0.3852	0.5550 0.4137	Ave		0.4388				15.8		30.0			
Acetone	+++++ 0.4105	+++++ 0.4203	+++++ 0.5020	+++++ 0.3863	0.6154 0.3976	Ave		0.4553				19.4		30.0			
Pentane	+++++ 0.2094	+++++ 0.2152	+++++ 0.2054	+++++ 0.1988	0.2313 0.2099	Ave		0.2117				5.2		30.0			
Isopropyl alcohol	+++++ 1.2520	1.4496 1.1363	1.4621 1.3026	1.3887 1.0811	1.6818 0.9956	Ave		1.3055				16.5		30.0			
Ethyl ether	+++++ 0.9270	1.1907 1.0369	1.3172 1.1920	1.2567 0.9354	1.2816 1.0045	Ave		1.1269				13.5		30.0			
1,1-Dichloroethene	1.1918 1.2779	1.3811 1.3189	1.4766 1.2749	1.3150 1.2757	1.4083 1.3170	Ave		1.3237				6.1		30.0			
Acrylonitrile	+++++ 0.6984	+++++ 0.7526	+++++ 0.8545	0.8339 0.7379	0.8884 0.7744	Ave		0.7914				8.7		30.0			
tert-Butyl alcohol	+++++ 1.7947	+++++ 1.5369	1.6759 1.5367	1.5338 1.5546	2.0606 1.3999	Lin1	0.0565	1.4729							0.9950		0.9900
1,1,2-Trichloro-1,2,2-trifluoroethane	2.4821 2.7500	2.5577 2.7957	2.8742 2.7881	2.8047 2.6832	3.0112 2.6922	Ave		2.7439				5.5		30.0			
Methylene Chloride	+++++ 1.3146	+++++ 1.2387	+++++ 1.2211	2.2172 1.1503	1.7294 1.1578	Ave		1.4327				27.8		30.0			
3-Chloropropene	+++++ 1.1751	+++++ 1.1217	1.5866 1.2165	1.1607 1.1097	1.3605 1.1320	Lin1	0.0344	1.1332							0.9990		0.9900
Carbon disulfide	3.6911 3.7376	3.6386 3.8828	4.3506 3.7568	3.8971 3.6868	4.0058 3.7550	Ave		3.8402				5.5		30.0			
trans-1,2-Dichloroethene	+++++ 1.3019	1.3022 1.3179	1.3875 1.3207	1.3062 1.2755	1.4288 1.2825	Ave		1.3248				3.8		30.0			
2-Methylpentane	+++++ 2.9504	+++++ 3.0134	3.6180 2.9503	3.0369 2.7948	3.3234 2.7231	Ave		3.0513				9.5		30.0			
Methyl tert-butyl ether	+++++ 2.6811	2.6492 2.7626	3.0177 3.3524	3.1101 2.6889	3.4113 2.7957	Ave		2.9410				10.0		30.0			
1,1-Dichloroethane	2.4253 2.3381	2.5251 2.4388	2.6340 2.5420	2.5025 2.3639	2.7085 2.4053	Ave		2.4883				4.7		30.0			
Vinyl acetate	+++++ 2.5034	2.3777 2.7208	2.8222 3.2054	3.1139 2.6767	3.2974 2.8203	Ave		2.8375				11.0		30.0			
2-Butanone (MEK)	+++++ 0.4527	+++++ 0.4569	+++++ 0.5711	0.6323 0.4484	0.5874 0.4303	Ave		0.5113				16.1		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Hexane	+++++ 1.0408	+++++ 1.0483	+++++ 1.0588	1.1864 0.9999	1.2001 0.9988	Ave		1.0762				7.7		30.0			
cis-1,2-Dichloroethene	1.2882 1.2837	1.3496 1.3287	1.4225 1.3828	1.3669 1.3054	1.4552 1.3322	Ave		1.3515				4.2		30.0			
Ethyl acetate	+++++ 1.9979	+++++ 2.0327	+++++ 2.5317	2.6021 1.9919	2.7194 1.9525	Ave		2.2612				15.0		30.0			
Chloroform	+++++ 2.6905	+++++ 2.7674	3.1390 2.8838	2.9415 2.6905	3.0730 2.7342	Ave		2.8650				6.1		30.0			
Tetrahydrofuran	+++++ 1.0858	+++++ 1.1302	+++++ 1.2587	1.4360 1.0849	1.4535 1.0393	Ave		1.2126				14.3		30.0			
1,1,1-Trichloroethane	3.0053 2.7843	3.1296 2.9030	3.1969 2.9798	2.9529 2.8232	3.1866 2.8621	Ave		2.9824				5.0		30.0			
1,2-Dichloroethane	+++++ 0.3099	0.3093 0.3230	0.3327 0.3283	0.3151 0.3169	0.3609 0.3240	Ave		0.3245				4.9		30.0			
1-Butanol	+++++ 0.0748	+++++ 0.0634	+++++ 0.0717	+++++ 0.0609	0.0891 0.0550	Ave		0.0692				17.6		30.0			
Cyclohexane	+++++ 0.1134	+++++ 0.1152	0.1400 0.1105	0.1166 0.1078	0.1296 0.1039	Ave		0.1171				10.2		30.0			
Benzene	0.7960 0.6620	0.7900 0.6816	0.7649 0.6859	0.7115 0.6328	0.7640 0.6104	Ave		0.7099				9.3		30.0			
Carbon tetrachloride	0.4528 0.5284	0.5183 0.5468	0.5701 0.5481	0.5301 0.5316	0.5993 0.5366	Ave		0.5362				7.0		30.0			
2,3-Dimethylpentane	+++++ 0.1594	+++++ 0.1627	0.1839 0.1605	0.1751 0.1535	0.1840 0.1543	Ave		0.1667				7.5		30.0			
Thiophene	+++++ 0.3782	+++++ 0.4012	0.4215 0.4038	0.4017 0.3833	0.4462 0.3888	Ave		0.4031				5.5		30.0			
2,2,4-Trimethylpentane	+++++ 1.1058	+++++ 1.1220	1.2776 1.1099	1.1667 1.0517	1.2608 1.0127	Ave		1.1384				8.2		30.0			
Heptane	+++++ 0.2385	0.2555 0.2445	0.2659 0.2457	0.2523 0.2345	0.2773 0.2337	Ave		0.2498				5.9		30.0			
1,2-Dichloropropane	+++++ 0.2524	0.2684 0.2619	0.2900 0.2714	0.2611 0.2555	0.2873 0.2552	Ave		0.2670				5.1		30.0			
Trichloroethene	0.2965 0.3009	0.3106 0.3121	0.3255 0.3179	0.3165 0.3027	0.3477 0.2985	Ave		0.3129				4.9		30.0			
Dibromomethane	+++++ 0.2764	+++++ 0.2876	0.3340 0.2946	0.3052 0.2795	0.3252 0.2826	Ave		0.2981				7.2		30.0			
Bromodichloromethane	0.5065 0.4927	0.5615 0.5146	0.5252 0.5303	0.5048 0.5057	0.5661 0.5130	Ave		0.5220				4.7		30.0			
1,4-Dioxane	+++++ 0.0706	+++++ 0.0671	0.0700 0.0796	0.0698 0.0663	0.0813 0.0522	Ave		0.0696				12.8		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Methyl methacrylate	+++++ 0.2164	+++++ 0.2235	+++++ 0.2774	0.2561 0.2218	0.2876 0.2182	Ave		0.2430				12.5		30.0			
Methylcyclohexane	+++++ 0.4224	0.4795 0.4325	0.4877 0.4304	0.4477 0.4128	0.4868 0.4109	Ave		0.4456				7.0		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.3445	+++++ 0.3355	+++++ 0.4250	0.3988 0.3275	0.4126 0.3227	Ave		0.3667				11.9		30.0			
cis-1,3-Dichloropropene	+++++ 0.3914	0.4061 0.4130	0.4178 0.4318	0.3835 0.4090	0.4391 0.4126	Ave		0.4116				4.2		30.0			
trans-1,3-Dichloropropene	+++++ 0.3607	+++++ 0.3847	0.3761 0.4050	0.3899 0.3791	0.4095 0.3942	Ave		0.3874				4.1		30.0			
Toluene	+++++ 0.7961	0.8419 0.8288	0.8832 0.8490	0.9008 0.7827	0.9170 0.7967	Ave		0.8440				5.7		30.0			
1,1,2-Trichloroethane	0.2354 0.2448	0.2644 0.2549	0.2761 0.2638	0.2683 0.2436	0.2817 0.2452	Ave		0.2578				6.0		30.0			
2-Hexanone	+++++ 0.1960	0.1869 0.1890	0.2038 0.2229	0.1923 0.1857	0.2288 0.1842	Ave		0.1989				8.3		30.0			
Octane	0.3110 0.2841	0.3203 0.2857	0.3034 0.2821	0.2981 0.2678	0.3183 0.2602	Ave		0.2931				7.0		30.0			
C8 Range	+++++ 2.5336	+++++ 2.5549	+++++ 2.5396	+++++ 2.3690	+++++ 2.2706	Ave		2.4535				5.2		30.0			
Dibromochloromethane	0.4903 0.5637	0.5332 0.5979	0.5661 0.6011	0.5582 0.5775	0.6214 0.5781	Ave		0.5688				6.5		30.0			
1,2-Dibromoethane (EDB)	+++++ 0.4644	0.4366 0.4899	0.4944 0.4990	0.4837 0.4698	0.4883 0.4781	Ave		0.4783				4.0		30.0			
Tetrachloroethene	0.3238 0.3222	0.3463 0.3309	0.3757 0.3268	0.3374 0.3095	0.3691 0.3060	Ave		0.3348				6.9		30.0			
Chlorobenzene	+++++ 0.6718	0.6252 0.6856	0.7219 0.6939	0.7097 0.6453	0.7381 0.6303	Ave		0.6802				5.9		30.0			
Ethylbenzene	+++++ 0.9620	1.0030 1.0075	1.1261 1.0732	1.1581 0.9538	1.1728 0.9583	Ave		1.0461				8.4		30.0			
m-Xylene & p-Xylene	+++++ 0.7262	0.7641 0.7684	0.8422 0.8196	0.8471 0.7096	0.8800 0.6923	Ave		0.7833				8.5		30.0			
Nonane	0.5521 0.5484	0.6164 0.5569	0.6378 0.5700	0.6019 0.5066	0.6319 0.4868	Ave		0.5709				8.9		30.0			
Styrene	+++++ 0.5765	0.5431 0.5820	0.6122 0.6668	0.6311 0.5801	0.6964 0.5728	Ave		0.6068				8.2		30.0			
Bromoform	+++++ 0.5867	+++++ 0.6248	0.5936 0.6399	0.5635 0.6306	0.6263 0.6151	Ave		0.6101				4.3		30.0			
o-Xylene	+++++ 0.7733	0.7991 0.8031	0.8592 0.8583	0.9152 0.7508	0.9597 0.7600	Ave		0.8310				8.7		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
1,1,2,2-Tetrachloroethane	+++++ 0.5489	0.5954 0.5728	0.6464 0.6308	0.6617 0.5281	0.6902 0.5309	Ave		0.6006				9.9		30.0			
1,2,3-Trichloropropane	+++++ 0.1450	0.1401 0.1517	0.1675 0.1689	0.1690 0.1428	0.1847 0.1469	Ave		0.1574				9.9		30.0			
Isopropylbenzene	+++++ 1.0062	1.1721 1.0564	1.2564 1.1558	1.2627 0.9849	1.3064 0.9795	Ave		1.1311				11.3		30.0			
Propylbenzene	+++++ 0.2785	+++++ 0.2940	0.3217 0.3306	0.3339 0.2824	0.3604 0.2873	Ave		0.3111				9.5		30.0			
2-Chlorotoluene	+++++ 0.2845	0.3004 0.2935	0.3184 0.3113	0.3206 0.2768	0.3335 0.2770	Ave		0.3018				6.8		30.0			
4-Ethyltoluene	+++++ 0.9690	1.0770 1.0296	1.1733 1.1652	1.2170 0.9653	1.2646 0.9651	Ave		1.0918				10.7		30.0			
1,3,5-Trimethylbenzene	+++++ 0.4147	0.4164 0.4287	0.4881 0.4881	0.5237 0.4080	0.5328 0.4098	Ave		0.4567				11.2		30.0			
Alpha Methyl Styrene	+++++ 0.4206	+++++ 0.4612	0.4949 0.5158	0.4932 0.4428	0.5352 0.4435	Ave		0.4759				8.4		30.0			
Decane	+++++ 0.6329	+++++ 0.6476	0.7986 0.6804	0.7665 0.5676	0.7901 0.5208	Ave		0.6756				15.3		30.0			
tert-Butylbenzene	+++++ 0.8685	0.9703 0.9110	1.0503 1.0233	1.1080 0.8376	1.1558 0.8071	Ave		0.9702				12.7		30.0			
1,2,4-Trimethylbenzene	+++++ 0.8204	0.9073 0.8641	1.0002 0.9699	1.0394 0.7937	1.0800 0.7679	Ave		0.9159				12.3		30.0			
sec-Butylbenzene	+++++ 1.2143	1.3303 1.2626	1.4419 1.4036	1.5356 1.1414	1.6225 1.0753	Ave		1.3364				13.6		30.0			
1,3-Dichlorobenzene	+++++ 0.6323	0.6920 0.6595	0.7624 0.7096	0.7188 0.6252	0.7664 0.6091	Ave		0.6861				8.5		30.0			
Benzyl chloride	+++++ 0.6434	0.7051 0.7157	0.7654 0.8307	0.7703 0.7084	0.8426 0.6740	Ave		0.7395				9.2		30.0			
1,4-Dichlorobenzene	+++++ 0.6196	0.6863 0.6495	0.7654 0.7094	0.7149 0.6292	0.7611 0.6085	Ave		0.6827				8.7		30.0			
4-Isopropyltoluene	+++++ 0.9923	1.0268 1.0264	1.2201 1.1604	1.2751 0.9383	1.3083 0.8709	Ave		1.0910				14.2		30.0			
1,2,3-Trimethylbenzene	+++++ 0.8106	0.8636 0.8448	0.9649 0.9493	1.0285 0.7815	1.0696 0.7557	Ave		0.8965				12.4		30.0			
Indane	+++++ 0.7777	0.8372 0.8138	0.9270 0.8958	0.9702 0.7435	1.0235 0.7090	Ave		0.8553				12.4		30.0			
1,2-Dichlorobenzene	+++++ 0.5951	0.6675 0.6122	0.7291 0.6684	0.7064 0.5743	0.7450 0.5433	Ave		0.6490				11.0		30.0			
Butylbenzene	+++++ 0.9588	1.0780 1.0007	1.1993 1.1225	1.2326 0.8919	1.2865 0.8121	Ave		1.0647				15.1		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Indene	+++++ 0.6491	0.7026 0.6953	0.7542 0.7760	0.7840 0.6436	0.8528 0.6117	Ave		0.7188				10.9		30.0			
Undecane	+++++ 0.6507	0.7536 0.6296	0.8097 0.7102	0.7686 0.6023	0.8572 0.5272	Ave		0.7010				15.2		30.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.2942	0.2917 0.3108	0.3325 0.3521	0.2976 0.3058	0.3780 0.2886	Ave		0.3168				9.8		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 0.8460	0.8453 0.8624	1.0089 1.0435	1.0149 0.8292	1.1345 0.7595	Ave		0.9272				13.5		30.0			
Dodecane	+++++ 0.5144	+++++ 0.4231	+++++ 0.4312	+++++ 0.4177	0.7424 0.3282	Qua	0.0236	0.4810	-0.009585						0.9980		0.9900
1,2,4-Trichlorobenzene	+++++ 0.4369	0.4982 0.4649	0.5689 0.5411	0.3978 0.4735	0.6084 0.4323	Ave		0.4913				14.1		30.0			
Naphthalene	0.6835 0.7107	0.8474 0.7161	0.9734 0.8343	0.6430 0.6899	1.0586 0.6128	Ave		0.7770				19.0		30.0			
Hexachlorobutadiene	+++++ 0.4556	0.5215 0.4700	0.5915 0.5048	0.5287 0.4315	0.6440 0.4119	Ave		0.5066				14.9		30.0			
1,2,3-Trichlorobenzene	+++++ 0.3082	+++++ 0.2848	0.4147 0.3143	0.2102 0.2816	0.4443 0.2430	Ave		0.3126				25.6		30.0			
2-Methylnaphthalene	+++++ 0.0604	+++++ 0.0525	+++++ 0.0514	0.0394 0.0638	0.1016 +++++	Ave		0.0616				34.7		50.0			
1-Methylnaphthalene	+++++ 0.0567	+++++ 0.0469	0.0813 0.0453	0.0381 0.0555	0.1033 +++++	Ave		0.0610				38.0		50.0			
4-Bromofluorobenzene (Surr)	0.7353 0.7158	0.7351 0.7064	0.7390 0.7313	0.7145 0.7223	0.7395 0.6923	Ave		0.7231				2.2		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-18185/3	JB15ICL01.D
Level 2	IC 140-18185/4	JB15ICL02.D
Level 3	IC 140-18185/5	JB15ICL03.D
Level 4	IC 140-18185/6	JB15ICL04.D
Level 5	IC 140-18185/7	JB15ICL05.D
Level 6	IC 140-18185/8	JB15ICL06.D
Level 7	ICIS 140-18185/9	JB15ICISL07.D
Level 8	IC 140-18185/10	JB15ICL08.D
Level 9	IC 140-18185/11	JB15ICL09.D
Level 10	IC 140-18185/12	JB15ICL10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorodifluoromethane	CBM	Ave	+++++ 27753	+++++ 54851	3577 101106	5657 214696	12058 440085	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	+++++ 82581	+++++ 162079	7440 316474	14182 647152	33073 1263500	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	4610 254947	9371 531010	21153 1026119	42724 2062839	106241 4108290	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	+++++ 29822	+++++ 59780	+++++ 109960	5660 228533	12950 439355	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	2961 169926	5973 348077	13879 642320	28478 1377554	72222 2692563	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	1262 98274	2929 202765	8173 374370	16389 777336	41629 1533687	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	+++++ 74384	+++++ 149529	6527 277320	13259 586005	31237 1140773	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	+++++ 138185	+++++ 288707	12961 537741	23931 1100932	58983 2153025	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	1533 93013	3337 189535	8215 353158	16066 759169	38970 1529331	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	+++++ 47525	1866 97167	3968 182916	8085 387996	19730 787780	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	+++++ 169364	+++++ 339004	+++++ 715122	32209 1279493	80056 2178805	+++++ 5.00	+++++ 10.0	+++++ 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	+++++ 86990	3063 181747	7192 338017	14562 722769	37034 1469727	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	+++++ 101583	+++++ 219189	+++++ 392146	17850 825846	45820 1650561	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0
Trichlorofluoromethane	CBM	Ave	4076 251225	8622 519886	20764 944269	42082 2068202	106737 4119857	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Acrolein	CBM	Ave	+++++	+++++	+++++	+++++	11307	+++++	+++++	+++++	+++++	0.400
			20755	50113	102480	182696	406528	1.00	2.00	4.00	8.00	16.0
Acetonitrile	CBM	Ave	+++++	+++++	+++++	+++++	15639	+++++	+++++	+++++	+++++	0.400
			26469	60118	131375	227816	482336	1.00	2.00	4.00	8.00	16.0
Acetone	CBM	Ave	+++++	+++++	+++++	+++++	52018	+++++	+++++	+++++	+++++	1.20
			87339	180855	406789	685323	1390929	3.00	6.00	12.0	24.0	48.0
Pentane	CBM	Ave	+++++	+++++	+++++	+++++	6517	+++++	+++++	+++++	+++++	0.400
			14849	30864	55484	117550	244732	1.00	2.00	4.00	8.00	16.0
Isopropyl alcohol	CBM	Ave	+++++	12013	24895	49915	142160	+++++	0.120	0.240	0.480	1.20
			266351	488972	1055630	1918054	3482589	3.00	6.00	12.0	24.0	48.0
Ethyl ether	CBM	Ave	+++++	3289	7476	15056	36110	+++++	0.0400	0.0800	0.160	0.400
			65736	148732	321989	553177	1171220	1.00	2.00	4.00	8.00	16.0
1,1-Dichloroethene	CBM	Ave	1656	3815	8381	15755	39680	0.0200	0.0400	0.0800	0.160	0.400
			90621	189184	344392	754423	1535615	1.00	2.00	4.00	8.00	16.0
Acrylonitrile	CBM	Ave	+++++	+++++	+++++	9991	25032	+++++	+++++	+++++	0.160	0.400
			49529	107948	230835	436353	902964	1.00	2.00	4.00	8.00	16.0
tert-Butyl alcohol	CBM	Lin1	+++++	+++++	9512	18376	58060	+++++	+++++	0.0800	0.160	0.400
			127270	220441	415127	919383	1632262	1.00	2.00	4.00	8.00	16.0
1,1,2-Trichloro-1,2,2-trifluoroetha ne	CBM	Ave	3449	7065	16313	33602	84847	0.0200	0.0400	0.0800	0.160	0.400
			195021	401001	753175	1586774	3139209	1.00	2.00	4.00	8.00	16.0
Methylene Chloride	CBM	Ave	+++++	+++++	+++++	26564	48728	+++++	+++++	+++++	0.160	0.400
			93225	177679	329860	680277	1349970	1.00	2.00	4.00	8.00	16.0
3-Chloropropene	CBM	Lin1	+++++	+++++	9005	13906	38333	+++++	+++++	0.0800	0.160	0.400
			83333	160899	328625	656238	1319889	1.00	2.00	4.00	8.00	16.0
Carbon disulfide	CBM	Ave	5129	10051	24693	46690	112870	0.0200	0.0400	0.0800	0.160	0.400
			265055	556931	1014855	2180282	4378353	1.00	2.00	4.00	8.00	16.0
trans-1,2-Dichloroethene	CBM	Ave	+++++	3597	7875	15649	40259	+++++	0.0400	0.0800	0.160	0.400
			92328	189036	356777	754307	1495456	1.00	2.00	4.00	8.00	16.0
2-Methylpentane	CBM	Ave	+++++	+++++	20535	36385	93643	+++++	+++++	0.0800	0.160	0.400
			209227	432234	796987	1652759	3175157	1.00	2.00	4.00	8.00	16.0
Methyl tert-butyl ether	CBM	Ave	+++++	7318	17128	37261	96118	+++++	0.0400	0.0800	0.160	0.400
			190134	396264	905606	1590174	3259814	1.00	2.00	4.00	8.00	16.0
1,1-Dichloroethane	CBM	Ave	3370	6975	14950	29982	76318	0.0200	0.0400	0.0800	0.160	0.400
			165806	349810	686686	1397954	2804661	1.00	2.00	4.00	8.00	16.0
Vinyl acetate	CBM	Ave	+++++	6568	16018	37307	92910	+++++	0.0400	0.0800	0.160	0.400
			177532	390265	865889	1582936	3288528	1.00	2.00	4.00	8.00	16.0
2-Butanone (MEK)	CBM	Ave	+++++	+++++	+++++	7576	16551	+++++	+++++	+++++	0.160	0.400
			32107	65541	154279	265192	501778	1.00	2.00	4.00	8.00	16.0
Hexane	CBM	Ave	+++++	+++++	+++++	14214	33815	+++++	+++++	+++++	0.160	0.400
			73808	150365	286027	591318	1164610	1.00	2.00	4.00	8.00	16.0
cis-1,2-Dichloroethene	CBM	Ave	1790	3728	8074	16376	41004	0.0200	0.0400	0.0800	0.160	0.400
			91036	190591	373543	771979	1553316	1.00	2.00	4.00	8.00	16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Ethyl acetate	CBM	Ave	+++++ 141681	+++++ 291559	+++++ 683903	31175 1177995	76623 2276697	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	+++++ 190800	+++++ 396942	17816 779025	35241 1591098	86586 3188140	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	+++++ 76999	+++++ 162110	+++++ 340009	17204 641564	40956 1211876	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	4176 197454	8645 416395	18145 804959	35378 1669563	89788 3337256	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	+++++ 123151	4723 259212	10626 509786	21442 1050690	56229 2135949	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	+++++ 29744	+++++ 50901	+++++ 111381	+++++ 202000	13885 362827	+++++ 1.00	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	+++++ 45080	+++++ 92419	4472 171655	7932 357423	20197 685290	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	6241 263091	12063 547051	24429 1065062	48414 2097890	119041 4024394	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	3550 209982	7915 438828	18207 851003	36066 1762311	93367 3537791	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	+++++ 63347	+++++ 130603	5875 249155	11913 508864	28672 1017496	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	+++++ 150312	+++++ 321955	13462 626957	27334 1270708	69518 2563344	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	+++++ 439459	+++++ 900463	40803 1723360	79383 3486427	196445 6676767	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	+++++ 94765	3902 196222	8492 381559	17167 777358	43205 1540847	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	+++++ 100302	4098 210169	9261 421493	17767 847107	44766 1682910	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	2325 119589	4743 250475	10397 493629	21535 1003544	54179 1968061	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	+++++ 109851	+++++ 230836	10667 457388	20766 926694	50669 1863214	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	3971 195803	8574 413015	16774 823450	34347 1676336	88194 3382471	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	+++++ 28069	+++++ 53844	2237 123538	4748 219872	12668 344425	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	+++++ 85989	+++++ 179409	+++++ 430723	17426 735125	44804 1438539	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	Ave	+++++ 167878	7322 347070	15575 668329	30462 1368540	75845 2709025	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	+++++ 136923	+++++ 269233	+++++ 659992	27138 1085608	64288 2127971	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	+++++ 155553	6201 331437	13343 670433	26097 1355923	68409 2720193	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd5	Ave	+++++ 128407	+++++ 278618	10875 591191	23711 1173124	58578 2433426	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Toluene	CBZd5	Ave	+++++ 283412	11936 600208	25542 1239377	54782 2422147	131181 4918045	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd5	Ave	1695 87152	3749 184581	7985 385134	16317 753906	40303 1513985	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Hexanone	CBZd5	Ave	+++++ 69784	2650 136876	5895 325452	11694 574790	32729 1137183	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Octane	CBZd5	Ave	2239 101126	4541 206925	8774 411769	18132 828864	45527 1606217	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
C8 Range	CBZd5	Ave	+++++ 901978	+++++ 1850127	+++++ 3707341	+++++ 7331415	+++++ 14016806	+++++ 1.00	+++++ 2.00	+++++ 4.00	+++++ 8.00	+++++ 16.0
Dibromochloromethane	CBZd5	Ave	3530 200692	7559 432967	16372 877444	33946 1787283	88886 3568712	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromoethane (EDB)	CBZd5	Ave	+++++ 165343	6189 354754	14297 728486	29416 1453979	69856 2951686	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrachloroethene	CBZd5	Ave	2331 114687	4909 239650	10866 477136	20519 957712	52795 1889134	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chlorobenzene	CBZd5	Ave	+++++ 239164	8864 496514	20875 1012976	43161 1997116	105585 3891277	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethylbenzene	CBZd5	Ave	+++++ 342484	14220 729559	32565 1566611	70429 2951613	167768 5915991	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd5	Ave	+++++ 517067	21664 1112844	48711 2392826	103040 4391902	251768 8546976	+++++ 2.00	0.0800 4.00	0.160 8.00	0.320 16.0	0.800 32.0
Nonane	CBZd5	Ave	3975 195236	8738 403252	18443 832138	36604 1567651	90392 3005085	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Styrene	CBZd5	Ave	+++++ 205243	7700 421470	17705 973459	38384 1795211	99622 3536130	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromoform	CBZd5	Ave	+++++ 208872	+++++ 452443	17167 934107	34267 1951424	89592 3797430	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
o-Xylene	CBZd5	Ave	+++++ 275312	11329 581607	24847 1252990	55661 2323383	137277 4691784	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd5	Ave	+++++ 195397	8441 414828	18692 920868	40240 1634322	98733 3277617	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd5	Ave	+++++ 51609	1986 109836	4845 246555	10278 441919	26427 906990	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Isopropylbenzene	CBZd5	Ave	+++++ 358205	16616 764991	36334 1687204	76795 3047982	186877 6046514	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propylbenzene	CBZd5	Ave	+++++ 99164	+++++ 212901	9302 482571	20306 873966	51549 1773765	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Chlorotoluene	CBZd 5	Ave	+++++ 101293	4258 212574	9208 454373	19495 856661	47705 1710230	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	+++++ 344967	15269 745587	33930 1700936	74014 2987293	180899 5957624	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	+++++ 147646	5903 310461	14114 712579	31849 1262527	76220 2530049	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	+++++ 149742	+++++ 334017	14312 752971	29994 1370381	76565 2737983	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	+++++ 225316	+++++ 468958	23094 993210	46614 1756545	113027 3214750	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	+++++ 309204	13756 659713	30373 1493882	67386 2592000	165330 4982279	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	+++++ 292070	12863 625778	28923 1415936	63212 2456158	154495 4740203	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	+++++ 432308	18860 914293	41696 2048964	93389 3532437	232101 6638117	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	+++++ 225116	9811 477551	22046 1035883	43715 1934769	109636 3759992	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	+++++ 229036	9996 518315	22135 1212674	46845 2192216	120536 4160862	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	+++++ 220578	9729 470366	22135 1035664	43480 1947184	108874 3756592	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	+++++ 353244	14557 743248	35283 1693897	77548 2903808	187151 5376440	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	+++++ 288587	12243 611735	27902 1385849	62548 2418553	153010 4664935	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indane	CBZd 5	Ave	+++++ 276849	11869 589287	26808 1307644	59006 2301054	146404 4376817	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	+++++ 211868	9463 443319	21084 975697	42959 1777289	106565 3354013	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	+++++ 341321	15282 724644	34682 1638649	74962 2760230	184036 5013238	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	+++++ 231067	9960 503526	21811 1132821	47682 1991794	121997 3775959	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	+++++ 231645	10683 455946	23414 1036819	46744 1863928	122622 3254285	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	+++++ 104745	4136 225034	9615 514013	18099 946492	54065 1781427	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 301194	11984 624537	29177 1523328	61721 2566257	162287 4688609	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Qua	+++++ 183122	+++++ 306380	+++++ 629519	+++++ 1292753	106198 2025925	+++++ 1.00	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
1,2,4-Trichlorobenzene	CBZd5	Ave	+++++ 155531	7063 336684	16452 789833	24193 1465426	87032 2668565	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd5	Ave	4921 253015	12014 518551	28149 1217927	39105 2135019	151426 3783262	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexachlorobutadiene	CBZd5	Ave	+++++ 162206	7393 340335	17105 736883	32154 1335307	92129 2542924	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd5	Ave	+++++ 109718	+++++ 206227	11991 458814	12782 871367	63553 1500391	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd5	Ave	+++++ 67237	+++++ 118911	+++++ 234598	7493 617406	45438 +++++	+++++ 3.13	+++++ 6.25	+++++ 12.5	0.500 25.0	1.25 +++++
1-Methylnaphthalene	CBZd5	Ave	+++++ 63122	+++++ 106135	7343 206757	7235 536661	46180 +++++	+++++ 3.13	+++++ 6.25	0.250 12.5	0.500 25.0	1.25 +++++
4-Bromofluorobenzene (Surr)	CBZd5	Ave	1058714 1019252	1042081 1023083	1068525 1067616	1086367 1117665	1057828 1068475	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Qua = Quadratic ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-18185/3	JB15ICL01.D
Level 2	IC 140-18185/4	JB15ICL02.D
Level 3	IC 140-18185/5	JB15ICL03.D
Level 4	IC 140-18185/6	JB15ICL04.D
Level 5	IC 140-18185/7	JB15ICL05.D
Level 6	IC 140-18185/8	JB15ICL06.D
Level 7	ICIS 140-18185/9	JB15ICISL07.D
Level 8	IC 140-18185/10	JB15ICL08.D
Level 9	IC 140-18185/11	JB15ICL09.D
Level 10	IC 140-18185/12	JB15ICL10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	+++++	47.5						50			
Propene	+++++	+++++	12.6						50			
Dichlorodifluoromethane	-7.5						50					
Chloromethane	+++++	+++++	+++++	12.5						50		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	-9.4						50					
Vinyl chloride	-30.5						50					
1,3-Butadiene	+++++	+++++	8.8						50			
Butane	+++++	+++++	13.9						50			
Bromomethane	-15.3						50					
Chloroethane	+++++	-0.4						50				
Ethanol	+++++	+++++	+++++	11.0						50		
Vinyl bromide	+++++	-10.4						50				
2-Methylbutane	+++++	+++++	+++++	0.9						50		
Trichlorofluoromethane	-15.5						50					

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Acrolein	+++++	+++++	+++++	+++++	15.7						50	
Acetonitrile	+++++	+++++	+++++	+++++	26.5						50	
Acetone	+++++	+++++	+++++	+++++	35.1						80	
Pentane	+++++	+++++	+++++	+++++	9.3						50	
Isopropyl alcohol	+++++	11.0						50				
Ethyl ether	+++++	5.7						50				
1,1-Dichloroethene	-10.0						50					
Acrylonitrile	+++++	+++++	+++++	5.4						50		
tert-Butyl alcohol	+++++	+++++	-34.2						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	-9.5						50					
Methylene Chloride	+++++	+++++	+++++	54.8						80		
3-Chloropropene	+++++	+++++	2.1						50			
Carbon disulfide	-3.9						50					
trans-1,2-Dichloroethene	+++++	-1.7						50				
2-Methylpentane	+++++	+++++	18.6						50			
Methyl tert-butyl ether	+++++	-9.9						50				
1,1-Dichloroethane	-2.5						50					
Vinyl acetate	+++++	-16.2						50				
2-Butanone (MEK)	+++++	+++++	+++++	23.7						50		
Hexane	+++++	+++++	+++++	10.2						50		
cis-1,2-Dichloroethene	-4.7						50					

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Ethyl acetate	+++++	+++++	+++++	15.1						50		
Chloroform	+++++	+++++	9.6						50			
Tetrahydrofuran	+++++	+++++	+++++	18.4						50		
1,1,1-Trichloroethane	0.8						50					
1,2-Dichloroethane	+++++	-4.7						50				
1-Butanol	+++++	+++++	+++++	+++++	28.8						50	
Cyclohexane	+++++	+++++	19.5						50			
Benzene	12.1						50					
Carbon tetrachloride	-15.6						50					
2,3-Dimethylpentane	+++++	+++++	10.4						50			
Thiophene	+++++	+++++	4.6						50			
2,2,4-Trimethylpentane	+++++	+++++	12.2						50			
Heptane	+++++	2.3						50				
1,2-Dichloropropane	+++++	0.5						50				
Trichloroethene	-5.2						50					
Dibromomethane	+++++	+++++	12.0						50			
Bromodichloromethane	-3.0						50					
1,4-Dioxane	+++++	+++++	0.6						50			
Methyl methacrylate	+++++	+++++	+++++	5.4						50		
Methylcyclohexane	+++++	7.6						50				
4-Methyl-2-pentanone (MIBK)	+++++	+++++	+++++	8.8						50		

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
cis-1,3-Dichloropropene	+++++	-1.3						50				
trans-1,3-Dichloropropene	+++++	+++++	-2.9						50			
Toluene	+++++	-0.2						50				
1,1,2-Trichloroethane	-8.7						50					
2-Hexanone	+++++	-6.0						50				
Octane	6.1						50					
Dibromochloromethane	-13.8						50					
1,2-Dibromoethane (EDB)	+++++	-8.7						50				
Tetrachloroethene	-3.3						50					
Chlorobenzene	+++++	-8.1						50				
Ethylbenzene	+++++	-4.1						50				
m-Xylene & p-Xylene	+++++	-2.5						50				
Nonane	-3.3						50					
Styrene	+++++	-10.5						50				
Bromoform	+++++	+++++	-2.7						50			
o-Xylene	+++++	-3.8						50				
1,1,2,2-Tetrachloroethane	+++++	-0.9						50				
1,2,3-Trichloropropane	+++++	-11.0						50				
Isopropylbenzene	+++++	3.6						50				
Propylbenzene	+++++	+++++	3.4						50			
2-Chlorotoluene	+++++	-0.5						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
4-Ethyltoluene	+++++	-1.4						50				
1,3,5-Trimethylbenzene	+++++	-8.8						50				
Alpha Methyl Styrene	+++++	+++++	4.0						50			
Decane	+++++	+++++	18.2						50			
tert-Butylbenzene	+++++	0.0						50				
1,2,4-Trimethylbenzene	+++++	-0.9						50				
sec-Butylbenzene	+++++	-0.5						50				
1,3-Dichlorobenzene	+++++	0.9						50				
Benzyl chloride	+++++	-4.7						50				
1,4-Dichlorobenzene	+++++	0.5						50				
4-Isopropyltoluene	+++++	-5.9						50				
1,2,3-Trimethylbenzene	+++++	-3.7						50				
Indane	+++++	-2.1						50				
1,2-Dichlorobenzene	+++++	2.8						50				
Butylbenzene	+++++	1.2						50				
Indene	+++++	-2.3						50				
Undecane	+++++	7.5						50				
1,2-Dibromo-3-Chloropropane	+++++	-7.9						50				
1,2,4,5-Tetramethylbenzene	+++++	-8.8						50				
Dodecane	+++++	+++++	+++++	+++++	43.7						50	
1,2,4-Trichlorobenzene	+++++	1.4						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Naphthalene	-12.0						80					
Hexachlorobutadiene	+++++	2.9						50				
1,2,3-Trichlorobenzene	+++++	+++++	32.6						50			
2-Methylnaphthalene	+++++	+++++	+++++	-35.9 +++++						80		
1-Methylnaphthalene	+++++	+++++	33.2	+++++					80			

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Lab Sample ID: ICV 140-18185/15 Calibration Date: 02/16/2018 00:43

Instrument ID: MJ Calib Start Date: 02/15/2018 15:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/15/2018 22:24

Lab File ID: JLCSB16.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4274	0.3673		1.72	2.00	-14.0	35.0
Propene	Ave	1.164	1.047		1.80	2.00	-10.0	35.0
Dichlorodifluoromethane	Ave	3.588	3.379		1.88	2.00	-5.8	35.0
Chloromethane	Ave	0.4199	0.3899		1.86	2.00	-7.2	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.352	2.322		1.97	2.00	-1.3	35.0
Acetaldehyde	Ave	0.4660	0.3900		8.37	10.0	-16.3	35.0
Vinyl chloride	Ave	1.307	1.364		2.09	2.00	4.4	35.0
1,3-Butadiene	Ave	1.057	1.011		1.91	2.00	-4.3	35.0
Butane	Ave	2.004	1.887		1.88	2.00	-5.8	35.0
Bromomethane	Ave	1.302	1.246		1.91	2.00	-4.3	35.0
Chloroethane	Ave	0.6785	0.6904		2.04	2.00	1.8	35.0
Ethanol	Ave	0.4846	0.3232		6.67	10.0	-33.3	35.0
Vinyl bromide	Ave	1.237	1.303		2.11	2.00	5.3	35.0
2-Methylbutane	Ave	1.477	1.457		1.97	2.00	-1.4	35.0
Trichlorofluoromethane	Ave	3.471	3.460		1.99	2.00	-0.3	35.0
Acrolein	Ave	0.3467	0.3376		1.95	2.00	-2.6	35.0
Acetonitrile	Ave	0.4388	0.3737		1.70	2.00	-14.8	35.0
Acetone	Ave	0.4553	0.4159		1.83	2.00	-8.7	35.0
Pentane	Ave	0.2117	0.2191		2.07	2.00	3.5	35.0
Isopropyl alcohol	Ave	1.306	1.085		1.66	2.00	-16.9	35.0
Ethyl ether	Ave	1.127	1.037		1.84	2.00	-7.9	35.0
1,1-Dichloroethene	Ave	1.324	1.306		1.97	2.00	-1.3	35.0
Acrylonitrile	Ave	0.7914	0.7360		1.86	2.00	-7.0	35.0
tert-Butyl alcohol	Lin1		1.077		1.42	2.00	-28.8	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.744	2.816		2.05	2.00	2.6	35.0
Methylene Chloride	Ave	1.433	1.253		1.75	2.00	-12.5	35.0
3-Chloropropene	Lin1		1.119		1.95	2.00	-2.7	35.0
Carbon disulfide	Ave	3.840	3.595		1.87	2.00	-6.4	35.0
trans-1,2-Dichloroethene	Ave	1.325	1.316		1.99	2.00	-0.6	35.0
2-Methylpentane	Ave	3.051	2.763		1.81	2.00	-9.5	35.0
Methyl tert-butyl ether	Ave	2.941	2.699		1.84	2.00	-8.2	35.0
1,1-Dichloroethane	Ave	2.488	2.460		1.98	2.00	-1.1	35.0
Vinyl acetate	Ave	2.838	2.607		1.84	2.00	-8.1	35.0
2-Butanone (MEK)	Ave	0.5113	0.4378		1.71	2.00	-14.4	35.0
Hexane	Ave	1.076	1.027		1.91	2.00	-4.6	35.0
Isopropyl ether	Ave	3.523	3.240		1.84	2.00	-8.0	35.0
cis-1,2-Dichloroethene	Ave	1.352	1.345		1.99	2.00	-0.5	35.0
Ethyl acetate	Ave	2.261	1.855		1.64	2.00	-18.0	35.0
Chloroform	Ave	2.865	2.728		1.90	2.00	-4.8	35.0
Tert-butyl ethyl ether	Ave	3.280	2.837		1.73	2.00	-13.5	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Lab Sample ID: ICV 140-18185/15 Calibration Date: 02/16/2018 00:43

Instrument ID: MJ Calib Start Date: 02/15/2018 15:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/15/2018 22:24

Lab File ID: JLCSB16.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.213	1.000		1.65	2.00	-17.5	35.0
1,1,1-Trichloroethane	Ave	2.982	2.842		1.91	2.00	-4.7	35.0
1,2-Dichloroethane	Ave	0.3245	0.3175		1.96	2.00	-2.1	35.0
1-Butanol	Ave	0.0692	0.0594		1.72	2.00	-14.1	35.0
Cyclohexane	Ave	0.1171	0.1118		1.91	2.00	-4.6	35.0
Benzene	Ave	0.7099	0.6709		1.89	2.00	-5.5	35.0
Carbon tetrachloride	Ave	0.5362	0.5458		2.04	2.00	1.8	35.0
2,3-Dimethylpentane	Ave	0.1667	0.1544		1.85	2.00	-7.4	35.0
Thiophene	Ave	0.4031	0.3833		1.90	2.00	-4.9	35.0
Tert-amyl methyl ether	Ave	0.5960	0.5347		1.79	2.00	-10.3	35.0
2,2,4-Trimethylpentane	Ave	1.138	1.105		1.94	2.00	-2.9	35.0
Heptane	Ave	0.2498	0.2365		1.89	2.00	-5.3	35.0
1,2-Dichloropropane	Ave	0.2670	0.2588		1.94	2.00	-3.1	35.0
Trichloroethene	Ave	0.3129	0.3157		2.02	2.00	0.9	35.0
Dibromomethane	Ave	0.2981	0.2856		1.92	2.00	-4.2	35.0
Bromodichloromethane	Ave	0.5220	0.5030		1.93	2.00	-3.6	35.0
1,4-Dioxane	Ave	0.0696	0.0572		1.64	2.00	-17.8	35.0
Methyl methacrylate	Ave	0.2430	0.2099		1.73	2.00	-13.6	35.0
Methylcyclohexane	Ave	0.4456	0.5145		2.31	2.00	15.4	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3667	0.2883		1.57	2.00	-21.4	35.0
cis-1,3-Dichloropropene	Ave	0.4116	0.4100		1.99	2.00	-0.4	35.0
trans-1,3-Dichloropropene	Ave	0.3874	0.3847		1.99	2.00	-0.7	35.0
Toluene	Ave	0.8440	0.8056		1.91	2.00	-4.6	35.0
1,1,2-Trichloroethane	Ave	0.2578	0.2472		1.92	2.00	-4.1	35.0
2-Hexanone	Ave	0.1989	0.1592		1.60	2.00	-20.0	35.0
Octane	Ave	0.2931	0.2827		1.93	2.00	-3.5	35.0
Dibromochloromethane	Ave	0.5688	0.5911		2.08	2.00	3.9	35.0
1,2-Dibromoethane (EDB)	Ave	0.4783	0.4843		2.03	2.00	1.3	35.0
Tetrachloroethene	Ave	0.3348	0.3309		1.98	2.00	-1.2	35.0
2,3-Dimethylheptane	Ave	0.8602	0.7593		1.77	2.00	-11.7	35.0
Chlorobenzene	Ave	0.6802	0.6929		2.04	2.00	1.9	35.0
Ethylbenzene	Ave	1.046	0.9800		1.87	2.00	-6.3	35.0
m-Xylene & p-Xylene	Ave	0.7833	0.7469		3.81	4.00	-4.6	35.0
Nonane	Ave	0.5709	0.5566		1.95	2.00	-2.5	35.0
Bromoform	Ave	0.6101	0.6227		2.04	2.00	2.1	35.0
Styrene	Ave	0.6068	0.6064		2.00	2.00	-0.0	35.0
o-Xylene	Ave	0.8310	0.7631		1.84	2.00	-8.2	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6006	0.5425		1.81	2.00	-9.7	35.0
1,2,3-Trichloropropane	Ave	0.1574	0.1442		1.83	2.00	-8.4	35.0
Isopropylbenzene	Ave	1.131	1.043		1.84	2.00	-7.8	35.0
Propylbenzene	Ave	0.3111	0.2910		1.87	2.00	-6.5	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Lab Sample ID: ICV 140-18185/15 Calibration Date: 02/16/2018 00:43

Instrument ID: MJ Calib Start Date: 02/15/2018 15:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/15/2018 22:24

Lab File ID: JLCSB16.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chlorotoluene	Ave	0.3018	0.2962		1.96	2.00	-1.9	35.0
4-Ethyltoluene	Ave	1.092	0.9558		1.75	2.00	-12.5	35.0
1,3,5-Trimethylbenzene	Ave	0.4567	0.4752		2.08	2.00	4.0	35.0
Alpha Methyl Styrene	Ave	0.4759	0.4446		1.87	2.00	-6.6	35.0
Decane	Ave	0.6756	0.6432		1.90	2.00	-4.8	35.0
tert-Butylbenzene	Ave	0.9702	0.8847		1.82	2.00	-8.8	35.0
1,2,4-Trimethylbenzene	Ave	0.9159	0.8384		1.83	2.00	-8.5	35.0
sec-Butylbenzene	Ave	1.336	1.226		1.83	2.00	-8.3	35.0
1,3-Dichlorobenzene	Ave	0.6861	0.6615		1.93	2.00	-3.6	35.0
Benzyl chloride	Ave	0.7395	0.6769		1.83	2.00	-8.5	35.0
1,4-Dichlorobenzene	Ave	0.6827	0.6602		1.93	2.00	-3.3	35.0
4-Isopropyltoluene	Ave	1.091	0.9840		1.80	2.00	-9.8	35.0
1,2,3-Trimethylbenzene	Ave	0.8965	0.6038		1.35	2.00	-32.6	35.0
Butylcyclohexane	Ave	0.8276	0.7496		1.81	2.00	-9.4	35.0
Indane	Ave	0.8553	0.7716		1.80	2.00	-9.8	35.0
1,2-Dichlorobenzene	Ave	0.6490	0.6155		1.90	2.00	-5.2	35.0
Butylbenzene	Ave	1.065	0.9651		1.81	2.00	-9.4	35.0
Indene	Ave	0.7188	0.5725		1.59	2.00	-20.4	35.0
Undecane	Ave	0.7010	0.6305		1.80	2.00	-10.1	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.3168	0.2436		1.54	2.00	-23.1	35.0
1,2,4,5-Tetramethylbenzene	Ave	0.9272	0.7656		1.65	2.00	-17.4	35.0
Dodecane	Qua		0.4818		2.04	2.00	1.8	35.0
1,2,4-Trichlorobenzene	Ave	0.4913	0.4952		2.02	2.00	0.8	35.0
Naphthalene	Ave	0.7770	0.7325		1.89	2.00	-5.7	35.0
Hexachlorobutadiene	Ave	0.5066	0.4538		1.79	2.00	-10.4	35.0
1,2,3-Trichlorobenzene	Ave	0.3126	0.3306		2.12	2.00	5.8	35.0
2-Methylnaphthalene	Ave	0.0616	0.1211		12.6	6.40	96.8*	50.0
1-Methylnaphthalene	Ave	0.0610	0.1423		14.1	6.05	133.3*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7231	0.7159		3.96	4.00	-1.0	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Lab Sample ID: ICV 140-18185/15 Calibration Date: 02/16/2018 00:43

Instrument ID: MJ Calib Start Date: 05/28/2017 18:27

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 05/29/2017 00:31

Lab File ID: JLCSB16.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methylthiophene	Ave	0.6836	0.7003			2.00	2.5	35.0
3-Methylthiophene	Ave	0.6771	0.6848			2.00	1.1	35.0
2-Ethylthiophene	Ave	0.8046	0.7673			2.00	-4.6	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.7737	0.0050			2.00	-99.4*	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.5914	0.4575			2.00	-22.6	35.0
1,2,3,4-Tetramethylbenzene	Ave	0.7242	0.5864			2.00	-19.0	35.0
Benzo(b)thiophene	Ave	0.3024	0.3654			2.00	20.8	35.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Lab File ID: JBFBB27A.D BFB Injection Date: 02/27/2018

Instrument ID: MJ BFB Injection Time: 11:48

Analysis Batch No.: 18439

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.0	
75	30.0 - 60.0 % of mass 95	51.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	105.5	
175	5.0 - 9.0 % of mass 174	7.5	(7.1) 1
176	95.0 - 101.0 % of mass 174	102.4	(97.1) 1
177	5.0 - 9.0 % of mass 176	6.9	(6.8) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-18439/6	JCCVB27A.D	02/27/2018	12:17
	LCS 140-18439/1006	JCCVB27A-LCS .d	02/27/2018	12:17
	MB 140-18439/8	J500BB27.D	02/27/2018	14:32
IA-146-C-24	140-10788-16	JB27P101.D	02/27/2018	15:17
IA-145-C-24	140-10788-17	JB27P102.D	02/27/2018	16:02
IA-149-C-24	140-10788-18	JB27P103.D	02/27/2018	16:47
IA-DUP02-C-24	140-10788-19	JB27P104.D	02/27/2018	17:31
IA-126-C-24	140-10788-20	JB27P105.D	02/27/2018	18:16
IA-101-B-24	140-10788-21	JB27P106.D	02/27/2018	19:00
IA-100-B-24	140-10788-22	JB27P107.D	02/27/2018	19:44

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Lab Sample ID: CCVIS 140-18439/6 Calibration Date: 02/27/2018 12:17

Instrument ID: MJ Calib Start Date: 02/15/2018 15:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/15/2018 22:24

Lab File ID: JCCVB27A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4274	0.4392		2.06	2.00	2.8	30.0
Propene	Ave	1.164	1.308		2.25	2.00	12.3	30.0
Dichlorodifluoromethane	Ave	3.588	4.131		2.30	2.00	15.1	30.0
Chloromethane	Ave	0.4199	0.4868		2.32	2.00	15.9	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.352	2.791		2.37	2.00	18.7	30.0
Acetaldehyde	Ave	0.4660	0.4256		9.13	10.0	-8.7	30.0
Vinyl chloride	Ave	1.307	1.628		2.49	2.00	24.6	30.0
1,3-Butadiene	Ave	1.057	1.213		2.30	2.00	14.8	30.0
Butane	Ave	2.004	2.287		2.28	2.00	14.1	30.0
Bromomethane	Ave	1.302	1.536		2.36	2.00	18.0	30.0
Chloroethane	Ave	0.6785	0.7735		2.28	2.00	14.0	30.0
Ethanol	Ave	0.4846	0.4607		9.51	10.0	-4.9	30.0
Vinyl bromide	Ave	1.237	1.474		2.38	2.00	19.1	30.0
2-Methylbutane	Ave	1.477	1.730		2.34	2.00	17.1	30.0
Trichlorofluoromethane	Ave	3.471	4.260		2.45	2.00	22.7	30.0
Acrolein	Ave	0.3467	0.2934		1.69	2.00	-15.4	30.0
Acetonitrile	Ave	0.4388	0.4002		1.82	2.00	-8.8	30.0
Acetone	Ave	0.4553	0.3915		5.16	6.00	-14.0	30.0
Pentane	Ave	0.2117	0.2435		2.30	2.00	15.1	30.0
Isopropyl alcohol	Ave	1.306	1.222		5.62	6.00	-6.4	30.0
Ethyl ether	Ave	1.127	1.004		1.78	2.00	-10.9	30.0
1,1-Dichloroethene	Ave	1.324	1.520		2.30	2.00	14.8	30.0
Acrylonitrile	Ave	0.7914	0.6876		1.74	2.00	-13.1	30.0
tert-Butyl alcohol	Lin1		1.789		2.39	2.00	19.6	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.744	3.221		2.35	2.00	17.4	30.0
Methylene Chloride	Ave	1.433	1.405		1.96	2.00	-1.9	30.0
3-Chloropropene	Lin1		1.246		2.17	2.00	8.4	30.0
Carbon disulfide	Ave	3.840	4.456		2.32	2.00	16.0	30.0
trans-1,2-Dichloroethene	Ave	1.325	1.483		2.24	2.00	11.9	30.0
2-Methylpentane	Ave	3.051	3.317		2.17	2.00	8.7	30.0
Methyl tert-butyl ether	Ave	2.941	2.620		1.78	2.00	-10.9	30.0
1,1-Dichloroethane	Ave	2.488	2.622		2.11	2.00	5.4	30.0
Vinyl acetate	Ave	2.838	2.493		1.76	2.00	-12.1	30.0
2-Butanone (MEK)	Ave	0.5113	0.4173		1.63	2.00	-18.4	30.0
Hexane	Ave	1.076	1.110		2.06	2.00	3.1	30.0
Isopropyl ether	Ave	3.523	3.064		1.74	2.00	-13.0	30.0
cis-1,2-Dichloroethene	Ave	1.352	1.412		2.09	2.00	4.5	30.0
Ethyl acetate	Ave	2.261	1.864		1.65	2.00	-17.6	30.0
Chloroform	Ave	2.865	2.949		2.06	2.00	2.9	30.0
Tert-butyl ethyl ether	Ave	3.280	2.921		1.78	2.00	-10.9	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Lab Sample ID: CCVIS 140-18439/6 Calibration Date: 02/27/2018 12:17

Instrument ID: MJ Calib Start Date: 02/15/2018 15:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/15/2018 22:24

Lab File ID: JCCVB27A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.213	1.011		1.67	2.00	-16.7	30.0
1,1,1-Trichloroethane	Ave	2.982	3.173		2.13	2.00	6.4	30.0
1,2-Dichloroethane	Ave	0.3245	0.3509		2.16	2.00	8.2	30.0
1-Butanol	Ave	0.0692	0.0712		2.06	2.00	2.8	30.0
Benzene	Ave	0.7099	0.6960		1.96	2.00	-2.0	30.0
Cyclohexane	Ave	0.1171	0.1269		2.17	2.00	8.4	30.0
Carbon tetrachloride	Ave	0.5362	0.5488		2.05	2.00	2.3	30.0
2,3-Dimethylpentane	Ave	0.1667	0.1749		2.10	2.00	4.9	30.0
Thiophene	Ave	0.4031	0.4160		2.06	2.00	3.2	30.0
Tert-amyl methyl ether	Ave	0.5960	0.5485		1.84	2.00	-8.0	30.0
2,2,4-Trimethylpentane	Ave	1.138	1.201		2.11	2.00	5.5	30.0
Heptane	Ave	0.2498	0.2582		2.07	2.00	3.4	30.0
1,2-Dichloropropane	Ave	0.2670	0.2715		2.03	2.00	1.7	30.0
Trichloroethene	Ave	0.3129	0.3435		2.20	2.00	9.8	30.0
Dibromomethane	Ave	0.2981	0.3046		2.04	2.00	2.2	30.0
Bromodichloromethane	Ave	0.5220	0.5498		2.11	2.00	5.3	30.0
1,4-Dioxane	Ave	0.0696	0.0671		1.93	2.00	-3.6	30.0
Methyl methacrylate	Ave	0.2430	0.2071		1.70	2.00	-14.8	30.0
Methylcyclohexane	Ave	0.4456	0.4636		2.08	2.00	4.0	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3667	0.3670		2.00	2.00	0.0	30.0
cis-1,3-Dichloropropene	Ave	0.4116	0.4394		2.14	2.00	6.8	30.0
trans-1,3-Dichloropropene	Ave	0.3874	0.3864		2.00	2.00	-0.2	30.0
Toluene	Ave	0.8440	0.7798		1.85	2.00	-7.6	30.0
1,1,2-Trichloroethane	Ave	0.2578	0.2513		1.95	2.00	-2.5	30.0
2-Hexanone	Ave	0.1989	0.2030		2.04	2.00	2.1	30.0
Octane	Ave	0.2931	0.2887		1.97	2.00	-1.5	30.0
Dibromochloromethane	Ave	0.5688	0.6019		2.12	2.00	5.8	30.0
1,2-Dibromoethane (EDB)	Ave	0.4783	0.4886		2.04	2.00	2.2	30.0
Tetrachloroethene	Ave	0.3348	0.3397		2.03	2.00	1.5	30.0
2,3-Dimethylheptane	Ave	0.8602	0.8646		2.01	2.00	0.5	30.0
Chlorobenzene	Ave	0.6802	0.6897		2.03	2.00	1.4	30.0
Ethylbenzene	Ave	1.046	0.9344		1.79	2.00	-10.7	30.0
m-Xylene & p-Xylene	Ave	0.7833	0.6919		3.53	4.00	-11.7	30.0
Nonane	Ave	0.5709	0.5467		1.92	2.00	-4.2	30.0
Styrene	Ave	0.6068	0.5564		1.83	2.00	-8.3	30.0
Bromoform	Ave	0.6101	0.6205		2.03	2.00	1.7	30.0
o-Xylene	Ave	0.8310	0.7303		1.76	2.00	-12.1	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6006	0.5137		1.71	2.00	-14.5	30.0
1,2,3-Trichloropropane	Ave	0.1574	0.1358		1.73	2.00	-13.7	30.0
Isopropylbenzene	Ave	1.131	0.9524		1.68	2.00	-15.8	30.0
Propylbenzene	Ave	0.3111	0.2552		1.64	2.00	-18.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Lab Sample ID: CCVIS 140-18439/6 Calibration Date: 02/27/2018 12:17

Instrument ID: MJ Calib Start Date: 02/15/2018 15:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/15/2018 22:24

Lab File ID: JCCVB27A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chlorotoluene	Ave	0.3018	0.2748		1.82	2.00	-8.9	30.0
4-Ethyltoluene	Ave	1.092	0.8936		1.64	2.00	-18.2	30.0
1,3,5-Trimethylbenzene	Ave	0.4567	0.3676		1.61	2.00	-19.5	30.0
Alpha Methyl Styrene	Ave	0.4759	0.3882		1.63	2.00	-18.4	30.0
Decane	Ave	0.6756	0.5867		1.74	2.00	-13.1	30.0
tert-Butylbenzene	Ave	0.9702	0.7910		1.63	2.00	-18.5	30.0
1,2,4-Trimethylbenzene	Ave	0.9159	0.7378		1.61	2.00	-19.4	30.0
sec-Butylbenzene	Ave	1.336	1.089		1.63	2.00	-18.5	30.0
1,3-Dichlorobenzene	Ave	0.6861	0.6184		1.80	2.00	-9.9	30.0
Benzyl chloride	Ave	0.7395	0.6219		1.68	2.00	-15.9	30.0
1,4-Dichlorobenzene	Ave	0.6827	0.6076		1.78	2.00	-11.0	30.0
4-Isopropyltoluene	Ave	1.091	0.8883		1.63	2.00	-18.6	30.0
1,2,3-Trimethylbenzene	Ave	0.8965	0.7247		1.62	2.00	-19.2	30.0
Butylcyclohexane	Ave	0.8276	0.7589		1.83	2.00	-8.3	30.0
1,2-Dichlorobenzene	Ave	0.6490	0.5667		1.75	2.00	-12.7	30.0
Indane	Ave	0.8553	0.7059		1.65	2.00	-17.5	30.0
Butylbenzene	Ave	1.065	0.8495		1.60	2.00	-20.2	30.0
Indene	Ave	0.7188	0.5836		1.62	2.00	-18.8	30.0
Undecane	Ave	0.7010	0.5304		1.51	2.00	-24.3	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.3168	0.2680		1.69	2.00	-15.4	30.0
1,2,4,5-Tetramethylbenzene	Ave	0.9272	0.7759		1.67	2.00	-16.3	30.0
Dodecane	Qua		0.4402		1.85	2.00	-7.5	30.0
1,2,4-Trichlorobenzene	Ave	0.4913	0.4032		1.64	2.00	-17.9	30.0
Naphthalene	Ave	0.7770	0.6147		1.58	2.00	-20.9	30.0
Hexachlorobutadiene	Ave	0.5066	0.4067		1.61	2.00	-19.7	30.0
1,2,3-Trichlorobenzene	Ave	0.3126	0.2759		1.77	2.00	-11.7	30.0
2-Methylnaphthalene	Ave	0.0616	0.0763		7.75	6.25	24.0	50.0
1-Methylnaphthalene	Ave	0.0610	0.0748		7.66	6.25	22.5	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7231	0.7428		4.11	4.00	2.7	30.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Lab File ID: RBFBA30.D BFB Injection Date: 01/30/2018

Instrument ID: MR BFB Injection Time: 11:12

Analysis Batch No.: 17762

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.1	
75	30.0 - 60.0 % of mass 95	54.8	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	78.1	
175	5.0 - 9.0 % of mass 174	5.7	(7.3) 1
176	95.0 - 101.0 % of mass 174	76.6	(98.2) 1
177	5.0 - 9.0 % of mass 176	5.0	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-17762/3	RA30IC01.D	01/30/2018	12:29
	IC 140-17762/4	RA30IC02.D	01/30/2018	13:16
	IC 140-17762/5	RA30IC03.D	01/30/2018	14:04
	IC 140-17762/6	RA30IC04.D	01/30/2018	14:50
	IC 140-17762/7	RA30IC05.D	01/30/2018	15:39
	IC 140-17762/8	RA30IC06.D	01/30/2018	16:27
	ICIS 140-17762/9	RA30IC07.D	01/30/2018	17:15
	IC 140-17762/10	RA30IC08.D	01/30/2018	18:03
	IC 140-17762/11	RA30IC09.D	01/30/2018	18:50
	IC 140-17762/12	RA30IC10.D	01/30/2018	19:38
	ICV 140-17762/14	RA30ICV.D	01/30/2018	21:11

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-17762/3	RA30IC01.D
Level 2	IC 140-17762/4	RA30IC02.D
Level 3	IC 140-17762/5	RA30IC03.D
Level 4	IC 140-17762/6	RA30IC04.D
Level 5	IC 140-17762/7	RA30IC05.D
Level 6	IC 140-17762/8	RA30IC06.D
Level 7	ICIS 140-17762/9	RA30IC07.D
Level 8	IC 140-17762/10	RA30IC08.D
Level 9	IC 140-17762/11	RA30IC09.D
Level 10	IC 140-17762/12	RA30IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Chlorodifluoromethane	+++++ 0.4996	+++++ 0.5018	0.5364 0.4761	0.5007 0.4556	0.4969 0.4366	Ave		0.4879				6.4		30.0			
Propene	+++++ 1.0148	+++++ 1.0127	+++++ 0.9251	1.0749 0.8535	1.0335 0.7750	Ave		0.9557				11.4		30.0			
Dichlorodifluoromethane	+++++ 3.8576	+++++ 3.8716	3.9445 3.4238	4.4278 3.3920	3.8443 3.2841	Ave		3.7557				10.0		30.0			
Chloromethane	+++++ 0.3356	+++++ 0.3504	+++++ 0.3161	0.4352 0.2922	0.3844 0.2804	Ave		0.3421				15.8		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	2.9869 2.5228	2.8020 2.5888	2.6799 2.4191	2.4834 2.2928	2.5057 2.1607	Ave		2.5442				9.4		30.0			
Vinyl chloride	1.2473 1.0050	1.2981 1.0133	1.0342 0.9733	1.0613 0.9642	1.0145 0.8783	Ave		1.0490				12.2		30.0			
1,3-Butadiene	+++++ 0.6759	+++++ 0.6901	0.7589 0.6575	0.7160 0.6429	0.6702 0.6007	Ave		0.6765				7.0		30.0			
Butane	+++++ 1.1770	+++++ 1.1571	1.1761 1.0993	1.1870 1.0664	1.1472 0.9821	Ave		1.1240				6.3		30.0			
Bromomethane	+++++ 0.9756	+++++ 0.9799	1.0961 0.9468	0.9664 0.9339	0.9805 0.8851	Ave		0.9705				6.2		30.0			
Chloroethane	+++++ 0.4798	+++++ 0.4684	0.5400 0.4543	0.5007 0.4508	0.4816 0.4272	Ave		0.4754				7.2		30.0			
Ethanol	+++++ 0.3138	+++++ 0.3115	+++++ 0.2974	0.3206 0.2839	0.3092 0.2628	Ave		0.2999				6.8		30.0			
Vinyl bromide	+++++ 0.9734	+++++ 0.9603	1.0223 0.9264	0.9931 0.9030	0.9628 0.8698	Ave		0.9514				5.2		30.0			
2-Methylbutane	+++++ 0.7927	0.8473 0.7870	0.8827 0.7573	0.8140 0.7354	0.8057 0.7063	Ave		0.7921				6.9		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Acrolein	+++++ 0.2131	+++++ 0.2023	+++++ 0.1714	0.2463 0.2369	0.2775 0.1986	Ave		0.2209				16.0		30.0			
Trichlorofluoromethane	3.8163 3.6210	3.8962 3.5670	3.7377 3.3875	3.7221 3.2631	3.6118 3.0510	Ave		3.5674				7.4		30.0			
Acetonitrile	+++++ 0.2710	+++++ 0.2792	+++++ 0.2690	+++++ 0.2590	0.3012 0.2516	Ave		0.2718				6.4		30.0			
Acetone	+++++ 0.4445	+++++ 0.4298	+++++ 0.3730	+++++ 0.3559	0.5743 0.3319	Ave		0.4182				21.0		30.0			
Isopropyl alcohol	+++++ 1.7615	+++++ 1.7262	+++++ 1.6035	1.7601 1.4471	1.7064 1.2490	Ave		1.6077				12.0		30.0			
Pentane	+++++ 0.2821	0.3253 0.2863	0.3062 0.2706	0.2848 0.2514	0.2797 0.2238	Ave		0.2789				10.5		30.0			
Ethyl ether	+++++ 1.0595	+++++ 1.0591	1.1464 0.9558	1.0861 0.8868	1.0639 0.8197	Ave		1.0097				11.0		30.0			
1,1-Dichloroethene	1.8230 1.4732	1.6952 1.5251	1.5415 1.4388	1.4628 1.3846	1.4710 1.3297	Ave		1.5145				9.6		30.0			
Acrylonitrile	+++++ 0.9755	1.0491 1.0149	0.9699 0.9431	0.9648 0.8986	0.9313 0.8597	Ave		0.9563				6.0		30.0			
tert-Butyl alcohol	+++++ 3.0919	+++++ 3.1666	3.2956 2.9405	3.0814 2.8297	3.0612 2.6483	Ave		3.0144				6.7		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	3.6835 3.3085	3.3240 3.3647	3.3270 3.1386	3.2027 2.9781	3.2883 2.7719	Ave		3.2387				7.5		30.0			
Methylene Chloride	+++++ 1.5226	+++++ 1.4846	+++++ 1.3365	2.3963 1.2627	1.7575 1.1890	Ave		1.5642				26.4		30.0			
3-Chloropropene	+++++ 1.2912	1.4624 1.2679	1.3517 1.1239	1.2960 1.1775	1.2499 1.0934	Ave		1.2571				9.1		30.0			
Carbon disulfide	+++++ 4.3010	4.5429 4.3495	4.2824 4.0908	4.2202 3.9413	4.1883 3.7920	Ave		4.1898				5.3		30.0			
trans-1,2-Dichloroethene	+++++ 1.5663	1.6529 1.6054	1.5536 1.5101	1.5451 1.4740	1.5012 1.4213	Ave		1.5366				4.5		30.0			
Methyl tert-butyl ether	+++++ 4.8878	4.9780 5.0046	4.7681 4.7335	4.6401 4.5480	4.7610 4.3260	Ave		4.7386				4.5		30.0			
1,1-Dichloroethane	3.2552 2.9583	3.2402 2.9974	3.0427 2.7728	2.9120 2.6386	2.9342 2.5185	Ave		2.9270				8.0		30.0			
Vinyl acetate	+++++ 3.0422	+++++ 3.0483	2.4722 2.8443	2.4587 3.0745	2.7400 2.9503	Ave		2.8288				8.9		30.0			
2-Butanone (MEK)	+++++ 0.7255	+++++ 0.7913	+++++ 0.7057	0.7096 0.7007	0.7825 0.6631	Ave		0.7255				6.4		30.0			
Hexane	+++++ 1.2050	1.3784 1.2187	1.2369 1.1204	1.1721 1.0624	1.1769 0.9868	Ave		1.1731				9.5		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
cis-1,2-Dichloroethene	1.9071 1.6125	1.8156 1.6678	1.6641 1.5780	1.6147 1.5302	1.6025 1.4817	Ave		1.6474				7.8		30.0			
Ethyl acetate	+++++ 2.7290	+++++ 2.8405	2.1840 2.6632	2.2813 2.5958	2.5408 2.4854	Ave		2.5400				8.7		30.0			
Chloroform	4.2863 3.7052	3.8694 3.7903	3.7705 3.5491	3.6794 3.4047	3.6984 3.2578	Ave		3.7011				7.5		30.0			
Tetrahydrofuran	+++++ 1.3407	+++++ 1.3730	1.3680 1.2688	1.3174 1.2195	1.3030 1.1665	Ave		1.2946				5.6		30.0			
1,1,1-Trichloroethane	4.1703 3.9689	4.0153 4.0994	3.8140 3.8790	3.6871 3.7835	3.8389 3.6271	Ave		3.8883				4.5		30.0			
1,2-Dichloroethane	0.4598 0.4390	0.4262 0.4435	0.4288 0.4170	0.3913 0.4087	0.4251 0.3915	Ave		0.4231				5.2		30.0			
Benzene	0.8742 0.7844	0.8183 0.7925	0.7957 0.7383	0.7735 0.6873	0.7655 0.6121	Ave		0.7642				9.5		30.0			
1-Butanol	+++++ 0.0491	+++++ 0.0535	+++++ 0.0554	+++++ 0.0549	0.0399 0.0507	Ave		0.0506				11.4		30.0			
Cyclohexane	+++++ 0.1282	0.1302 0.1319	0.1361 0.1198	0.1248 0.1109	0.1254 0.0971	Ave		0.1227				9.8		30.0			
Carbon tetrachloride	0.6377 0.6481	0.5867 0.6494	0.5971 0.6370	0.5827 0.6239	0.6061 0.5914	Ave		0.6160				4.2		30.0			
2,2,4-Trimethylpentane	+++++ 1.1700	+++++ 1.1823	1.1763 1.1037	1.1213 1.0350	1.1405 0.9359	Ave		1.1081				7.6		30.0			
1,2-Dichloropropane	0.2892 0.2749	0.2827 0.2781	0.2783 0.2608	0.2653 0.2439	0.2652 0.2201	Ave		0.2659				7.7		30.0			
Heptane	+++++ 0.2794	0.2806 0.2826	0.2727 0.2668	0.2557 0.2502	0.2719 0.2244	Ave		0.2649				7.1		30.0			
Trichloroethene	0.3941 0.3561	0.3498 0.3989	0.3569 0.4050	0.3383 0.3430	0.3431 0.3253	Ave		0.3611				7.8		30.0			
Dibromomethane	+++++ 0.3180	+++++ 0.3337	0.3335 0.3154	0.3130 0.3075	0.3081 0.2866	Ave		0.3145				4.8		30.0			
Bromodichloromethane	0.5552 0.5927	0.5165 0.6275	0.5155 0.6065	0.5215 0.5926	0.5443 0.5621	Ave		0.5634				7.1		30.0			
1,4-Dioxane	+++++ 0.1244	0.1026 0.1255	0.1107 0.1188	0.1100 0.1111	0.1114 0.0998	Ave		0.1127				7.8		30.0			
Methyl methacrylate	+++++ 0.2534	+++++ 0.2814	+++++ 0.2766	0.1921 0.2732	0.2185 0.2613	Ave		0.2509				13.3		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.4476	+++++ 0.4761	0.4073 0.4607	0.3703 0.4462	0.4067 0.4120	Ave		0.4284				8.2		30.0			
cis-1,3-Dichloropropene	0.4432 0.4616	0.4182 0.4890	0.4016 0.4666	0.4077 0.4542	0.4258 0.4244	Ave		0.4392				6.4		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
trans-1,3-Dichloropropene	0.5110 0.5036	0.4535 0.5257	0.4406 0.5134	0.4431 0.5163	0.4525 0.4903	Ave		0.4850				7.0		30.0			
Toluene	1.2824 1.1325	1.1432 1.1561	1.0870 1.0939	1.0545 1.0385	1.0799 0.9486	Ave		1.1017				7.9		30.0			
1,1,2-Trichloroethane	0.3289 0.3161	0.3191 0.3218	0.2970 0.3044	0.2890 0.2905	0.3016 0.2671	Ave		0.3035				6.1		30.0			
2-Hexanone	+++++ 0.2856	+++++ 0.3067	0.1978 0.3130	0.1839 0.2994	0.2390 0.2768	Ave		0.2628				19.0		30.0			
Dibromochloromethane	0.5478 0.6218	0.4611 0.6757	0.5045 0.6734	0.4783 0.6763	0.5239 0.6415	Ave		0.5804				14.9		30.0			
Octane	0.3713 0.3761	0.3521 0.3823	0.3634 0.3590	0.3351 0.3411	0.3561 0.3074	Ave		0.3544				6.2		30.0			
1,2-Dibromoethane (EDB)	0.5777 0.5703	0.4862 0.5934	0.5028 0.5775	0.5036 0.5627	0.5214 0.5228	Ave		0.5418				7.1		30.0			
Tetrachloroethene	0.4510 0.4222	0.4302 0.4299	0.4096 0.4116	0.3928 0.3938	0.4006 0.3646	Ave		0.4106				5.9		30.0			
Chlorobenzene	1.0111 0.8808	0.9072 0.8981	0.8780 0.8583	0.8277 0.8176	0.8488 0.7523	Ave		0.8680				7.8		30.0			
Ethylbenzene	1.6592 1.4956	1.4733 1.5265	1.4692 1.4423	1.3826 1.3480	1.4274 1.1942	Ave		1.4418				8.4		30.0			
m-Xylene & p-Xylene	1.2623 1.1995	1.1484 1.2020	1.1693 1.1112	1.0926 1.0102	1.1299 0.8551	Ave		1.1181				10.3		30.0			
Bromoform	0.4567 0.5340	0.3917 0.5876	0.3879 0.5961	0.3803 0.6243	0.4243 0.6099	Ave		0.4993				20.2		30.0			
Styrene	+++++ 0.7708	+++++ 0.8353	0.5730 0.8116	0.5596 0.7867	0.6410 0.7271	Ave		0.7131				15.2		30.0			
Nonane	0.6231 0.6749	0.6344 0.6650	0.6202 0.5965	0.5897 0.5334	0.6338 0.4526	Ave		0.6024				11.0		30.0			
o-Xylene	1.3802 1.2416	1.2323 1.2309	1.2402 1.1408	1.1662 1.0563	1.1911 0.9246	Ave		1.1804				10.4		30.0			
1,1,2,2-Tetrachloroethane	0.7571 0.7998	0.6769 0.7375	0.6943 0.6416	0.6940 0.7009	0.7398 0.6230	Ave		0.7065				7.6		30.0			
1,2,3-Trichloropropane	0.2821 0.2687	0.2608 0.2698	0.2586 0.2533	0.2448 0.2410	0.2532 0.2251	Ave		0.2557				6.4		30.0			
Isopropylbenzene	+++++ 1.6847	1.7627 1.6664	1.6980 1.5413	1.5734 1.4182	1.6200 1.2451	Ave		1.5789				10.2		30.0			
Propylbenzene	0.4393 0.4800	0.4121 0.4854	0.4266 0.4494	0.4019 0.4134	0.4353 0.3689	Ave		0.4312				8.2		30.0			
2-Chlorotoluene	0.4307 0.4308	0.4121 0.4227	0.4100 0.3945	0.3900 0.3647	0.4077 0.3250	Ave		0.3988				8.2		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
4-Ethyltoluene	1.6721 1.8578	1.5887 1.8488	1.6064 1.7062	1.5559 1.5414	1.6697 1.3406	Ave		1.6388				9.3		30.0			
1,3,5-Trimethylbenzene	0.6886 0.7368	0.6438 0.7377	0.6390 0.6854	0.6228 0.6329	0.6583 0.5712	Ave		0.6617				7.8		30.0			
Alpha Methyl Styrene	+++++ 0.5961	+++++ 0.6811	+++++ 0.6723	0.3867 0.6319	0.4651 0.5717	Ave		0.5721				19.1		30.0			
Decane	0.7782 0.9615	0.7577 0.9673	0.8036 0.8765	0.7851 0.7693	0.8536 0.6351	Ave		0.8188				12.2		30.0			
tert-Butylbenzene	1.6747 1.7037	1.5629 1.6867	1.5711 1.5356	1.5162 1.3829	1.5602 1.1822	Ave		1.5376				10.2		30.0			
1,2,4-Trimethylbenzene	1.4061 1.5971	1.3356 1.5702	1.4117 1.4079	1.3483 1.2376	1.4396 1.0385	Ave		1.3793				11.6		30.0			
1,3-Dichlorobenzene	0.9382 0.9839	0.8463 0.9937	0.8839 0.9167	0.8388 0.8391	0.8924 0.7369	Ave		0.8870				8.7		30.0			
sec-Butylbenzene	2.1386 2.2501	1.9617 2.2330	1.9986 2.0283	1.9397 1.7523	2.0522 1.4290	Ave		1.9784				12.2		30.0			
Benzyl chloride	0.9176 1.2280	0.8673 1.3521	0.8700 1.2619	0.8429 1.1005	1.0250 0.9090	Ave		1.0374				18.1		30.0			
1,4-Dichlorobenzene	0.9388 0.9885	0.8643 0.9957	0.8741 0.9128	0.8360 0.8274	0.8810 0.7278	Ave		0.8846				9.0		30.0			
4-Isopropyltoluene	1.7285 1.9959	1.5857 2.0202	1.7817 1.8554	1.6423 1.6625	1.7503 1.3675	Ave		1.7390				11.1		30.0			
1,2,3-Trimethylbenzene	1.5856 1.7943	1.5711 1.7803	1.5668 1.6018	1.4899 1.4272	1.6163 1.2294	Ave		1.5663				10.4		30.0			
1,2-Dichlorobenzene	0.8942 0.9621	0.8150 0.9678	0.8654 0.8979	0.8005 0.8158	0.8702 0.7264	Ave		0.8615				8.7		30.0			
Butylbenzene	1.4292 1.8444	1.3568 1.8896	1.4519 1.7531	1.4134 1.5467	1.5664 1.2564	Ave		1.5508				13.8		30.0			
Undecane	0.7892 1.0726	0.7390 1.1100	0.7934 1.0270	0.8096 0.9132	0.8805 0.7285	Ave		0.8863				15.8		30.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.5969	+++++ 0.6647	0.3685 0.6164	0.3739 0.6149	0.4386 0.5398	Ave		0.5267				22.2		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 0.9191	+++++ 0.9859	0.7212 0.9676	0.6936 0.9342	0.7408 0.8332	Ave		0.8495				13.9		30.0			
Dodecane	+++++ 0.9928	+++++ 1.1283	0.5865 1.0229	0.6183 0.9289	0.6706 0.6900	Ave		0.8298				25.4		30.0			
1,2,4-Trichlorobenzene	+++++ 0.7149	0.4150 0.8253	0.4838 0.8320	0.4553 0.8417	0.5017 0.7379	Ave		0.6453				27.7		30.0			
Naphthalene	1.0448 1.6712	0.9243 1.9078	1.1299 1.8929	1.1276 1.8463	1.2769 1.5182	Ave		1.4340				26.4		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Hexachlorobutadiene	0.7046 0.7752	0.6195 0.8332	0.6587 0.8074	0.6012 0.7762	0.6084 0.6733	Ave		0.7058				12.3		30.0			
1,2,3-Trichlorobenzene	+++++ 0.6757	+++++ 0.7953	0.4965 0.7779	0.4801 0.7989	0.4939 0.7046	Ave		0.6529				21.7		30.0			
2-Methylnaphthalene	+++++ 0.2487	+++++ 0.4641	+++++ 0.4569	+++++ 0.4755	0.1340 0.3372	Ave		0.3527				39.5		50.0			
1-Methylnaphthalene	+++++ 0.2715	+++++ 0.5022	+++++ 0.4656	0.2315 0.4794	0.1676 0.3359	Ave		0.3505				38.1		50.0			
4-Bromofluorobenzene (Surr)	0.7650 0.7800	0.7779 0.7658	0.7890 0.7351	0.7826 0.7176	0.7941 0.6764	Ave		0.7584				5.0		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-17762/3	RA30IC01.D
Level 2	IC 140-17762/4	RA30IC02.D
Level 3	IC 140-17762/5	RA30IC03.D
Level 4	IC 140-17762/6	RA30IC04.D
Level 5	IC 140-17762/7	RA30IC05.D
Level 6	IC 140-17762/8	RA30IC06.D
Level 7	ICIS 140-17762/9	RA30IC07.D
Level 8	IC 140-17762/10	RA30IC08.D
Level 9	IC 140-17762/11	RA30IC09.D
Level 10	IC 140-17762/12	RA30IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorodifluoromethane	CBM	Ave	+++++	+++++	4119	7784	19042	+++++	+++++	0.0784	0.160	0.400
			49960	99602	192008	373011	719553	1.00	2.00	4.00	8.00	16.0
Propene	CBM	Ave	+++++	+++++	+++++	16712	39604	+++++	+++++	+++++	0.160	0.400
			101480	201013	373101	698857	1277376	1.00	2.00	4.00	8.00	16.0
Dichlorodifluoromethane	CBM	Ave	+++++	+++++	30290	68839	147314	+++++	+++++	0.0784	0.160	0.400
			385761	768499	1380786	2777340	5412793	1.00	2.00	4.00	8.00	16.0
Chloromethane	CBM	Ave	+++++	+++++	+++++	6766	14731	+++++	+++++	+++++	0.160	0.400
			33564	69549	127494	239224	462204	1.00	2.00	4.00	8.00	16.0
1,2-Dichloro-1,1,2,2-tetrafluoroeth ane	CBM	Ave	5510	10542	20579	38610	96019	0.0196	0.0392	0.0784	0.160	0.400
			252275	513872	975595	1877362	3561275	1.00	2.00	4.00	8.00	16.0
Vinyl chloride	CBM	Ave	2301	4884	7942	16500	38877	0.0196	0.0392	0.0784	0.160	0.400
			100495	201144	392525	789520	1447608	1.00	2.00	4.00	8.00	16.0
1,3-Butadiene	CBM	Ave	+++++	+++++	5828	11132	25683	+++++	+++++	0.0784	0.160	0.400
			67588	136978	265156	526420	990068	1.00	2.00	4.00	8.00	16.0
Butane	CBM	Ave	+++++	+++++	9031	18455	43962	+++++	+++++	0.0784	0.160	0.400
			117697	229678	443357	873129	1618667	1.00	2.00	4.00	8.00	16.0
Bromomethane	CBM	Ave	+++++	+++++	8417	15024	37574	+++++	+++++	0.0784	0.160	0.400
			97562	194501	381835	764670	1458793	1.00	2.00	4.00	8.00	16.0
Chloroethane	CBM	Ave	+++++	+++++	4147	7784	18456	+++++	+++++	0.0784	0.160	0.400
			47978	92980	183236	369095	704038	1.00	2.00	4.00	8.00	16.0
Ethanol	CBM	Ave	+++++	+++++	+++++	24919	59239	+++++	+++++	+++++	0.800	2.00
			156896	309152	599728	1162228	2165410	5.01	9.99	20.0	40.0	80.0
Vinyl bromide	CBM	Ave	+++++	+++++	7850	15440	36894	+++++	+++++	0.0784	0.160	0.400
			97338	190610	373599	739337	1433559	1.00	2.00	4.00	8.00	16.0
2-Methylbutane	CBM	Ave	+++++	3188	6778	12656	30876	+++++	0.0392	0.0784	0.160	0.400
			79273	156213	305420	602150	1164068	1.00	2.00	4.00	8.00	16.0
Acrolein	CBM	Ave	+++++	+++++	+++++	3830	10635	+++++	+++++	+++++	0.160	0.400
			21312	40157	69130	193944	327310	1.00	2.00	4.00	8.00	16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Trichlorofluoromethane	CBM	Ave	7040 362096	14659 708040	28702 1366159	57868 2671794	138405 5028632	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Acetonitrile	CBM	Ave	+++++ 27104	+++++ 55420	+++++ 108488	+++++ 212047	11541 414724	+++++ 1.00	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0
Acetone	CBM	Ave	+++++ 133362	+++++ 255969	+++++ 451316	+++++ 874182	66025 1641135	+++++ 3.01	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.20 48.0
Isopropyl alcohol	CBM	Ave	+++++ 528496	+++++ 1027986	+++++ 1940134	82100 3554966	196181 6176210	+++++ 3.01	+++++ 5.99	+++++ 12.0	0.480 24.0	1.20 48.0
Pentane	CBM	Ave	+++++ 28211	1224 56821	2351 109148	4428 205846	10720 368799	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Ethyl ether	CBM	Ave	+++++ 105952	+++++ 210233	8803 385484	16886 726094	40771 1351034	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethene	CBM	Ave	3363 147316	6378 302733	11837 580273	22742 1133673	56370 2191529	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	+++++ 97550	3947 201452	7448 380336	15000 735807	35688 1416916	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
tert-Butyl alcohol	CBM	Ave	+++++ 309191	+++++ 628551	25307 1185900	47907 2316983	117307 4364855	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	6795 330843	12506 667885	25548 1265800	49793 2438487	126008 4568598	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Methylene Chloride	CBM	Ave	+++++ 152260	+++++ 294696	+++++ 539025	37255 1033868	67350 1959635	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0
3-Chloropropene	CBM	Ave	+++++ 129123	5502 251667	10380 453252	20149 964101	47897 1802055	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Carbon disulfide	CBM	Ave	+++++ 430092	17092 863361	32885 1649806	65612 3227149	160500 6249903	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	+++++ 156625	6219 318661	11930 609026	24021 1206934	57527 2342499	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	+++++ 488775	18729 993401	36615 1909019	72140 3723922	182444 7130125	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethane	CBM	Ave	6005 295826	12191 594968	23365 1118272	45273 2160451	112441 4150884	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	+++++ 304213	+++++ 605079	18984 1147099	38225 2517397	104997 4862704	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
2-Butanone (MEK)	CBM	Ave	+++++ 72547	+++++ 157076	+++++ 284611	11032 573697	29985 1092853	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0
Hexane	CBM	Ave	+++++ 120502	5186 241914	9498 451862	18222 869891	45099 1626366	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
cis-1,2-Dichloroethene	CBM	Ave	3518 161247	6831 331061	12779 636383	25103 1252882	61408 2442184	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Ethyl acetate	CBM	Ave	+++++ 272902	+++++ 563824	16771 1074075	35467 2125431	97364 4096409	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chloroform	CBM	Ave	7907 370515	14558 752364	28954 1431329	57203 2787766	141724 5369459	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	+++++ 134069	+++++ 272546	10505 511682	20481 998545	49933 1922640	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	7693 396883	15107 813727	29288 1564396	57324 3097922	147109 5978105	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	5237 266293	9999 535650	20209 1019982	37522 2013816	100014 3907140	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	9957 475845	19199 957247	37499 1805776	74171 3386082	180099 6108554	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	+++++ 29797	+++++ 64569	+++++ 135506	+++++ 270253	9384 506348	+++++ 1.00	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	+++++ 77754	3056 159306	6414 293021	11967 546616	29509 968821	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	7263 393178	13765 784365	28139 1557932	55870 3073958	142596 5902097	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	+++++ 709763	+++++ 1428084	55433 2699507	107521 5099511	268337 9340512	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	3294 166795	6633 335945	13116 637774	25436 1201630	62400 2196910	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	+++++ 169496	6584 341354	12852 652666	24522 1232469	63962 2239236	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	4489 216055	8207 481860	16817 990611	32437 1689959	80726 3246702	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	+++++ 192925	+++++ 403081	15715 771427	30017 1514919	72482 2859943	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	6323 359583	12118 757973	24293 1483398	50003 2919706	128060 5610234	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	+++++ 75444	2408 151582	5216 290497	10547 547334	26213 995848	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	+++++ 153737	+++++ 339847	+++++ 676432	18423 1346179	51419 2607373	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	+++++ 271515	+++++ 575108	19192 1126777	35511 2198186	95687 4112261	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
cis-1,3-Dichloropropene	DFBZ	Ave	5048 280020	9812 590578	18927 1141143	39090 2237825	100184 4235998	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	5113 264281	9248 552390	18004 1089547	37170 2203158	93053 4251750	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Toluene	CBZd 5	Ave	12831 594266	23313 1214847	44415 2321715	88464 4431626	222095 8226314	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	3291 165862	6507 338126	12134 646119	24240 1239731	62032 2316335	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Hexanone	CBZd5	Ave	+++++ 149844	+++++ 322256	8080 664344	15426 1277875	49161 2400790	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Dibromochloromethane	CBZd5	Ave	5481 326299	9403 710033	20613 1429129	40122 2886064	107735 5563126	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Octane	CBZd5	Ave	3715 197364	7181 401741	14847 761888	28115 1455739	73235 2665696	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2-Dibromoethane (EDB)	CBZd5	Ave	5780 299269	9915 623528	20544 1225652	42246 2401387	107221 4533785	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Tetrachloroethene	CBZd5	Ave	4512 221546	8773 451735	16736 873561	32954 1680400	82386 3162320	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Chlorobenzene	CBZd5	Ave	10116 462209	18500 943722	35874 1821596	69433 3488920	174562 6524458	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Ethylbenzene	CBZd5	Ave	16601 784804	30045 1604021	60028 3061101	115987 5752584	293553 10356375	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd5	Ave	25259 1258868	46840 2526057	95548 4717005	183320 8622122	464738 14832360	0.0392 2.00	0.0784 3.99	0.157 8.00	0.320 16.0	0.800 32.0
Bromoform	CBZd5	Ave	4569 280201	7987 617419	15850 1265260	31906 2664358	87253 5289308	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Styrene	CBZd5	Ave	+++++ 404492	+++++ 877726	23411 1722436	46940 3357063	131824 6305273	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Nonane	CBZd5	Ave	6234 354142	12938 698726	25340 1266112	49466 2276291	130349 3925374	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
o-Xylene	CBZd5	Ave	13809 651529	25131 1293453	50674 2421285	97828 4507688	244961 8018750	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd5	Ave	7575 419698	13804 774984	28370 1361818	58220 2991028	152141 5403129	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd5	Ave	2822 140977	5319 283509	10568 537694	20539 1028585	52066 1952171	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Isopropylbenzene	CBZd5	Ave	+++++ 884009	35946 1751008	69379 3271189	131986 6052009	333169 10798333	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Propylbenzene	CBZd5	Ave	4395 251895	8404 510087	17429 953864	33714 1764153	89517 3199258	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
2-Chlorotoluene	CBZd5	Ave	4309 226074	8403 444172	16753 837183	32718 1556290	83842 2818704	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd5	Ave	16730 974862	32398 1942649	65633 3621190	130522 6577901	343391 11626420	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd5	Ave	6890 386617	13130 775132	26109 1454797	52246 2700808	135393 4953675	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd5	Ave	+++++ 312791	+++++ 715672	+++++ 1426907	32438 2696582	95659 4958200	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0
Decane	CBZd5	Ave	7786 504552	15452 1016420	32834 1860379	65857 3283161	175546 5508017	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
tert-Butylbenzene	CBZd 5	Ave	16756 894018	31873 1772333	64192 3259179	127195 5901403	320875 10252438	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	14068 838081	27236 1649904	57678 2988133	113107 5281375	296062 9006683	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	9387 516305	17259 1044130	36114 1945670	70364 3580637	183533 6390995	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	21397 1180727	40006 2346383	81660 4304932	162720 7478024	422045 12393102	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	9181 644403	17686 1420806	35545 2678333	70710 4696324	210797 7883232	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	9393 518691	17625 1046250	35715 1937249	70131 3530827	181180 6311344	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	17294 1047342	32338 2122805	72796 3937880	137773 7094422	359958 11859110	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	15864 941539	32040 1870714	64016 3399572	124983 6090386	332416 10662003	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	8947 504861	16621 1016927	35357 1905685	67149 3481297	178966 6299641	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	14299 967842	27670 1985514	59321 3720801	118568 6600625	322145 10895604	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	7896 562815	15070 1166396	32417 2179717	67912 3897040	181085 6317836	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	+++++ 313235	+++++ 698408	15056 1308310	31369 2624159	90207 4681454	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 482300	+++++ 1035933	29468 2053724	58187 3986557	152347 7226247	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Ave	+++++ 520941	+++++ 1185570	23965 2170914	51872 3963852	137913 5984092	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2,4-Trichlorobenzene	CBZd 5	Ave	+++++ 375125	8463 867227	19766 1765909	38197 3591958	103182 6399037	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	10453 876926	18850 2004705	46167 4017474	94589 7879181	262605 13166564	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Hexachlorobutadiene	CBZd 5	Ave	7050 406766	12634 875521	26912 1713702	50435 3312283	125133 5838950	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	+++++ 354574	+++++ 835689	20286 1650977	40272 3409456	101572 6110654	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	+++++ 300143	+++++ 1121735	+++++ 2230513	+++++ 4666996	63395 6724954	+++++ 2.30	+++++ 4.59	+++++ 9.20	+++++ 18.4	0.920 36.8
1-Methylnaphthalene	CBZd 5	Ave	+++++ 327721	+++++ 1213833	+++++ 2273024	44657 4705374	79264 6700143	+++++ 2.30	+++++ 4.59	+++++ 9.20	0.368 18.4	0.920 36.8
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1562115 1634670	1618846 1611533	1644837 1560168	1641285 1531137	1633174 1466410	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

Curve Type Legend:
Ave = Average ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-17762/3	RA30IC01.D
Level 2	IC 140-17762/4	RA30IC02.D
Level 3	IC 140-17762/5	RA30IC03.D
Level 4	IC 140-17762/6	RA30IC04.D
Level 5	IC 140-17762/7	RA30IC05.D
Level 6	IC 140-17762/8	RA30IC06.D
Level 7	ICIS 140-17762/9	RA30IC07.D
Level 8	IC 140-17762/10	RA30IC08.D
Level 9	IC 140-17762/11	RA30IC09.D
Level 10	IC 140-17762/12	RA30IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	+++++	9.9						50			
Propene	+++++	+++++	+++++	12.5						50		
Dichlorodifluoromethane	+++++	+++++	5.0						50			
Chloromethane	+++++	+++++	+++++	27.2						50		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	17.4						50					
Vinyl chloride	18.9						50					
1,3-Butadiene	+++++	+++++	12.2						50			
Butane	+++++	+++++	4.6						50			
Bromomethane	+++++	+++++	12.9						50			
Chloroethane	+++++	+++++	13.6						50			
Ethanol	+++++	+++++	+++++	6.9						50		
Vinyl bromide	+++++	+++++	7.5						50			
2-Methylbutane	+++++	7.0						50				
Acrolein	+++++	+++++	+++++	11.5						50		

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Trichlorofluoromethane	7.0						50					
Acetonitrile	+++++	+++++	+++++	+++++	10.8						50	
Acetone	+++++	+++++	+++++	+++++	37.3						80	
Isopropyl alcohol	+++++	+++++	+++++	9.5						50		
Pentane	+++++	16.6						50				
Ethyl ether	+++++	+++++	13.5						50			
1,1-Dichloroethene	20.4						50					
Acrylonitrile	+++++	9.7						50				
tert-Butyl alcohol	+++++	+++++	9.3						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	13.7						50					
Methylene Chloride	+++++	+++++	+++++	53.2						80		
3-Chloropropene	+++++	16.3						50				
Carbon disulfide	+++++	8.4						50				
trans-1,2-Dichloroethene	+++++	7.6						50				
Methyl tert-butyl ether	+++++	5.1						50				
1,1-Dichloroethane	11.2						50					
Vinyl acetate	+++++	+++++	-12.6						50			
2-Butanone (MEK)	+++++	+++++	+++++	-2.2						50		
Hexane	+++++	17.5						50				
cis-1,2-Dichloroethene	15.8						50					
Ethyl acetate	+++++	+++++	-14.0						50			

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chloroform	15.8						50					
Tetrahydrofuran	+++++	+++++	5.7						50			
1,1,1-Trichloroethane	7.2						50					
1,2-Dichloroethane	8.7						50					
Benzene	14.4						50					
1-Butanol	+++++	+++++	+++++	+++++	-21.1						50	
Cyclohexane	+++++	6.1						50				
Carbon tetrachloride	3.5						50					
2,2,4-Trimethylpentane	+++++	+++++	6.1						50			
1,2-Dichloropropane	8.8						50					
Heptane	+++++	5.9						50				
Trichloroethene	9.2						50					
Dibromomethane	+++++	+++++	6.0						50			
Bromodichloromethane	-1.5						50					
1,4-Dioxane	+++++	-8.9						50				
Methyl methacrylate	+++++	+++++	+++++	-23.4						50		
4-Methyl-2-pentanone (MIBK)	+++++	+++++	-4.9						50			
cis-1,3-Dichloropropene	0.9						50					
trans-1,3-Dichloropropene	5.4						50					
Toluene	16.4						50					
1,1,2-Trichloroethane	8.4						50					

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
2-Hexanone	+++++	+++++	-24.7						50			
Dibromochloromethane	-5.6						50					
Octane	4.8						50					
1,2-Dibromoethane (EDB)	6.6						50					
Tetrachloroethene	9.8						50					
Chlorobenzene	16.5						50					
Ethylbenzene	15.1						50					
m-Xylene & p-Xylene	12.9						50					
Bromoform	-8.5						50					
Styrene	+++++	+++++	-19.7						50			
Nonane	3.4						50					
o-Xylene	16.9						50					
1,1,2,2-Tetrachloroethane	7.2						50					
1,2,3-Trichloropropane	10.3						50					
Isopropylbenzene	+++++	11.6						50				
Propylbenzene	1.9						50					
2-Chlorotoluene	8.0						50					
4-Ethyltoluene	2.0						50					
1,3,5-Trimethylbenzene	4.1						50					
Alpha Methyl Styrene	+++++	+++++	+++++	-32.4						50		
Decane	-5.0						50					

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
tert-Butylbenzene	8.9						50					
1,2,4-Trimethylbenzene	1.9						50					
1,3-Dichlorobenzene	5.8						50					
sec-Butylbenzene	8.1						50					
Benzyl chloride	-11.5						50					
1,4-Dichlorobenzene	6.1						50					
4-Isopropyltoluene	-0.6						50					
1,2,3-Trimethylbenzene	1.2						50					
1,2-Dichlorobenzene	3.8						50					
Butylbenzene	-7.8						50					
Undecane	-11.0						50					
1,2-Dibromo-3-Chloropropane	+++++	+++++	-30.0						50			
1,2,4,5-Tetramethylbenzene	+++++	+++++	-15.1						50			
Dodecane	+++++	+++++	-29.3						50			
1,2,4-Trichlorobenzene	+++++	-35.7						50				
Naphthalene	-27.1						80					
Hexachlorobutadiene	-0.2						50					
1,2,3-Trichlorobenzene	+++++	+++++	-24.0						50			
2-Methylnaphthalene	+++++	+++++	+++++	+++++	-62.0						80	
1-Methylnaphthalene	+++++	+++++	+++++	-34.0						80		

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Lab Sample ID: ICV 140-17762/14 Calibration Date: 01/30/2018 21:11

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RA30ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4879	0.5051		2.56	2.47	3.5	35.0
Propene	Ave	0.9557	0.9570		2.47	2.47	0.1	35.0
Dichlorodifluoromethane	Ave	3.756	4.377		2.88	2.47	16.6	35.0
Chloromethane	Ave	0.3421	0.3220		2.32	2.47	-5.9	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.544	2.591		2.52	2.47	1.9	35.0
Vinyl chloride	Ave	1.049	1.041		2.45	2.47	-0.8	35.0
1,3-Butadiene	Ave	0.6765	0.6768		2.47	2.47	0.0	35.0
Butane	Ave	1.124	1.183		2.60	2.47	5.2	35.0
Bromomethane	Ave	0.9705	0.9841		2.50	2.47	1.4	35.0
Chloroethane	Ave	0.4754	0.4775		2.48	2.47	0.5	35.0
Ethanol	Ave	0.2999	0.2849		11.7	12.3	-5.0	35.0
Vinyl bromide	Ave	0.9514	1.041		2.70	2.47	9.4	35.0
2-Methylbutane	Ave	0.7921	0.8138		2.54	2.47	2.8	35.0
Acrolein	Ave	0.2209	0.2275		2.54	2.47	3.0	35.0
Trichlorofluoromethane	Ave	3.567	3.678		2.55	2.47	3.1	35.0
Acetonitrile	Ave	0.2718	0.2877		2.61	2.47	5.8	35.0
Acetone	Ave	0.4182	0.3903		6.91	7.41	-6.7	35.0
Isopropyl alcohol	Ave	1.608	1.805		8.32	7.41	12.3	35.0
Pentane	Ave	0.2789	0.2842		2.52	2.47	1.9	35.0
Ethyl ether	Ave	1.010	1.023		2.50	2.47	1.4	35.0
1,1-Dichloroethene	Ave	1.514	1.434		2.34	2.47	-5.3	35.0
Acrylonitrile	Ave	0.9563	0.9635		2.49	2.47	0.8	35.0
tert-Butyl alcohol	Ave	3.014	3.014		2.47	2.47	0.0	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.239	3.252		2.48	2.47	0.4	35.0
Methylene Chloride	Ave	1.564	1.381		2.18	2.47	-11.7	35.0
3-Chloropropene	Ave	1.257	1.307		2.57	2.47	4.0	35.0
Carbon disulfide	Ave	4.190	4.077		2.40	2.47	-2.7	35.0
trans-1,2-Dichloroethene	Ave	1.537	1.515		2.44	2.47	-1.4	35.0
Methyl tert-butyl ether	Ave	4.739	4.873		2.54	2.47	2.8	35.0
1,1-Dichloroethane	Ave	2.927	2.890		2.44	2.47	-1.2	35.0
Vinyl acetate	Ave	2.829	3.271		2.85	2.47	15.6	35.0
2-Butanone (MEK)	Ave	0.7255	0.7119		2.42	2.47	-1.9	35.0
Hexane	Ave	1.173	1.154		2.43	2.47	-1.7	35.0
cis-1,2-Dichloroethene	Ave	1.647	1.637		2.45	2.47	-0.6	35.0
Ethyl acetate	Ave	2.540	2.598		2.53	2.47	2.3	35.0
Chloroform	Ave	3.701	3.702		2.47	2.47	0.0	35.0
Tetrahydrofuran	Ave	1.295	1.329		2.54	2.47	2.7	35.0
1,1,1-Trichloroethane	Ave	3.888	4.070		2.58	2.47	4.7	35.0
1,2-Dichloroethane	Ave	0.4231	0.4407		2.57	2.47	4.2	35.0
1-Butanol	Ave	0.0506	0.0556		2.72	2.47	10.0	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Lab Sample ID: ICV 140-17762/14 Calibration Date: 01/30/2018 21:11

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RA30ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzene	Ave	0.7642	0.7746		2.50	2.47	1.4	35.0
Cyclohexane	Ave	0.1227	0.1250		2.51	2.47	1.8	35.0
Carbon tetrachloride	Ave	0.6160	0.6889		2.76	2.47	11.8	35.0
2,2,4-Trimethylpentane	Ave	1.108	1.146		2.55	2.47	3.4	35.0
1,2-Dichloropropane	Ave	0.2659	0.2696		2.50	2.47	1.4	35.0
Heptane	Ave	0.2649	0.2721		2.54	2.47	2.7	35.0
Trichloroethene	Ave	0.3611	0.3691		2.52	2.47	2.2	35.0
Dibromomethane	Ave	0.3145	0.3283		2.58	2.47	4.4	35.0
Bromodichloromethane	Ave	0.5634	0.6271		2.75	2.47	11.3	35.0
1,4-Dioxane	Ave	0.1127	0.1179		2.58	2.47	4.7	35.0
Methyl methacrylate	Ave	0.2509	0.2746		2.70	2.47	9.4	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4284	0.4624		2.67	2.47	7.9	35.0
cis-1,3-Dichloropropene	Ave	0.4392	0.4887		2.75	2.47	11.3	35.0
trans-1,3-Dichloropropene	Ave	0.4850	0.5351		2.72	2.47	10.3	35.0
Toluene	Ave	1.102	1.122		2.52	2.47	1.9	35.0
1,1,2-Trichloroethane	Ave	0.3035	0.3092		2.52	2.47	1.9	35.0
2-Hexanone	Ave	0.2628	0.2981		2.80	2.47	13.5	35.0
Dibromochloromethane	Ave	0.5804	0.6993		2.98	2.47	20.5	35.0
Octane	Ave	0.3544	0.3754		2.62	2.47	5.9	35.0
1,2-Dibromoethane (EDB)	Ave	0.5418	0.5896		2.69	2.47	8.8	35.0
Tetrachloroethene	Ave	0.4106	0.4276		2.57	2.47	4.1	35.0
Chlorobenzene	Ave	0.8680	0.8977		2.55	2.47	3.4	35.0
Ethylbenzene	Ave	1.442	1.497		2.56	2.47	3.8	35.0
m-Xylene & p-Xylene	Ave	1.118	1.183		5.23	4.94	5.8	35.0
Bromoform	Ave	0.4993	0.6381		3.16	2.47	27.8	35.0
Styrene	Ave	0.7131	0.8370		2.90	2.47	17.4	35.0
Nonane	Ave	0.6024	0.6373		2.61	2.47	5.8	35.0
o-Xylene	Ave	1.180	1.193		2.49	2.47	1.0	35.0
1,1,2,2-Tetrachloroethane	Ave	0.7065	0.7765		2.71	2.47	9.9	35.0
1,2,3-Trichloropropane	Ave	0.2557	0.2673		2.58	2.47	4.5	35.0
Isopropylbenzene	Ave	1.579	1.681		2.63	2.47	6.5	35.0
Propylbenzene	Ave	0.4312	0.4920		2.82	2.47	14.1	35.0
2-Chlorotoluene	Ave	0.3988	0.4292		2.66	2.47	7.6	35.0
4-Ethyltoluene	Ave	1.639	1.745		2.63	2.47	6.5	35.0
1,3,5-Trimethylbenzene	Ave	0.6617	0.7303		2.73	2.47	10.4	35.0
Alpha Methyl Styrene	Ave	0.5721	0.6952		3.00	2.47	21.5	35.0
Decane	Ave	0.8188	0.9370		2.83	2.47	14.4	35.0
tert-Butylbenzene	Ave	1.538	1.672		2.69	2.47	8.8	35.0
1,2,4-Trimethylbenzene	Ave	1.379	1.533		2.74	2.47	11.1	35.0
1,3-Dichlorobenzene	Ave	0.8870	0.9882		2.75	2.47	11.4	35.0
sec-Butylbenzene	Ave	1.978	2.196		2.74	2.47	11.0	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Lab Sample ID: ICV 140-17762/14 Calibration Date: 01/30/2018 21:11

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RA30ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzyl chloride	Ave	1.037	1.335		3.18	2.47	28.7	35.0
1,4-Dichlorobenzene	Ave	0.8846	0.9798		2.74	2.47	10.8	35.0
4-Isopropyltoluene	Ave	1.739	1.961		2.78	2.47	12.7	35.0
1,2,3-Trimethylbenzene	Ave	1.566	1.539		2.43	2.47	-1.7	35.0
1,2-Dichlorobenzene	Ave	0.8615	0.9599		2.75	2.47	11.4	35.0
Butylbenzene	Ave	1.551	1.840		2.93	2.47	18.7	35.0
Undecane	Ave	0.8863	1.046		2.91	2.47	18.0	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.5267	0.4263		2.00	2.47	-19.1	35.0
1,2,4,5-Tetramethylbenzene	Ave	0.8495	1.694		4.92	2.47	99.4*	35.0
Dodecane	Ave	0.8298	0.9946		2.96	2.47	19.9	35.0
1,2,4-Trichlorobenzene	Ave	0.6453	0.7696		2.94	2.47	19.3	35.0
Naphthalene	Ave	1.434	1.710		2.95	2.47	19.3	35.0
Hexachlorobutadiene	Ave	0.7058	0.7878		2.76	2.47	11.6	35.0
1,2,3-Trichlorobenzene	Ave	0.6529	0.7394		2.80	2.47	13.3	35.0
2-Methylnaphthalene	Ave	0.3527	0.1484		2.38	5.67	-57.9*	50.0
1-Methylnaphthalene	Ave	0.3505	0.1569		2.54	5.68	-55.3*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7584	0.7641		4.03	4.00	0.8	35.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Lab File ID: RBFBB26.D BFB Injection Date: 02/26/2018

Instrument ID: MR BFB Injection Time: 09:42

Analysis Batch No.: 18348

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	54.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	79.4	
175	5.0 - 9.0 % of mass 174	5.7	(7.2) 1
176	95.0 - 101.0 % of mass 174	77.0	(96.9) 1
177	5.0 - 9.0 % of mass 176	5.2	(6.8) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-18348/2	RCCVB26.D	02/26/2018	10:14
	LCS 140-18348/1002	RCCVB26-LCS.d	02/26/2018	10:14
	MB 140-18348/4	R500BB26.D	02/26/2018	11:58
IA-001-C-24	140-10788-1	RB26P101.D	02/26/2018	14:01
IA-004-C-24	140-10788-2	RB26P102.D	02/26/2018	14:48
IA-102-C-24	140-10788-3	RB26P103.D	02/26/2018	15:35
IA-155-C-24	140-10788-4	RB26P104.D	02/26/2018	16:22
IA-153-C-24	140-10788-5	RB26P105.D	02/26/2018	17:10
IA-DUP01-C-24	140-10788-6	RB26P106.D	02/26/2018	17:57
IA-133-C-24	140-10788-7	RB26P107.D	02/26/2018	18:44
IA-060-C-24	140-10788-8	RB26P108.D	02/26/2018	19:31
IA-152-C-24	140-10788-9	RB26P109.D	02/26/2018	20:18
IA-150-C-24	140-10788-10	RB26P110.D	02/26/2018	21:05
IA-141-C-24	140-10788-11	RB26P111.D	02/26/2018	21:52
IA-142-C-24	140-10788-12	RB26P112.D	02/26/2018	22:39
IA-088-C-24	140-10788-13	RB26P113.D	02/26/2018	23:27
IA-113-C-24	140-10788-14	RB26P114.D	02/27/2018	00:14
IA-144-C-24	140-10788-15	RB26P115.D	02/27/2018	01:01

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Lab Sample ID: CCVIS 140-18348/2 Calibration Date: 02/26/2018 10:14

Instrument ID: MR Calib Start Date: 06/28/2017 15:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/28/2017 21:58

Lab File ID: RCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetaldehyde	Ave	0.3474	0.2210			10.0	-36.4*	30.0
2-Methylpentane	Ave	1.822	2.120			2.00	16.4	30.0
2,3-Dimethylpentane	Ave	0.1274	0.1551			2.00	21.7	30.0
Thiophene	Ave	0.3433	0.4087			2.00	19.1	30.0
Methylcyclohexane	Ave	0.4439	0.5370			2.00	21.0	30.0
3-Methylthiophene	Ave	0.6908	0.8726			2.00	26.3	30.0
2,3-Dimethylheptane	Ave	0.5998	0.5938			2.00	-1.0	30.0
2-Ethylthiophene	Ave	0.9153	1.068			2.00	16.6	30.0
Butylcyclohexane	Ave	0.7978	1.108			2.00	38.9*	30.0
Indane	Ave	1.030	1.352			2.00	31.3*	30.0
Indene	QuaF		0.9843			2.00		30.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		0.0028			2.00		30.0
1,2,3,5-Tetramethylbenzene	Ave	0.9142	1.053			2.00	15.2	30.0
1,2,3,4-Tetramethylbenzene	Ave	1.236	1.384			2.00	11.9	30.0
Benzo(b)thiophene	Ave	0.9147	0.8418			2.00	-8.0	30.0
2-Methylthiophene	Ave	0.6999				2.00		

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Lab Sample ID: CCVIS 140-18348/2 Calibration Date: 02/26/2018 10:14

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4879	0.4572		1.87	2.00	-6.3	30.0
Propene	Ave	0.9557	0.7407		1.55	2.00	-22.5	30.0
Dichlorodifluoromethane	Ave	3.756	3.443		1.83	2.00	-8.3	30.0
Chloromethane	Ave	0.3421	0.3039		1.78	2.00	-11.2	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.544	2.638		2.07	2.00	3.7	30.0
Vinyl chloride	Ave	1.049	0.9081		1.73	2.00	-13.4	30.0
1,3-Butadiene	Ave	0.6765	0.5962		1.76	2.00	-11.9	30.0
Butane	Ave	1.124	0.9812		1.75	2.00	-12.7	30.0
Bromomethane	Ave	0.9705	0.9298		1.92	2.00	-4.2	30.0
Chloroethane	Ave	0.4754	0.4417		1.86	2.00	-7.1	30.0
Ethanol	Ave	0.2999	0.1666		5.55	10.0	-44.5*	30.0
Vinyl bromide	Ave	0.9514	0.9704		2.04	2.00	2.0	30.0
2-Methylbutane	Ave	0.7921	0.7043		1.78	2.00	-11.1	30.0
Acrolein	Ave	0.2209	0.2834		2.57	2.00	28.3	30.0
Trichlorofluoromethane	Ave	3.567	3.431		1.92	2.00	-3.8	30.0
Acetonitrile	Ave	0.2718	0.2146		1.58	2.00	-21.1	30.0
Acetone	Ave	0.4182	0.3888		1.86	2.00	-7.0	30.0
Isopropyl alcohol	Ave	1.608	1.703		2.12	2.00	5.9	30.0
Pentane	Ave	0.2789	0.2830		2.03	2.00	1.5	30.0
Ethyl ether	Ave	1.010	0.8475		1.68	2.00	-16.1	30.0
1,1-Dichloroethene	Ave	1.514	1.424		1.88	2.00	-6.0	30.0
Acrylonitrile	Ave	0.9563	0.8283		1.73	2.00	-13.4	30.0
tert-Butyl alcohol	Ave	3.014	2.483		1.65	2.00	-17.6	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.239	3.193		1.97	2.00	-1.4	30.0
Methylene Chloride	Ave	1.564	1.352		1.73	2.00	-13.6	30.0
3-Chloropropene	Ave	1.257	1.096		1.74	2.00	-12.8	30.0
Carbon disulfide	Ave	4.190	3.860		1.84	2.00	-7.9	30.0
trans-1,2-Dichloroethene	Ave	1.537	1.462		1.90	2.00	-4.8	30.0
Methyl tert-butyl ether	Ave	4.739	4.386		1.85	2.00	-7.4	30.0
1,1-Dichloroethane	Ave	2.927	2.531		1.73	2.00	-13.5	30.0
Vinyl acetate	Ave	2.829	2.588		1.83	2.00	-8.5	30.0
2-Butanone (MEK)	Ave	0.7255	0.5991		1.65	2.00	-17.4	30.0
Hexane	Ave	1.173	0.9807		1.67	2.00	-16.4	30.0
cis-1,2-Dichloroethene	Ave	1.647	1.540		1.87	2.00	-6.5	30.0
Ethyl acetate	Ave	2.540	2.040		1.61	2.00	-19.7	30.0
Chloroform	Ave	3.701	3.391		1.83	2.00	-8.4	30.0
Tetrahydrofuran	Ave	1.295	1.016		1.57	2.00	-21.5	30.0
1,1,1-Trichloroethane	Ave	3.888	3.696		1.90	2.00	-4.9	30.0
1,2-Dichloroethane	Ave	0.4231	0.3983		1.88	2.00	-5.9	30.0
1-Butanol	Ave	0.0506	0.0359		1.42	2.00	-29.1	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Lab Sample ID: CCVIS 140-18348/2 Calibration Date: 02/26/2018 10:14

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzene	Ave	0.7642	0.7184		1.88	2.00	-6.0	30.0
Cyclohexane	Ave	0.1227	0.1129		1.84	2.00	-8.0	30.0
Carbon tetrachloride	Ave	0.6160	0.6547		2.13	2.00	6.3	30.0
2,2,4-Trimethylpentane	Ave	1.108	0.9765		1.76	2.00	-11.9	30.0
1,2-Dichloropropane	Ave	0.2659	0.2328		1.75	2.00	-12.4	30.0
Heptane	Ave	0.2649	0.2422		1.83	2.00	-8.6	30.0
Trichloroethene	Ave	0.3611	0.3585		1.99	2.00	-0.7	30.0
Dibromomethane	Ave	0.3145	0.3012		1.92	2.00	-4.2	30.0
Bromodichloromethane	Ave	0.5634	0.5630		2.00	2.00	-0.0	30.0
1,4-Dioxane	Ave	0.1127	0.0960		1.70	2.00	-14.8	30.0
Methyl methacrylate	Ave	0.2509	0.2100		1.67	2.00	-16.3	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4284	0.3589		1.68	2.00	-16.2	30.0
cis-1,3-Dichloropropene	Ave	0.4392	0.4297		1.96	2.00	-2.2	30.0
trans-1,3-Dichloropropene	Ave	0.4850	0.4913		2.03	2.00	1.3	30.0
Toluene	Ave	1.102	1.101		2.00	2.00	-0.0	30.0
1,1,2-Trichloroethane	Ave	0.3035	0.2950		1.94	2.00	-2.8	30.0
2-Hexanone	Ave	0.2628	0.2494		1.90	2.00	-5.1	30.0
Dibromochloromethane	Ave	0.5804	0.6779		2.34	2.00	16.8	30.0
Octane	Ave	0.3544	0.3642		2.06	2.00	2.8	30.0
1,2-Dibromoethane (EDB)	Ave	0.5418	0.5692		2.10	2.00	5.0	30.0
Tetrachloroethene	Ave	0.4106	0.4392		2.14	2.00	7.0	30.0
Chlorobenzene	Ave	0.8680	0.8783		2.02	2.00	1.2	30.0
Ethylbenzene	Ave	1.442	1.416		1.96	2.00	-1.8	30.0
m-Xylene & p-Xylene	Ave	1.118	1.129		4.04	4.00	1.0	30.0
Bromoform	Ave	0.4993	0.5878		2.35	2.00	17.7	30.0
Styrene	Ave	0.7131	0.7663		2.15	2.00	7.5	30.0
Nonane	Ave	0.6024	0.5632		1.87	2.00	-6.5	30.0
o-Xylene	Ave	1.180	1.119		1.90	2.00	-5.2	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7065	0.6998		1.98	2.00	-0.9	30.0
1,2,3-Trichloropropane	Ave	0.2557	0.2526		1.98	2.00	-1.2	30.0
Isopropylbenzene	Ave	1.579	1.581		2.00	2.00	0.1	30.0
Propylbenzene	Ave	0.4312	0.4800		2.23	2.00	11.3	30.0
2-Chlorotoluene	Ave	0.3988	0.4196		2.10	2.00	5.2	30.0
4-Ethyltoluene	Ave	1.639	1.700		2.07	2.00	3.7	30.0
1,3,5-Trimethylbenzene	Ave	0.6617	0.8247		2.49	2.00	24.6	30.0
Alpha Methyl Styrene	Ave	0.5721	0.6480		2.27	2.00	13.3	30.0
Decane	Ave	0.8188	0.8519		2.08	2.00	4.0	30.0
tert-Butylbenzene	Ave	1.538	1.688		2.20	2.00	9.8	30.0
1,2,4-Trimethylbenzene	Ave	1.379	1.540		2.23	2.00	11.6	30.0
1,3-Dichlorobenzene	Ave	0.8870	1.008		2.27	2.00	13.6	30.0
sec-Butylbenzene	Ave	1.978	2.206		2.23	2.00	11.5	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Lab Sample ID: CCVIS 140-18348/2 Calibration Date: 02/26/2018 10:14

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzyl chloride	Ave	1.037	1.260		2.43	2.00	21.5	30.0
1,4-Dichlorobenzene	Ave	0.8846	1.003		2.27	2.00	13.4	30.0
4-Isopropyltoluene	Ave	1.739	2.072		2.38	2.00	19.2	30.0
1,2,3-Trimethylbenzene	Ave	1.566	1.257		1.60	2.00	-19.8	30.0
1,2-Dichlorobenzene	Ave	0.8615	0.9765		2.27	2.00	13.3	30.0
Butylbenzene	Ave	1.551	1.834		2.36	2.00	18.2	30.0
Undecane	Ave	0.8863	0.9516		2.15	2.00	7.4	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.5267	0.4163		1.58	2.00	-21.0	30.0
1,2,4,5-Tetramethylbenzene	Ave	0.8495	1.732		4.08	2.00	103.9*	30.0
Dodecane	Ave	0.8298	0.8610		2.08	2.00	3.8	30.0
1,2,4-Trichlorobenzene	Ave	0.6453	0.8089		2.51	2.00	25.4	30.0
Naphthalene	Ave	1.434	1.684		2.35	2.00	17.5	30.0
Hexachlorobutadiene	Ave	0.7058	0.8200		2.32	2.00	16.2	30.0
1,2,3-Trichlorobenzene	Ave	0.6529	0.7248		2.22	2.00	11.0	30.0
4-Bromofluorobenzene (Surr)	Ave	0.7584	0.7162		3.78	4.00	-5.6	30.0

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Lab File ID: J500BB27.D Lab Sample ID: MB 140-18439/8

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MJ Date Analyzed: 02/27/2018 14:32

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-18439/1006	JCCVB27A-LCS.d	02/27/2018 12:17
IA-146-C-24	140-10788-16	JB27P101.D	02/27/2018 15:17
IA-145-C-24	140-10788-17	JB27P102.D	02/27/2018 16:02
IA-149-C-24	140-10788-18	JB27P103.D	02/27/2018 16:47
IA-DUP02-C-24	140-10788-19	JB27P104.D	02/27/2018 17:31
IA-126-C-24	140-10788-20	JB27P105.D	02/27/2018 18:16
IA-101-B-24	140-10788-21	JB27P106.D	02/27/2018 19:00
IA-100-B-24	140-10788-22	JB27P107.D	02/27/2018 19:44

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-18439/8

Matrix: Air | Lab File ID: J500BB27.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 02/27/2018 14:32

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18439 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	0.0226	J	0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-18439/8

Matrix: Air | Lab File ID: J500BB27.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 02/27/2018 14:32

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18439 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	0.123	J	0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Matrix: Air Level: Low Lab File ID: JCCVB27A-LCS.d

Lab ID: LCS 140-18439/1006 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.96	98	70-130	
Carbon tetrachloride	2.00	2.05	102	70-130	
Chlorodifluoromethane	2.00	2.06	103	60-140	
Chloroform	2.00	2.06	103	70-130	
cis-1,2-Dichloroethene	2.00	2.09	104	70-130	
Dichlorodifluoromethane	2.00	2.30	115	60-140	
1,1-Dichloroethane	2.00	2.11	105	70-130	
1,2-Dichloroethane	2.00	2.16	108	70-130	
1,1-Dichloroethene	2.00	2.30	115	70-130	
Ethylbenzene	2.00	1.79	89	70-130	
Methylene Chloride	2.00	1.96	98	70-130	
Methyl tert-butyl ether	2.00	1.78	89	60-140	
Naphthalene	2.00	1.58	79	60-140	
Tetrachloroethene	2.00	2.03	101	70-130	
Toluene	2.00	1.85	92	70-130	
trans-1,2-Dichloroethene	2.00	2.24	112	70-130	
1,2,4-Trichlorobenzene	2.00	1.64	82	60-140	
1,1,1-Trichloroethane	2.00	2.13	106	70-130	
1,1,2-Trichloroethane	2.00	1.95	97	70-130	
Trichloroethene	2.00	2.20	110	70-130	
1,2,3-Trimethylbenzene	2.00	1.62	81	70-130	
1,2,4-Trimethylbenzene	2.00	1.61	81	70-130	
1,3,5-Trimethylbenzene	2.00	1.61	80	70-130	
Vinyl chloride	2.00	2.49	125	70-130	
Xylenes, Total	6.00	5.29	88	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Lab File ID: R500BB26.D Lab Sample ID: MB 140-18348/4

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MR Date Analyzed: 02/26/2018 11:58

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-18348/1002	RCCVB26-LCS.d	02/26/2018 10:14
IA-001-C-24	140-10788-1	RB26P101.D	02/26/2018 14:01
IA-004-C-24	140-10788-2	RB26P102.D	02/26/2018 14:48
IA-102-C-24	140-10788-3	RB26P103.D	02/26/2018 15:35
IA-155-C-24	140-10788-4	RB26P104.D	02/26/2018 16:22
IA-153-C-24	140-10788-5	RB26P105.D	02/26/2018 17:10
IA-DUP01-C-24	140-10788-6	RB26P106.D	02/26/2018 17:57
IA-133-C-24	140-10788-7	RB26P107.D	02/26/2018 18:44
IA-060-C-24	140-10788-8	RB26P108.D	02/26/2018 19:31
IA-152-C-24	140-10788-9	RB26P109.D	02/26/2018 20:18
IA-150-C-24	140-10788-10	RB26P110.D	02/26/2018 21:05
IA-141-C-24	140-10788-11	RB26P111.D	02/26/2018 21:52
IA-142-C-24	140-10788-12	RB26P112.D	02/26/2018 22:39
IA-088-C-24	140-10788-13	RB26P113.D	02/26/2018 23:27
IA-113-C-24	140-10788-14	RB26P114.D	02/27/2018 00:14
IA-144-C-24	140-10788-15	RB26P115.D	02/27/2018 01:01

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-18348/4

Matrix: Air | Lab File ID: R500BB26.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 02/26/2018 11:58

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10788-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-18348/4

Matrix: Air | Lab File ID: R500BB26.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 02/26/2018 11:58

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18348 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Matrix: Air Level: Low Lab File ID: RCCVB26-LCS.d

Lab ID: LCS 140-18348/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.88	94	70-130	
Carbon tetrachloride	2.00	2.13	106	70-130	
Chlorodifluoromethane	2.00	1.87	94	60-140	
Chloroform	2.00	1.83	92	70-130	
cis-1,2-Dichloroethene	2.00	1.87	94	70-130	
Dichlorodifluoromethane	2.00	1.83	92	60-140	
1,1-Dichloroethane	2.00	1.73	86	70-130	
1,2-Dichloroethane	2.00	1.88	94	70-130	
1,1-Dichloroethene	2.00	1.88	94	70-130	
Ethylbenzene	2.00	1.96	98	70-130	
Methylene Chloride	2.00	1.73	86	70-130	
Methyl tert-butyl ether	2.00	1.85	93	60-140	
Naphthalene	2.00	2.35	117	60-140	
Tetrachloroethene	2.00	2.14	107	70-130	
Toluene	2.00	2.00	100	70-130	
trans-1,2-Dichloroethene	2.00	1.90	95	70-130	
1,2,4-Trichlorobenzene	2.00	2.51	125	60-140	
1,1,1-Trichloroethane	2.00	1.90	95	70-130	
1,1,2-Trichloroethane	2.00	1.94	97	70-130	
Trichloroethene	2.00	1.99	99	70-130	
1,2,3-Trimethylbenzene	2.00	1.60	80	70-130	
1,2,4-Trimethylbenzene	2.00	2.23	112	70-130	
1,3,5-Trimethylbenzene	2.00	2.49	125	70-130	
Vinyl chloride	2.00	1.73	87	70-130	
Xylenes, Total	6.00	5.94	99	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
IA-001-C-24	140-10788-1	103
IA-004-C-24	140-10788-2	103
IA-102-C-24	140-10788-3	104
IA-155-C-24	140-10788-4	102
IA-153-C-24	140-10788-5	103
IA-DUP01-C-24	140-10788-6	104
IA-133-C-24	140-10788-7	103
IA-060-C-24	140-10788-8	100
IA-152-C-24	140-10788-9	101
IA-150-C-24	140-10788-10	104
IA-141-C-24	140-10788-11	103
IA-142-C-24	140-10788-12	104
IA-088-C-24	140-10788-13	101
IA-113-C-24	140-10788-14	102
IA-144-C-24	140-10788-15	99
IA-146-C-24	140-10788-16	102
IA-145-C-24	140-10788-17	98
IA-149-C-24	140-10788-18	97
IA-DUP02-C-24	140-10788-19	98
IA-126-C-24	140-10788-20	96
IA-101-B-24	140-10788-21	103
IA-100-B-24	140-10788-22	97
	MB 140-18348/4	101
	MB 140-18439/8	100
	LCS 140-18348/1002	94
	LCS 140-18439/1006	103

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Sample No.: ICIS 140-18185/9 Date Analyzed: 02/15/2018 20:08

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): JB15ICISL07.D Heated Purge: (Y/N) N

Calibration ID: 1394

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		286873	9.69	1605094	11.79	1448317	16.39
UPPER LIMIT		401622	10.02	2247132	12.12	2027644	16.72
LOWER LIMIT		172124	9.36	963056	11.46	868990	16.06
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-18185/15		287782	9.69	1626462	11.79	1472970	16.39

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Sample No.: CCVIS 140-18439/6 Date Analyzed: 02/27/2018 12:17

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): JCCVB27A.D Heated Purge: (Y/N) N

Calibration ID: 1394

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		215320	9.69	1173352	11.78	1088537	16.38
UPPER LIMIT		301448	10.02	1642693	12.11	1523952	16.71
LOWER LIMIT		129192	9.36	704011	11.45	653122	16.05
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-18439/1006		215320	9.69	1173352	11.78	1088537	16.38
MB 140-18439/8		244994	9.68	1384433	11.78	1198843	16.38
140-10788-16	IA-146-C-24	213758	9.69	1090009	11.78	1024969	16.38
140-10788-17	IA-145-C-24	213763	9.70	1179635	11.79	1081843	16.38
140-10788-18	IA-149-C-24	234210	9.68	1312556	11.78	1176458	16.38
140-10788-19	IA-DUP02-C-24	195536	9.68	1149572	11.78	1075865	16.38
140-10788-20	IA-126-C-24	225379	9.68	1259806	11.78	1104988	16.38
140-10788-21	IA-101-B-24	201272	9.70	1134477	11.79	1037817	16.38
140-10788-22	IA-100-B-24	231158	9.70	1295473	11.79	1157819	16.38

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Sample No.: ICIS 140-17762/9 Date Analyzed: 01/30/2018 17:15

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RA30IC07.D Heated Purge: (Y/N) N

Calibration ID: 1371

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		397524	7.71	2418900	9.85	2104378	14.86
UPPER LIMIT		556534	8.04	3386460	10.18	2946129	15.19
LOWER LIMIT		238514	7.38	1451340	9.52	1262627	14.53
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-17762/14		374886	7.72	2292324	9.85	1999070	14.86

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1

SDG No.:

Sample No.: CCVIS 140-18348/2 Date Analyzed: 02/26/2018 10:14

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RCCVB26.D Heated Purge: (Y/N) N

Calibration ID: 1371

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		386604	7.69	2276960	9.83	1869192	14.84
UPPER LIMIT		541246	8.02	3187744	10.16	2616869	15.17
LOWER LIMIT		231962	7.36	1366176	9.50	1121515	14.51
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-18348/1002		386604	7.69	2276960	9.83	1869192	14.84
MB 140-18348/4		378687	7.68	2219097	9.83	1785974	14.84
140-10788-1	IA-001-C-24	357141	7.69	2105284	9.83	1680292	14.84
140-10788-2	IA-004-C-24	354716	7.69	2077132	9.83	1707623	14.84
140-10788-3	IA-102-C-24	355575	7.70	2122153	9.83	1705041	14.84
140-10788-4	IA-155-C-24	372717	7.70	2199474	9.83	1790313	14.84
140-10788-5	IA-153-C-24	362456	7.70	2142431	9.83	1766694	14.84
140-10788-6	IA-DUP01-C-24	360274	7.70	2098540	9.83	1756487	14.84
140-10788-7	IA-133-C-24	365818	7.70	2155249	9.84	1769713	14.84
140-10788-8	IA-060-C-24	359139	7.71	2126395	9.84	1741465	14.84
140-10788-9	IA-152-C-24	360752	7.71	2144834	9.84	1757263	14.84
140-10788-10	IA-150-C-24	381941	7.70	2242131	9.83	1835991	14.84
140-10788-11	IA-141-C-24	363230	7.69	2153926	9.83	1801442	14.84
140-10788-12	IA-142-C-24	371495	7.70	2197656	9.83	1815696	14.84
140-10788-13	IA-088-C-24	368712	7.69	2168821	9.83	1778668	14.84
140-10788-14	IA-113-C-24	378302	7.70	2230922	9.83	1882799	14.84
140-10788-15	IA-144-C-24	375116	7.72	2218436	9.84	1824564	14.84

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

LOCKHEED MARTIN CORPORATION (LMC) - MIDDLE RIVER COMPLEX (MRC)
SDG 140-10788-1

SAMPLE IDENTIFICATION	IA-001-C-24		
COMPOUND	BENZENE	MW=	78.11
		GAS CONSTANT =	24.45
COMPOUND AREA	12550		
INTERNAL STANDARD AMOUNT (ppbv)	4		
CALIBRATION VOLUME (mL)	500		
DILUTION FACTOR	1		
INTERNAL STANDARD AREA	2105284		
AVERAGE RRF	0.7642		
SAMPLE VOLUME (mL)	100		

0.16 ppbv
0.50 µg/m³

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1
SDG No.:
Client Sample ID: IA-001-C-24 Lab Sample ID: 140-10788-1
Matrix: Air Lab File ID: RB26P101.D
Analysis Method: TO 15 LL Date Collected: 02/20/2018 16:09
Sample wt/vol: 100 (mL) Date Analyzed: 02/26/2018 14:01
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32 (mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18348 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.49		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.36	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.84	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.54	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1
SDG No.:
Client Sample ID: IA-001-C-24 Lab Sample ID: 140-10788-1
Matrix: Air Lab File ID: RB26P101.D
Analysis Method: TO 15 LL Date Collected: 02/20/2018 16:09
Sample wt/vol: 100(mL) Date Analyzed: 02/26/2018 14:01
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18348 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.50	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.8	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.9	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180221-7463.b\RB26P101.D
Lims ID: 140-10788-A-1
Client ID: IA-001-C-24
Sample Type: Client
Inject. Date: 26-Feb-2018 14:01:30 ALS Bottle#: 1 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007463-006
Misc. Info.: 140-10788-a-1
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20180221-7463.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Feb-2018 10:28:23 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: tajh Date: 27-Feb-2018 10:21:07

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.687	7.686	0.001	77	357141	4.00	
* 2 1,4-Difluorobenzene	114	9.827	9.827	0.000	94	2105284	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.842	14.842	0.000	87	1680292	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.552	16.557	-0.005	90	1310066	4.11	
6 Chlorodifluoromethane	67	3.481	3.470	0.011	93	4253	0.0976	
8 Dichlorodifluoromethane	85	3.524	3.518	0.006	99	24031	0.0717	
31 Methylene Chloride	84	5.486	5.476	0.010	87	23584	0.1689	
47 Benzene	78	9.250	9.250	0.000	97	12550	0.0312	
65 Toluene	91	12.777	12.777	0.000	93	39749	0.0859	
76 Ethylbenzene	91	15.220	15.220	0.000	82	11227	0.0185	7a
77 m-Xylene & p-Xylene	91	15.392	15.397	-0.005	99	34794	0.0741	
82 o-Xylene	91	15.932	15.931	0.001	98	16692	0.0337	
S 119 Xylenes, Total	100				0		0.1077	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection
Review Flags
a - User Assigned ID

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10788-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
cis-1,2-Dichloroethene	1.9071 1.6125	1.8156 1.6678	1.6641 1.5780	1.6147 1.5302	1.6025 1.4817	Ave		1.6474				7.8		30.0			
Ethyl acetate	+++++ 2.7290	+++++ 2.8405	2.1840 2.6632	2.2813 2.5958	2.5408 2.4854	Ave		2.5400				8.7		30.0			
Chloroform	4.2863 3.7052	3.8694 3.7903	3.7705 3.5491	3.6794 3.4047	3.6984 3.2578	Ave		3.7011				7.5		30.0			
Tetrahydrofuran	+++++ 1.3407	+++++ 1.3730	1.3680 1.2688	1.3174 1.2195	1.3030 1.1665	Ave		1.2946				5.6		30.0			
1,1,1-Trichloroethane	4.1703 3.9689	4.0153 4.0994	3.8140 3.8790	3.6871 3.7835	3.8389 3.6271	Ave		3.8883				4.5		30.0			
1,2-Dichloroethane	0.4598 0.4390	0.4262 0.4435	0.4288 0.4170	0.3913 0.4087	0.4251 0.3915	Ave		0.4231				5.2		30.0			
Benzene	0.8742 0.7844	0.8183 0.7925	0.7957 0.7383	0.7735 0.6873	0.7655 0.6121	Ave		0.7642				9.5		30.0			
1-Butanol	+++++ 0.0491	+++++ 0.0535	+++++ 0.0554	+++++ 0.0549	0.0399 0.0507	Ave		0.0506				11.4		30.0			
Cyclohexane	+++++ 0.1282	0.1302 0.1319	0.1361 0.1198	0.1248 0.1109	0.1254 0.0971	Ave		0.1227				9.8		30.0			
Carbon tetrachloride	0.6377 0.6481	0.5867 0.6494	0.5971 0.6370	0.5827 0.6239	0.6061 0.5914	Ave		0.6160				4.2		30.0			
2,2,4-Trimethylpentane	+++++ 1.1700	+++++ 1.1823	1.1763 1.1037	1.1213 1.0350	1.1405 0.9359	Ave		1.1081				7.6		30.0			
1,2-Dichloropropane	0.2892 0.2749	0.2827 0.2781	0.2783 0.2608	0.2653 0.2439	0.2652 0.2201	Ave		0.2659				7.7		30.0			
Heptane	+++++ 0.2794	0.2806 0.2826	0.2727 0.2668	0.2557 0.2502	0.2719 0.2244	Ave		0.2649				7.1		30.0			
Trichloroethene	0.3941 0.3561	0.3498 0.3989	0.3569 0.4050	0.3383 0.3430	0.3431 0.3253	Ave		0.3611				7.8		30.0			
Dibromomethane	+++++ 0.3180	+++++ 0.3337	0.3335 0.3154	0.3130 0.3075	0.3081 0.2866	Ave		0.3145				4.8		30.0			
Bromodichloromethane	0.5552 0.5927	0.5165 0.6275	0.5155 0.6065	0.5215 0.5926	0.5443 0.5621	Ave		0.5634				7.1		30.0			
1,4-Dioxane	+++++ 0.1244	0.1026 0.1255	0.1107 0.1188	0.1100 0.1111	0.1114 0.0998	Ave		0.1127				7.8		30.0			
Methyl methacrylate	+++++ 0.2534	+++++ 0.2814	+++++ 0.2766	0.1921 0.2732	0.2185 0.2613	Ave		0.2509				13.3		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.4476	+++++ 0.4761	0.4073 0.4607	0.3703 0.4462	0.4067 0.4120	Ave		0.4284				8.2		30.0			
cis-1,3-Dichloropropene	0.4432 0.4616	0.4182 0.4890	0.4016 0.4666	0.4077 0.4542	0.4258 0.4244	Ave		0.4392				6.4		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

TETRA TECH

INTERNAL CORRESPONDENCE

TO: **M. MARTIN** **DATE:** **APRIL 4, 2018**

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

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
LOCKHEED MARTIN CORPORATION (LMC) – MIDDLE RIVER CENTER (MRC)
SDG 140-10789-1

SAMPLES: 17/Indoor Air/VOC

IA-015-A-24	IA-018-A-24	IA-021-A-24	IA-075-A-24
IA-076-A-24	IA-078-A-24	IA-079-A-24	IA-081-A-24
IA-093-A-24	IA-117-A-24	IA-118-A-24	IA-136-A-24
IA-138-A-24	IA-168-A-24	IA-174-A-24	IA-DUP01-A-24
IA-DUP02-A-24			

Overview

The sample set for LMC - MRC, SDG 140-10789-1 consisted of seventeen (17) indoor air samples. All samples were analyzed for select Volatile Organic Compounds (VOC). Two field duplicate sample pairs were included in this SDG: IA-018-A-24 / IA-DUP01-A-24 and IA-079-A-24/IA-DUP02-A-24.

The samples were collected by Tetra Tech on February 21, 2018 and analyzed by TestAmerica. All analyses were conducted in accordance with EPA Method TO-15 analytical and reporting protocols.

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

Major

No major issues were identified.

Minor

- Field duplicate imprecision (difference >2x reporting limit) was noted for benzene, toluene, and total xylenes in field duplicate pair IA-079-A-24/IA-DUP02-A-24. Results for these parameters were qualified as estimated in samples IA-079-A-24 and IA-DUP02-A-24.

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

Notes

All internal standard areas were within ±40% of the standard.

The surrogate spike compound and Laboratory Control Sample (LCS) had Percent Recoveries (%Rs) within the quality control limits.

Twenty-five VOC target compounds were reported for the TO-15 analysis of the samples.

All sample canisters opened to the approximately -30 psig (-29 psig) and finished at approximately 0 psig.

Non-detected results were reported to the MDL.

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: Results below the RL were estimated.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Review" (January 2017) and EPA Method TO-15 analytical and reporting protocols. The text of this report has been formulated to address only those areas affecting data quality.



Tetra Tech
Leanne M. Ganser
Environmental Scientist/Data Validator

Tetra Tech
Joseph A. Samchuck
Data Validation Manager

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

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted method detection limit for sample and method.
J	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

Appendix A

Qualified Analytical Results

Qualifier Codes:

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

PROJ_NO: 08388	NSAMPLE	IA-015-A-24			IA-018-A-24			IA-021-A-24			IA-075-A-24		
SDG: 140-10789-1	LAB_ID	140-10789-17			140-10789-3			140-10789-16			140-10789-15		
FRACTION: OV-M3	SAMP_DATE	2/21/2018			2/21/2018			2/21/2018			2/21/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.33	U		0.33	U		0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.72	J	P	0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.61	U		0.61	U		0.97	J	P	1.5	J	P
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		0.66	J	P	0.84	J	P	0.42	J	P	0.41	J	P
CARBON TETRACHLORIDE		0.47	U		0.61	J	P	0.49	J	P	0.5	J	P
CHLORODIFLUOROMETHANE		2.8			1.3	J	P	1.8			3.5		
CHLOROFORM		0.37	U		1	J	P	0.37	U		0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		2.1			1.8	J	P	1.8	J	P	1.7	J	P
ETHYLBENZENE		0.59	U		0.67	J	P	0.88	J	P	1.7	J	P
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		3	J	P	7.9			3	J	P	2.7	J	P
NAPHTHALENE		1	U		5.7			1	U		1	U	
TETRACHLOROETHENE		0.54	U		0.54	U		0.54	U		1.1	J	P
TOLUENE		6.9			3.3			30			35		
TOTAL XYLENES		2.7	J	P	2.8	J	P	3.9			8.6		
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.38	U		2.1			0.43	J	P	0.38	U	
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 08388	NSAMPLE	IA-076-A-24			IA-078-A-24			IA-079-A-24			IA-081-A-24		
SDG: 140-10789-1	LAB_ID	140-10789-14			140-10789-11			140-10789-8			140-10789-7		
FRACTION: OV-M3	SAMP_DATE	2/21/2018			2/21/2018			2/21/2018			2/21/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.33	U		0.33	U		0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		1.3	J	P	1.6	J	P	1	J	P	0.62	J	P
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		0.42	J	P	0.44	J	P	0.61	J	GP	0.46	J	P
CARBON TETRACHLORIDE		0.47	U		0.47	U		0.48	J	P	0.49	J	P
CHLORODIFLUOROMETHANE		1.4			1.5			1.9			4.4		
CHLOROFORM		0.37	U		0.37	U		0.37	U		0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		1.9	J	P	2			1.7	J	P	1.9	J	P
ETHYLBENZENE		1.1	J	P	1.1	J	P	1.2	J	P	1.2	J	P
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		2.3	U		4.4			3.3	J	P	14		
NAPHTHALENE		1	U		1	U		1	U		1	U	
TETRACHLOROETHENE		0.54	U		0.54	U		0.54	U		0.54	U	
TOLUENE		37			39			35	J	G	20		
TOTAL XYLENES		5.1			5			5.4	J	G	6.9		
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.38	U		0.38	U		0.38	U		0.38	U	
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 08388	NSAMPLE	IA-093-A-24			IA-117-A-24			IA-118-A-24			IA-136-A-24		
SDG: 140-10789-1	LAB_ID	140-10789-2			140-10789-10			140-10789-6			140-10789-12		
FRACTION: OV-M3	SAMP_DATE	2/21/2018			2/21/2018			2/21/2018			2/21/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.79	J	P	0.33	U		0.33	U		0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.47	J	P	0.28	U		0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.61	U		1.6	J	P	0.61	U		1	J	P
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		0.79	J	P	0.37	U		0.47	J	P	0.38	J	P
CARBON TETRACHLORIDE		0.98	J	P	0.53	J	P	0.49	J	P	0.47	U	
CHLORODIFLUOROMETHANE		1.5			1.4			9.8			1.7		
CHLOROFORM		0.37	U		0.77	J	P	0.37	U		0.37	U	
CIS-1,2-DICHLOROETHENE		0.5	J	P	0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		1.6	J	P	1.9	J	P	1.7	J	P	1.9	J	P
ETHYLBENZENE		0.59	U		0.98	J	P	0.88	J	P	1.1	J	P
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		2.9	J	P	2.3	U		3.4	J	P	3	J	P
NAPHTHALENE		1	U		1	U		1	U		1	U	
TETRACHLOROETHENE		0.54	U		0.54	U		0.97	J	P	3.6		
TOLUENE		2.3	U		38			7.4			44		
TOTAL XYLENES		0.52	U		4.4			5.1			5.2		
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		3.4			0.38	U		0.38	U		0.57	J	P
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 08388	NSAMPLE	IA-138-A-24			IA-168-A-24			IA-174-A-24			IA-DUP01-A-24		
SDG: 140-10789-1	LAB_ID	140-10789-1			140-10789-13			140-10789-5			140-10789-4		
FRACTION: OV-M3	SAMP_DATE	2/21/2018			2/21/2018			2/21/2018			2/21/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			FD		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF										IA-018-A-24		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.41	J	P	0.33	U		0.55	J	P	0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.45	J	P	0.28	U		0.37	J	P	0.8	J	P
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.61	U		1.7	J	P	0.61	U		0.61	U	
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		0.74	J	P	0.44	J	P	0.89	J	P	0.69	J	P
CARBON TETRACHLORIDE		0.96	J	P	0.47	U		0.88	J	P	0.59	J	P
CHLORODIFLUOROMETHANE		1.3	J	P	1.4			1.3	J	P	1.3	J	P
CHLOROFORM		0.37	U		0.45	J	P	0.43	J	P	1.2	J	P
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		1.4	J	P	1.5	J	P	1.7	J	P	1.6	J	P
ETHYLBENZENE		0.59	U		0.93	J	P	0.59	U		0.59	U	
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		3.4	J	P	3.4	J	P	4.4			2.8	J	P
NAPHTHALENE		1	U		1	U		1	U		4.8		
TETRACHLOROETHENE		0.54	U		3.7			0.54	U		0.54	U	
TOLUENE		2.3	U		31			2.8			2.3	U	
TOTAL XYLENES		0.52	U		4.5			2.1	J	P	0.52	U	
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		2.2			0.82	J	P	2.7			2.5		
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 08388	NSAMPLE	IA-DUP02-A-24		
SDG: 140-10789-1	LAB_ID	140-10789-9		
FRACTION: OV-M3	SAMP_DATE	2/21/2018		
MEDIA: AIR	QC_TYPE	FD		
	UNITS	UG/M3		
	PCT_SOLIDS	0.0		
	DUP_OF	IA-079-A-24		
PARAMETER		RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U	
1,1-DICHLOROETHANE		0.2	U	
1,1-DICHLOROETHENE		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U	
1,2,4-TRIMETHYLBENZENE		2.1		
1,2-DICHLOROETHANE		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U	
BENZENE		10	J	G
CARBON TETRACHLORIDE		0.48	J	P
CHLORODIFLUOROMETHANE		1.8		
CHLOROFORM		0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U	
DICHLORODIFLUOROMETHANE		1.9	J	P
ETHYLBENZENE		3.4		
METHYL TERT-BUTYL ETHER		1.2	U	
METHYLENE CHLORIDE		3.4	J	P
NAPHTHALENE		1	U	
TETRACHLOROETHENE		2.2	J	P
TOLUENE		44	J	G
TOTAL XYLENES		14	J	G
TRANS-1,2-DICHLOROETHENE		0.4	U	
TRICHLOROETHENE		0.38	U	
VINYL CHLORIDE		0.37	U	

PROJ_NO: 08388	NSAMPLE	IA-015-A-24			IA-018-A-24			IA-021-A-24			IA-075-A-24		
SDG: 140-10789-1	LAB_ID	140-10789-17			140-10789-3			140-10789-16			140-10789-15		
FRACTION: OV	SAMP_DATE	2/21/2018			2/21/2018			2/21/2018			2/21/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	PPBV			PPBV			PPBV			PPBV		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.06	U		0.06	U		0.06	U		0.06	U	
1,1,2-TRICHLOROETHANE		0.11	U		0.11	U		0.11	U		0.11	U	
1,1-DICHLOROETHANE		0.05	U		0.05	U		0.05	U		0.05	U	
1,1-DICHLOROETHENE		0.07	U		0.18	J	P	0.07	U		0.07	U	
1,2,3-TRIMETHYLBENZENE		0.17	U		0.17	U		0.17	U		0.17	U	
1,2,4-TRICHLOROBENZENE		0.2	U		0.2	U		0.2	U		0.2	U	
1,2,4-TRIMETHYLBENZENE		0.13	U		0.13	U		0.2	J	P	0.31	J	P
1,2-DICHLOROETHANE		0.095	U		0.095	U		0.095	U		0.095	U	
1,3,5-TRIMETHYLBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
BENZENE		0.21	J	P	0.26	J	P	0.13	J	P	0.13	J	P
CARBON TETRACHLORIDE		0.075	U		0.098	J	P	0.078	J	P	0.079	J	P
CHLORODIFLUOROMETHANE		0.78			0.37	J	P	0.5			0.98		
CHLOROFORM		0.075	U		0.2	J	P	0.075	U		0.075	U	
CIS-1,2-DICHLOROETHENE		0.12	U		0.12	U		0.12	U		0.12	U	
DICHLORODIFLUOROMETHANE		0.43			0.36	J	P	0.36	J	P	0.35	J	P
ETHYLBENZENE		0.14	U		0.16	J	P	0.2	J	P	0.38	J	P
METHYL TERT-BUTYL ETHER		0.34	U		0.34	U		0.34	U		0.34	U	
METHYLENE CHLORIDE		0.87	J	P	2.3			0.87	J	P	0.79	J	P
NAPHTHALENE		0.2	U		1.1			0.2	U		0.2	U	
TETRACHLOROETHENE		0.08	U		0.08	U		0.08	U		0.16	J	P
TOLUENE		1.8			0.87			8			9.4		
TOTAL XYLENES		0.63	J	P	0.65	J	P	0.89			2		
TRANS-1,2-DICHLOROETHENE		0.1	U		0.1	U		0.1	U		0.1	U	
TRICHLOROETHENE		0.07	U		0.39			0.08	J	P	0.07	U	
VINYL CHLORIDE		0.15	U		0.15	U		0.15	U		0.15	U	

PROJ_NO: 08388	NSAMPLE	IA-076-A-24			IA-078-A-24			IA-079-A-24			IA-081-A-24		
SDG: 140-10789-1	LAB_ID	140-10789-14			140-10789-11			140-10789-8			140-10789-7		
FRACTION: OV	SAMP_DATE	2/21/2018			2/21/2018			2/21/2018			2/21/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	PPBV			PPBV			PPBV			PPBV		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.06	U		0.06	U		0.06	U		0.06	U	
1,1,2-TRICHLOROETHANE		0.11	U		0.11	U		0.11	U		0.11	U	
1,1-DICHLOROETHANE		0.05	U		0.05	U		0.05	U		0.05	U	
1,1-DICHLOROETHENE		0.07	U		0.07	U		0.07	U		0.07	U	
1,2,3-TRIMETHYLBENZENE		0.17	U		0.17	U		0.17	U		0.17	U	
1,2,4-TRICHLOROBENZENE		0.2	U		0.2	U		0.2	U		0.2	U	
1,2,4-TRIMETHYLBENZENE		0.25	J	P	0.33	J	P	0.21	J	P	0.13	J	P
1,2-DICHLOROETHANE		0.095	U		0.095	U		0.095	U		0.095	U	
1,3,5-TRIMETHYLBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
BENZENE		0.13	J	P	0.14	J	P	0.19	J	GP	0.14	J	P
CARBON TETRACHLORIDE		0.075	U		0.075	U		0.076	J	P	0.078	J	P
CHLORODIFLUOROMETHANE		0.4			0.44			0.54			1.2		
CHLOROFORM		0.075	U		0.075	U		0.075	U		0.075	U	
CIS-1,2-DICHLOROETHENE		0.12	U		0.12	U		0.12	U		0.12	U	
DICHLORODIFLUOROMETHANE		0.39	J	P	0.41			0.34	J	P	0.39	J	P
ETHYLBENZENE		0.26	J	P	0.24	J	P	0.28	J	P	0.28	J	P
METHYL TERT-BUTYL ETHER		0.34	U		0.34	U		0.34	U		0.34	U	
METHYLENE CHLORIDE		0.65	U		1.3			0.95	J	P	4.2		
NAPHTHALENE		0.2	U		0.2	U		0.2	U		0.2	U	
TETRACHLOROETHENE		0.08	U		0.08	U		0.08	U		0.08	U	
TOLUENE		9.9			10			9.2	J	G	5.4		
TOTAL XYLENES		1.2			1.1			1.2	J	G	1.6		
TRANS-1,2-DICHLOROETHENE		0.1	U		0.1	U		0.1	U		0.1	U	
TRICHLOROETHENE		0.07	U		0.07	U		0.07	U		0.07	U	
VINYL CHLORIDE		0.15	U		0.15	U		0.15	U		0.15	U	

PROJ_NO: 08388	NSAMPLE	IA-093-A-24			IA-117-A-24			IA-118-A-24			IA-136-A-24		
SDG: 140-10789-1	LAB_ID	140-10789-2			140-10789-10			140-10789-6			140-10789-12		
FRACTION: OV	SAMP_DATE	2/21/2018			2/21/2018			2/21/2018			2/21/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	PPBV			PPBV			PPBV			PPBV		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.14	J	P	0.06	U		0.06	U		0.06	U	
1,1,2-TRICHLOROETHANE		0.11	U		0.11	U		0.11	U		0.11	U	
1,1-DICHLOROETHANE		0.05	U		0.05	U		0.05	U		0.05	U	
1,1-DICHLOROETHENE		0.12	J	P	0.07	U		0.07	U		0.07	U	
1,2,3-TRIMETHYLBENZENE		0.17	U		0.17	U		0.17	U		0.17	U	
1,2,4-TRICHLOROBENZENE		0.2	U		0.2	U		0.2	U		0.2	U	
1,2,4-TRIMETHYLBENZENE		0.13	U		0.33	J	P	0.13	U		0.21	J	P
1,2-DICHLOROETHANE		0.095	U		0.095	U		0.095	U		0.095	U	
1,3,5-TRIMETHYLBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
BENZENE		0.25	J	P	0.12	U		0.15	J	P	0.12	J	P
CARBON TETRACHLORIDE		0.16	J	P	0.084	J	P	0.078	J	P	0.075	U	
CHLORODIFLUOROMETHANE		0.44			0.4			2.8			0.48		
CHLOROFORM		0.075	U		0.16	J	P	0.075	U		0.075	U	
CIS-1,2-DICHLOROETHENE		0.13	J	P	0.12	U		0.12	U		0.12	U	
DICHLORODIFLUOROMETHANE		0.33	J	P	0.39	J	P	0.34	J	P	0.39	J	P
ETHYLBENZENE		0.14	U		0.22	J	P	0.2	J	P	0.26	J	P
METHYL TERT-BUTYL ETHER		0.34	U		0.34	U		0.34	U		0.34	U	
METHYLENE CHLORIDE		0.82	J	P	0.65	U		0.99	J	P	0.87	J	P
NAPHTHALENE		0.2	U		0.2	U		0.2	U		0.2	U	
TETRACHLOROETHENE		0.08	U		0.08	U		0.14	J	P	0.53		
TOLUENE		0.6	U		10			2			12		
TOTAL XYLENES		0.12	U		1			1.2			1.2		
TRANS-1,2-DICHLOROETHENE		0.1	U		0.1	U		0.1	U		0.1	U	
TRICHLOROETHENE		0.63			0.07	U		0.07	U		0.11	J	P
VINYL CHLORIDE		0.15	U		0.15	U		0.15	U		0.15	U	

PROJ_NO: 08388	NSAMPLE	IA-138-A-24			IA-168-A-24			IA-174-A-24			IA-DUP01-A-24		
SDG: 140-10789-1	LAB_ID	140-10789-1			140-10789-13			140-10789-5			140-10789-4		
FRACTION: OV	SAMP_DATE	2/21/2018			2/21/2018			2/21/2018			2/21/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			FD		
	UNITS	PPBV			PPBV			PPBV			PPBV		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF										IA-018-A-24		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.075	J	P	0.06	U		0.1	J	P	0.06	U	
1,1,2-TRICHLOROETHANE		0.11	U		0.11	U		0.11	U		0.11	U	
1,1-DICHLOROETHANE		0.05	U		0.05	U		0.05	U		0.05	U	
1,1-DICHLOROETHENE		0.11	J	P	0.07	U		0.094	J	P	0.2	J	P
1,2,3-TRIMETHYLBENZENE		0.17	U		0.17	U		0.17	U		0.17	U	
1,2,4-TRICHLOROBENZENE		0.2	U		0.2	U		0.2	U		0.2	U	
1,2,4-TRIMETHYLBENZENE		0.13	U		0.35	J	P	0.13	U		0.13	U	
1,2-DICHLOROETHANE		0.095	U		0.095	U		0.095	U		0.095	U	
1,3,5-TRIMETHYLBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
BENZENE		0.23	J	P	0.14	J	P	0.28	J	P	0.22	J	P
CARBON TETRACHLORIDE		0.15	J	P	0.075	U		0.14	J	P	0.094	J	P
CHLORODIFLUOROMETHANE		0.37	J	P	0.4			0.38	J	P	0.36	J	P
CHLOROFORM		0.075	U		0.092	J	P	0.088	J	P	0.24	J	P
CIS-1,2-DICHLOROETHENE		0.12	U		0.12	U		0.12	U		0.12	U	
DICHLORODIFLUOROMETHANE		0.28	J	P	0.31	J	P	0.34	J	P	0.32	J	P
ETHYLBENZENE		0.14	U		0.22	J	P	0.14	U		0.14	U	
METHYL TERT-BUTYL ETHER		0.34	U		0.34	U		0.34	U		0.34	U	
METHYLENE CHLORIDE		0.97	J	P	0.97	J	P	1.3			0.82	J	P
NAPHTHALENE		0.2	U		0.2	U		0.2	U		0.91		
TETRACHLOROETHENE		0.08	U		0.54			0.08	U		0.08	U	
TOLUENE		0.6	U		8.3			0.75			0.6	U	
TOTAL XYLENES		0.12	U		1			0.49	J	P	0.12	U	
TRANS-1,2-DICHLOROETHENE		0.1	U		0.1	U		0.1	U		0.1	U	
TRICHLOROETHENE		0.41			0.15	J	P	0.51			0.46		
VINYL CHLORIDE		0.15	U		0.15	U		0.15	U		0.15	U	

PROJ_NO: 08388	NSAMPLE	IA-DUP02-A-24		
SDG: 140-10789-1	LAB_ID	140-10789-9		
FRACTION: OV	SAMP_DATE	2/21/2018		
MEDIA: AIR	QC_TYPE	FD		
	UNITS	PPBV		
	PCT_SOLIDS	0.0		
	DUP_OF	IA-079-A-24		
PARAMETER		RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.06	U	
1,1,2-TRICHLOROETHANE		0.11	U	
1,1-DICHLOROETHANE		0.05	U	
1,1-DICHLOROETHENE		0.07	U	
1,2,3-TRIMETHYLBENZENE		0.17	U	
1,2,4-TRICHLOROBENZENE		0.2	U	
1,2,4-TRIMETHYLBENZENE		0.42		
1,2-DICHLOROETHANE		0.095	U	
1,3,5-TRIMETHYLBENZENE		0.13	U	
BENZENE		3.2	J	G
CARBON TETRACHLORIDE		0.077	J	P
CHLORODIFLUOROMETHANE		0.52		
CHLOROFORM		0.075	U	
CIS-1,2-DICHLOROETHENE		0.12	U	
DICHLORODIFLUOROMETHANE		0.38	J	P
ETHYLBENZENE		0.79		
METHYL TERT-BUTYL ETHER		0.34	U	
METHYLENE CHLORIDE		0.97	J	P
NAPHTHALENE		0.2	U	
TETRACHLOROETHENE		0.33	J	P
TOLUENE		12	J	G
TOTAL XYLENES		3.3	J	G
TRANS-1,2-DICHLOROETHENE		0.1	U	
TRICHLOROETHENE		0.07	U	
VINYL CHLORIDE		0.15	U	

Appendix B

Results as Reported by the Laboratory

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-138-A-24 | Lab Sample ID: 140-10789-1

Matrix: Air | Lab File ID: RB27P101.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:30

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 14:45

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.23	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.15	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.37	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.11	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.97	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.075	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.41		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-138-A-24 Lab Sample ID: 140-10789-1

Matrix: Air Lab File ID: RB27P101.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 16:30

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 14:45

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18442 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.74	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.96	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.45	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.41	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.2		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-093-A-24 | Lab Sample ID: 140-10789-2

Matrix: Air | Lab File ID: RB27P102.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:32

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 15:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.25	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.16	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.44		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.13	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.33	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.12	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.82	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.14	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.63		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-093-A-24 | Lab Sample ID: 140-10789-2

Matrix: Air | Lab File ID: RB27P102.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:32

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 15:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.79	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.98	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	0.50	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.6	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.47	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.9	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.79	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	3.4		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-018-A-24 | Lab Sample ID: 140-10789-3

Matrix: Air | Lab File ID: RB27P103.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:36

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 16:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.26	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.098	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.37	J	0.40	0.075
67-66-3	Chloroform	119.38	0.20	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.36	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.18	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.16	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.3		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	1.1		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.87		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.39		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.65	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-018-A-24 | Lab Sample ID: 140-10789-3

Matrix: Air | Lab File ID: RB27P103.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:36

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 16:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.84	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.61	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	1.0	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.8	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.72	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	0.67	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	7.9		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	5.7		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.1		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.8	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-DUP01-A-24 Lab Sample ID: 140-10789-4

Matrix: Air Lab File ID: RB27P104.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 00:00

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 17:08

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18442 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.22	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.094	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.36	J	0.40	0.075
67-66-3	Chloroform	119.38	0.24	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.32	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.20	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.82	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.91		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.46		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-DUP01-A-24 Lab Sample ID: 140-10789-4

Matrix: Air Lab File ID: RB27P104.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 00:00

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 17:08

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18442 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.69	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.59	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	1.2	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.6	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.80	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	4.8		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-174-A-24 Lab Sample ID: 140-10789-5

Matrix: Air Lab File ID: RB27P105.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 16:40

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 17:56

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18442 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.28	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.14	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.38	J	0.40	0.075
67-66-3	Chloroform	119.38	0.088	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.34	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.094	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.3		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.75		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.10	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.51		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.49	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-174-A-24 Lab Sample ID: 140-10789-5

Matrix: Air Lab File ID: RB27P105.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 16:40

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 17:56

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18442 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.89	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.88	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	0.43	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.7	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.37	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.4		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.55	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.7		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.1	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-118-A-24 | Lab Sample ID: 140-10789-6

Matrix: Air | Lab File ID: RB27P106.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:49

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 18:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.078	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.8		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.34	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.20	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.99	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.14	J	0.40	0.080
108-88-3	Toluene	92.14	2.0		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-118-A-24 | Lab Sample ID: 140-10789-6

Matrix: Air | Lab File ID: RB27P106.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:49

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 18:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.47	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.49	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	9.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.7	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.88	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.97	J	2.7	0.54
108-88-3	Toluene	92.14	7.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.1		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-081-A-24 | Lab Sample ID: 140-10789-7

Matrix: Air | Lab File ID: RB27P107.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:53

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 19:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.078	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.2		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.28	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	4.2		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	5.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.13	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.6		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-081-A-24 Lab Sample ID: 140-10789-7

Matrix: Air Lab File ID: RB27P107.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 16:53

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 19:30

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18442 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.46	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.49	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.4		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.2	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	14		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	20		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.62	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	6.9		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-079-A-24 | Lab Sample ID: 140-10789-8

Matrix: Air | Lab File ID: RB27P108.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:55

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 20:17

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.076	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.54		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.34	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.28	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.95	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	9.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.21	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-079-A-24 Lab Sample ID: 140-10789-8

Matrix: Air Lab File ID: RB27P108.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 16:55

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 20:17

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18442 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.61	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.7	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.2	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	35		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.0	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.4		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-DUP02-A-24 | Lab Sample ID: 140-10789-9

Matrix: Air | Lab File ID: RB27P109.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 21:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	3.2		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.077	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.52		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.38	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.79		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.97	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.33	J	0.40	0.080
108-88-3	Toluene	92.14	12		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.42		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-DUP02-A-24 Lab Sample ID: 140-10789-9

Matrix: Air Lab File ID: RB27P109.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 00:00

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 21:04

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18442 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	10		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	3.4		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	2.2	J	2.7	0.54
108-88-3	Toluene	92.14	44		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	2.1		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	14		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-117-A-24 Lab Sample ID: 140-10789-10

Matrix: Air Lab File ID: RB27P110.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 16:56

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 21:52

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18442 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.084	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.40		0.40	0.075
67-66-3	Chloroform	119.38	0.16	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.22	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	10		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.33	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-117-A-24 | Lab Sample ID: 140-10789-10

Matrix: Air | Lab File ID: RB27P110.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:56

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 21:52

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.53	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4		1.4	0.27
67-66-3	Chloroform	119.38	0.77	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.98	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	38		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.6	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.4		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-078-A-24 | Lab Sample ID: 140-10789-11

Matrix: Air | Lab File ID: RB27P111.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:59

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 22:39

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.44		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.24	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.3		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	10		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.33	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-078-A-24 Lab Sample ID: 140-10789-11

Matrix: Air Lab File ID: RB27P111.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 16:59

Sample wt/vol: 100(mL) Date Analyzed: 02/27/2018 22:39

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18442 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.44	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.1	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.4		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	39		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.6	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.0		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-136-A-24 | Lab Sample ID: 140-10789-12

Matrix: Air | Lab File ID: RB27P112.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 17:02

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 23:26

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.12	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.48		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.26	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.87	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.53		0.40	0.080
108-88-3	Toluene	92.14	12		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.11	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.21	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-136-A-24 | Lab Sample ID: 140-10789-12

Matrix: Air | Lab File ID: RB27P112.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 17:02

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 23:26

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.38	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.1	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.0	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	3.6		2.7	0.54
108-88-3	Toluene	92.14	44		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.57	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.0	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-168-A-24 | Lab Sample ID: 140-10789-13

Matrix: Air | Lab File ID: RB27P113.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 17:08

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 00:13

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.40		0.40	0.075
67-66-3	Chloroform	119.38	0.092	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.31	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.22	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.97	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.54		0.40	0.080
108-88-3	Toluene	92.14	8.3		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.15	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.35	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-168-A-24 | Lab Sample ID: 140-10789-13

Matrix: Air | Lab File ID: RB27P113.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 17:08

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 00:13

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.44	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4		1.4	0.27
67-66-3	Chloroform	119.38	0.45	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.5	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.93	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	3.7		2.7	0.54
108-88-3	Toluene	92.14	31		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.82	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.7	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.5		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-076-A-24 | Lab Sample ID: 140-10789-14

Matrix: Air | Lab File ID: RB27P114.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 17:11

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 01:00

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.40		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.26	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	9.9		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.25	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-076-A-24 Lab Sample ID: 140-10789-14

Matrix: Air Lab File ID: RB27P114.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 17:11

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 01:00

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18442 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.42	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.1	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	37		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.3	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.1		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-075-A-24 | Lab Sample ID: 140-10789-15

Matrix: Air | Lab File ID: RB27P115.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 17:15

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 01:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.079	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.98		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.35	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.38	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.79	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.16	J	0.40	0.080
108-88-3	Toluene	92.14	9.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.31	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-075-A-24 | Lab Sample ID: 140-10789-15

Matrix: Air | Lab File ID: RB27P115.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 17:15

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 01:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.41	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.50	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.7	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.7	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.7	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.1	J	2.7	0.54
108-88-3	Toluene	92.14	35		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.5	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	8.6		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-021-A-24 | Lab Sample ID: 140-10789-16

Matrix: Air | Lab File ID: RB27P116D.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 17:18

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 02:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.078	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.50		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.36	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.20	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.87	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	8.0		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.080	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.20	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.89		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-021-A-24 | Lab Sample ID: 140-10789-16

Matrix: Air | Lab File ID: RB27P116D.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 17:18

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 02:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.42	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.49	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.8	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.88	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.0	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	30		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.43	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.97	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.9		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-015-A-24 | Lab Sample ID: 140-10789-17

Matrix: Air | Lab File ID: RB27P201.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 17:22

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 04:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.21	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.78		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.43		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.87	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.8		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.63	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-015-A-24 | Lab Sample ID: 140-10789-17

Matrix: Air | Lab File ID: RB27P201.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 17:22

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 04:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.66	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.0	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	6.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.7	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

Appendix C

Support Documentation

Job Narrative
140-10789-1

Receipt
The samples were received on 2/23/2018 at 10:30 AM. The samples arrived in good condition and properly preserved.

Air - GC/MS VOA - TO-15 LL
EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

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

Comments
No additional comments.

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Air - GC/MS VOA

Analysis Batch: 18442

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-10789-1	IA-138-A-24	Total/NA	Air	TO 15 LL	
140-10789-2	IA-093-A-24	Total/NA	Air	TO 15 LL	
140-10789-3	IA-018-A-24	Total/NA	Air	TO 15 LL	
140-10789-4	IA-DUP01-A-24	Total/NA	Air	TO 15 LL	
140-10789-5	IA-174-A-24	Total/NA	Air	TO 15 LL	
140-10789-6	IA-118-A-24	Total/NA	Air	TO 15 LL	
140-10789-7	IA-081-A-24	Total/NA	Air	TO 15 LL	
140-10789-8	IA-079-A-24	Total/NA	Air	TO 15 LL	
140-10789-9	IA-DUP02-A-24	Total/NA	Air	TO 15 LL	
140-10789-10	IA-117-A-24	Total/NA	Air	TO 15 LL	
140-10789-11	IA-078-A-24	Total/NA	Air	TO 15 LL	
140-10789-12	IA-136-A-24	Total/NA	Air	TO 15 LL	
140-10789-13	IA-168-A-24	Total/NA	Air	TO 15 LL	
140-10789-14	IA-076-A-24	Total/NA	Air	TO 15 LL	
140-10789-15	IA-075-A-24	Total/NA	Air	TO 15 LL	
140-10789-16	IA-021-A-24	Total/NA	Air	TO 15 LL	
140-10789-17	IA-015-A-24	Total/NA	Air	TO 15 LL	
MB 140-18442/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-18442/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865.291.3000 fax 865.584.4315

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Tony Apanavage	Site Contact: Tony Apanavage	Date: 2/21/2018	COC No:
Tera Tech	Tel/Fax: (301)528-3021	Lab Contact: John McFadden	Carrier: Fedex	8 of 9 COCs
20251 Century Blvd. Ste 200	**Analysis Turnaround Time**			Job No: RUSH/ TAT IS NOT
Germantown, Maryland 20874	Calendar (C) or Work Days (W) _____			
Phone: (301)528-5552	TAT if different from Below ___Standard_____			SDG No: 180325
	☐ 2 weeks			
Project Name: 112IC08388	☐ 1 week			
Site: Middle River, MD	☐ 2 days			
P O #	☐ 1 day			Sampler: MULLIS/PRYOR

140-10789 Chain of Custody

Sample Identification	Sample Date	Time Start	Time Stop	Canister Volume in Field "Hg (Start)	Canister Volume in Field "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	Sample Specific Notes:
IA-138-A-24	2/21/2018	0830	1630	-29	-1	7617	11569	X	
IA-093-A-24	2/21/2018	0832	1632	-30	-2	8604	11607	X	Received @ ambient
IA-018-A-24	2/21/2018	0836	1636	-24	-20	7633	11268	X	2 boxes FedEx SO
IA-DUP01-A-24	2/21/2018	0000	0000	-30	-3	11601	11623	X	trk# 715 919 2147
IA-174-A-24	2/21/2018	0840	1640	-26	0	11597	11132	X	" 2909
IA-118-A-24	2/21/2018	0845	1649	-30	0	10619	10760	X	No custody seal
IA-081-A-24	2/21/2018	0850	1653	-30	-2	10174	11692	X	KW 2/23/18
IA-079-A-24	2/21/2018	0854	1655	-30	-2	09854	09750	X	
IA-DUP02-A-24	2/21/2018	0000	0000	-26	-2	10079	11706	X	
IA-117-A-24	2/21/2018	0856	1656	-28	0	10450	9833	X	
IA-078-A-24	2/21/2018	0859	1659	-30	-2	09950	09643	X	
IA-136-A-24	2/21/2018	0902	1702	-29	0	7358	11713	X	2 Tu
IA-168-A-24	2/21/2018	0908	1708	-30	-3	10053	11657	X	19 flows
IA-076-A-24	2/21/2018	0911	1711	-30	-3.5	7273	10922	X	17 can
IA-075-A-24	2/21/2018	0915	1715	-30	0	11526	11666	X	

Special Instructions/QC Requirements & Comments: **Contracted Analyte List**

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Walt Pryor	TT INC	2/22/18 1150			2/22/18 1150
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
		2/22/18		TA-Ky	2/23/18 0830
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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

Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865.291.3000 fax 865.584.4315

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Tony Apanavage	Site Contact: Tony Apanavage	Date: 2/21/2018	COC No:
Tera Tech	Tel/Fax: (301)528-3021	Lab Contact: John McFadden	Carrier: Fedex	4 of 9 COCs
20251 Century Blvd. Ste 200	Analysis Turnaround Time			Job No. 18081
Germantown, Maryland 20874	Calendar (C) or Work Days (W) _____			
Phone: (301)528-5552	TAT if different from Below ___Standard_____			
	☐ 2 weeks			
Project Name: 112IC08388	☐ 1 week			SDG No.
Site: Middle River, MD	☐ 2 days			
P O #	☐ 1 day			Sampler: MULLIS/PRYOR

Sample Identification	Sample Date	Time Start	Time Stop	Canister Volume in Field "Hg (Start)	Canister Volume in Field "Hg (Stop)	Flow Controller ID	Canister ID	TO-15								Sample Specific Notes:
IA-021-A-24	2/21/2018	0918	1718	-30	-1	8751	09633	X								
IA-015-A-24	2/21/2018	0922	1722	-30	0	7061	10341	X								

Special Instructions/QC Requirements & Comments: **Contracted Analyte List**

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	TT EMC	2/22/18/1150	[signature]		2/22/18/1150
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]		2/22/18	[signature]	TA-Hk	2/23/18 1030
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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

Loc: 140
10789

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST **Log In Number:**

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	/			☐ **Containers, Broken**
2. Were ambient air containers received intact?			/	☑ Checked in lab
3. The coolers/containers custody seal if present, is it intact?			/	☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			/	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	/			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	/			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	/			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	/			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	/			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?	/			☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	/			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	/			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	/			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	/			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	/			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			/	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			/	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:_____			/	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			/	☐ If no, lab will adjust
20. For rad samples was sample activity info. Provided?			/	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: _____ PM Instructions: _____

Sample Receiving Associate: _____ Date: 2/23/18

QA026R30.doc, 080916

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 2/26/2018-2/27/18

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
HMT	140-10789-a-1	11569	10524	B	1	0.0	11:49	2/26
HMT	140-10789-a-2	11607	10577	B	1	-2.0	11:50	
HMT	140-10789-a-3	11268	10524	B	1	0.0	11:51	
HMT	140-10789-a-4	11623	10524	B	1	-1.9	11:52	
HMT	140-10789-a-5	11132	10524	B	1	0.0	11:53	
HMT	140-10789-a-6	10760	10622	B	1	-1.2	11:54	
HMT	140-10789-a-7	11692	10577	B	1	0.0	11:55	
AFB	140-10789-a-8	09750	10622	B	1	-2.4	10:10	2/27
AFB	140-10789-a-9	11706	10622	B	1	-2.7	10:11	
AFB	140-10789-a-10	09833	10622	B	1	0	10:12	
AFB	140-10789-a-11	09643	10524	B	1	-2.1	10:13	
AFB	140-10789-a-12	11713	10622	B	1	-2.4	10:14	
AFB	140-10789-a-13	11657	10622	B	1	-2.8	10:15	
AFB	140-10789-a-14	10922	10622	B	1	-1.7	10:16	
AFB	140-10789-a-15	11666	10577	B	1	-2.3	10:17	
AFB	140-10789-a-16	09633	10577	B	1	0	10:18	
AFB	140-10789-a-17	10341	10622	B	1	-1.1	10:19	

Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Lab File ID: R500BB27.D Lab Sample ID: MB 140-18442/4

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MR Date Analyzed: 02/27/2018 12:54

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-18442/1002	RCCVB27-LCS.d	02/27/2018 11:01
IA-138-A-24	140-10789-1	RB27P101.D	02/27/2018 14:45
IA-093-A-24	140-10789-2	RB27P102.D	02/27/2018 15:33
IA-018-A-24	140-10789-3	RB27P103.D	02/27/2018 16:20
IA-DUP01-A-24	140-10789-4	RB27P104.D	02/27/2018 17:08
IA-174-A-24	140-10789-5	RB27P105.D	02/27/2018 17:56
IA-118-A-24	140-10789-6	RB27P106.D	02/27/2018 18:43
IA-081-A-24	140-10789-7	RB27P107.D	02/27/2018 19:30
IA-079-A-24	140-10789-8	RB27P108.D	02/27/2018 20:17
IA-DUP02-A-24	140-10789-9	RB27P109.D	02/27/2018 21:04
IA-117-A-24	140-10789-10	RB27P110.D	02/27/2018 21:52
IA-078-A-24	140-10789-11	RB27P111.D	02/27/2018 22:39
IA-136-A-24	140-10789-12	RB27P112.D	02/27/2018 23:26
IA-168-A-24	140-10789-13	RB27P113.D	02/28/2018 00:13
IA-076-A-24	140-10789-14	RB27P114.D	02/28/2018 01:00
IA-075-A-24	140-10789-15	RB27P115.D	02/28/2018 01:47
IA-021-A-24	140-10789-16	RB27P116D.D	02/28/2018 02:34
IA-015-A-24	140-10789-17	RB27P201.D	02/28/2018 04:08

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-18442/4

Matrix: Air Lab File ID: R500BB27.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 02/27/2018 12:54

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18442 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-18442/4

Matrix: Air | Lab File ID: R500BB27.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 02/27/2018 12:54

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Lab File ID: RBFBA30.D BFB Injection Date: 01/30/2018

Instrument ID: MR BFB Injection Time: 11:12

Analysis Batch No.: 17762

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.1	
75	30.0 - 60.0 % of mass 95	54.8	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	78.1	
175	5.0 - 9.0 % of mass 174	5.7	(7.3) 1
176	95.0 - 101.0 % of mass 174	76.6	(98.2) 1
177	5.0 - 9.0 % of mass 176	5.0	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-17762/3	RA30IC01.D	01/30/2018	12:29
	IC 140-17762/4	RA30IC02.D	01/30/2018	13:16
	IC 140-17762/5	RA30IC03.D	01/30/2018	14:04
	IC 140-17762/6	RA30IC04.D	01/30/2018	14:50
	IC 140-17762/7	RA30IC05.D	01/30/2018	15:39
	IC 140-17762/8	RA30IC06.D	01/30/2018	16:27
	ICIS 140-17762/9	RA30IC07.D	01/30/2018	17:15
	IC 140-17762/10	RA30IC08.D	01/30/2018	18:03
	IC 140-17762/11	RA30IC09.D	01/30/2018	18:50
	IC 140-17762/12	RA30IC10.D	01/30/2018	19:38
	ICV 140-17762/14	RA30ICV.D	01/30/2018	21:11

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Lab File ID: RBFBB27x.D BFB Injection Date: 02/27/2018

Instrument ID: MR BFB Injection Time: 10:29

Analysis Batch No.: 18442

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	54.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.2	(0.3) 1
174	50.0 - 120.00 % of mass 95	78.8	
175	5.0 - 9.0 % of mass 174	5.7	(7.2) 1
176	95.0 - 101.0 % of mass 174	76.1	(96.6) 1
177	5.0 - 9.0 % of mass 176	4.9	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-18442/2	RCCVB27.D	02/27/2018	11:01
	LCS 140-18442/1002	RCCVB27-LCS.d	02/27/2018	11:01
	MB 140-18442/4	R500BB27.D	02/27/2018	12:54
IA-138-A-24	140-10789-1	RB27P101.D	02/27/2018	14:45
IA-093-A-24	140-10789-2	RB27P102.D	02/27/2018	15:33
IA-018-A-24	140-10789-3	RB27P103.D	02/27/2018	16:20
IA-DUP01-A-24	140-10789-4	RB27P104.D	02/27/2018	17:08
IA-174-A-24	140-10789-5	RB27P105.D	02/27/2018	17:56
IA-118-A-24	140-10789-6	RB27P106.D	02/27/2018	18:43
IA-081-A-24	140-10789-7	RB27P107.D	02/27/2018	19:30
IA-079-A-24	140-10789-8	RB27P108.D	02/27/2018	20:17
IA-DUP02-A-24	140-10789-9	RB27P109.D	02/27/2018	21:04
IA-117-A-24	140-10789-10	RB27P110.D	02/27/2018	21:52
IA-078-A-24	140-10789-11	RB27P111.D	02/27/2018	22:39
IA-136-A-24	140-10789-12	RB27P112.D	02/27/2018	23:26
IA-168-A-24	140-10789-13	RB27P113.D	02/28/2018	00:13
IA-076-A-24	140-10789-14	RB27P114.D	02/28/2018	01:00
IA-075-A-24	140-10789-15	RB27P115.D	02/28/2018	01:47
IA-021-A-24	140-10789-16	RB27P116D.D	02/28/2018	02:34
IA-015-A-24	140-10789-17	RB27P201.D	02/28/2018	04:08

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-17762/3	RA30IC01.D
Level 2	IC 140-17762/4	RA30IC02.D
Level 3	IC 140-17762/5	RA30IC03.D
Level 4	IC 140-17762/6	RA30IC04.D
Level 5	IC 140-17762/7	RA30IC05.D
Level 6	IC 140-17762/8	RA30IC06.D
Level 7	ICIS 140-17762/9	RA30IC07.D
Level 8	IC 140-17762/10	RA30IC08.D
Level 9	IC 140-17762/11	RA30IC09.D
Level 10	IC 140-17762/12	RA30IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Chlorodifluoromethane	+++++ 0.4996	+++++ 0.5018	0.5364 0.4761	0.5007 0.4556	0.4969 0.4366	Ave		0.4879				6.4		30.0			
Propene	+++++ 1.0148	+++++ 1.0127	+++++ 0.9251	1.0749 0.8535	1.0335 0.7750	Ave		0.9557				11.4		30.0			
Dichlorodifluoromethane	+++++ 3.8576	+++++ 3.8716	3.9445 3.4238	4.4278 3.3920	3.8443 3.2841	Ave		3.7557				10.0		30.0			
Chloromethane	+++++ 0.3356	+++++ 0.3504	+++++ 0.3161	0.4352 0.2922	0.3844 0.2804	Ave		0.3421				15.8		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	2.9869 2.5228	2.8020 2.5888	2.6799 2.4191	2.4834 2.2928	2.5057 2.1607	Ave		2.5442				9.4		30.0			
Vinyl chloride	1.2473 1.0050	1.2981 1.0133	1.0342 0.9733	1.0613 0.9642	1.0145 0.8783	Ave		1.0490				12.2		30.0			
1,3-Butadiene	+++++ 0.6759	+++++ 0.6901	0.7589 0.6575	0.7160 0.6429	0.6702 0.6007	Ave		0.6765				7.0		30.0			
Butane	+++++ 1.1770	+++++ 1.1571	1.1761 1.0993	1.1870 1.0664	1.1472 0.9821	Ave		1.1240				6.3		30.0			
Bromomethane	+++++ 0.9756	+++++ 0.9799	1.0961 0.9468	0.9664 0.9339	0.9805 0.8851	Ave		0.9705				6.2		30.0			
Chloroethane	+++++ 0.4798	+++++ 0.4684	0.5400 0.4543	0.5007 0.4508	0.4816 0.4272	Ave		0.4754				7.2		30.0			
Ethanol	+++++ 0.3138	+++++ 0.3115	+++++ 0.2974	0.3206 0.2839	0.3092 0.2628	Ave		0.2999				6.8		30.0			
Vinyl bromide	+++++ 0.9734	+++++ 0.9603	1.0223 0.9264	0.9931 0.9030	0.9628 0.8698	Ave		0.9514				5.2		30.0			
2-Methylbutane	+++++ 0.7927	0.8473 0.7870	0.8827 0.7573	0.8140 0.7354	0.8057 0.7063	Ave		0.7921				6.9		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Acrolein	+++++ 0.2131	+++++ 0.2023	+++++ 0.1714	0.2463 0.2369	0.2775 0.1986	Ave		0.2209				16.0		30.0			
Trichlorofluoromethane	3.8163 3.6210	3.8962 3.5670	3.7377 3.3875	3.7221 3.2631	3.6118 3.0510	Ave		3.5674				7.4		30.0			
Acetonitrile	+++++ 0.2710	+++++ 0.2792	+++++ 0.2690	+++++ 0.2590	0.3012 0.2516	Ave		0.2718				6.4		30.0			
Acetone	+++++ 0.4445	+++++ 0.4298	+++++ 0.3730	+++++ 0.3559	0.5743 0.3319	Ave		0.4182				21.0		30.0			
Isopropyl alcohol	+++++ 1.7615	+++++ 1.7262	+++++ 1.6035	1.7601 1.4471	1.7064 1.2490	Ave		1.6077				12.0		30.0			
Pentane	+++++ 0.2821	0.3253 0.2863	0.3062 0.2706	0.2848 0.2514	0.2797 0.2238	Ave		0.2789				10.5		30.0			
Ethyl ether	+++++ 1.0595	+++++ 1.0591	1.1464 0.9558	1.0861 0.8868	1.0639 0.8197	Ave		1.0097				11.0		30.0			
1,1-Dichloroethene	1.8230 1.4732	1.6952 1.5251	1.5415 1.4388	1.4628 1.3846	1.4710 1.3297	Ave		1.5145				9.6		30.0			
Acrylonitrile	+++++ 0.9755	1.0491 1.0149	0.9699 0.9431	0.9648 0.8986	0.9313 0.8597	Ave		0.9563				6.0		30.0			
tert-Butyl alcohol	+++++ 3.0919	+++++ 3.1666	3.2956 2.9405	3.0814 2.8297	3.0612 2.6483	Ave		3.0144				6.7		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	3.6835 3.3085	3.3240 3.3647	3.3270 3.1386	3.2027 2.9781	3.2883 2.7719	Ave		3.2387				7.5		30.0			
Methylene Chloride	+++++ 1.5226	+++++ 1.4846	+++++ 1.3365	2.3963 1.2627	1.7575 1.1890	Ave		1.5642				26.4		30.0			
3-Chloropropene	+++++ 1.2912	1.4624 1.2679	1.3517 1.1239	1.2960 1.1775	1.2499 1.0934	Ave		1.2571				9.1		30.0			
Carbon disulfide	+++++ 4.3010	4.5429 4.3495	4.2824 4.0908	4.2202 3.9413	4.1883 3.7920	Ave		4.1898				5.3		30.0			
trans-1,2-Dichloroethene	+++++ 1.5663	1.6529 1.6054	1.5536 1.5101	1.5451 1.4740	1.5012 1.4213	Ave		1.5366				4.5		30.0			
Methyl tert-butyl ether	+++++ 4.8878	4.9780 5.0046	4.7681 4.7335	4.6401 4.5480	4.7610 4.3260	Ave		4.7386				4.5		30.0			
1,1-Dichloroethane	3.2552 2.9583	3.2402 2.9974	3.0427 2.7728	2.9120 2.6386	2.9342 2.5185	Ave		2.9270				8.0		30.0			
Vinyl acetate	+++++ 3.0422	+++++ 3.0483	2.4722 2.8443	2.4587 3.0745	2.7400 2.9503	Ave		2.8288				8.9		30.0			
2-Butanone (MEK)	+++++ 0.7255	+++++ 0.7913	+++++ 0.7057	0.7096 0.7007	0.7825 0.6631	Ave		0.7255				6.4		30.0			
Hexane	+++++ 1.2050	1.3784 1.2187	1.2369 1.1204	1.1721 1.0624	1.1769 0.9868	Ave		1.1731				9.5		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
cis-1,2-Dichloroethene	1.9071 1.6125	1.8156 1.6678	1.6641 1.5780	1.6147 1.5302	1.6025 1.4817	Ave		1.6474				7.8		30.0			
Ethyl acetate	+++++ 2.7290	+++++ 2.8405	2.1840 2.6632	2.2813 2.5958	2.5408 2.4854	Ave		2.5400				8.7		30.0			
Chloroform	4.2863 3.7052	3.8694 3.7903	3.7705 3.5491	3.6794 3.4047	3.6984 3.2578	Ave		3.7011				7.5		30.0			
Tetrahydrofuran	+++++ 1.3407	+++++ 1.3730	1.3680 1.2688	1.3174 1.2195	1.3030 1.1665	Ave		1.2946				5.6		30.0			
1,1,1-Trichloroethane	4.1703 3.9689	4.0153 4.0994	3.8140 3.8790	3.6871 3.7835	3.8389 3.6271	Ave		3.8883				4.5		30.0			
1,2-Dichloroethane	0.4598 0.4390	0.4262 0.4435	0.4288 0.4170	0.3913 0.4087	0.4251 0.3915	Ave		0.4231				5.2		30.0			
Benzene	0.8742 0.7844	0.8183 0.7925	0.7957 0.7383	0.7735 0.6873	0.7655 0.6121	Ave		0.7642				9.5		30.0			
1-Butanol	+++++ 0.0491	+++++ 0.0535	+++++ 0.0554	+++++ 0.0549	0.0399 0.0507	Ave		0.0506				11.4		30.0			
Cyclohexane	+++++ 0.1282	0.1302 0.1319	0.1361 0.1198	0.1248 0.1109	0.1254 0.0971	Ave		0.1227				9.8		30.0			
Carbon tetrachloride	0.6377 0.6481	0.5867 0.6494	0.5971 0.6370	0.5827 0.6239	0.6061 0.5914	Ave		0.6160				4.2		30.0			
2,2,4-Trimethylpentane	+++++ 1.1700	+++++ 1.1823	1.1763 1.1037	1.1213 1.0350	1.1405 0.9359	Ave		1.1081				7.6		30.0			
1,2-Dichloropropane	0.2892 0.2749	0.2827 0.2781	0.2783 0.2608	0.2653 0.2439	0.2652 0.2201	Ave		0.2659				7.7		30.0			
Heptane	+++++ 0.2794	0.2806 0.2826	0.2727 0.2668	0.2557 0.2502	0.2719 0.2244	Ave		0.2649				7.1		30.0			
Trichloroethene	0.3941 0.3561	0.3498 0.3989	0.3569 0.4050	0.3383 0.3430	0.3431 0.3253	Ave		0.3611				7.8		30.0			
Dibromomethane	+++++ 0.3180	+++++ 0.3337	0.3335 0.3154	0.3130 0.3075	0.3081 0.2866	Ave		0.3145				4.8		30.0			
Bromodichloromethane	0.5552 0.5927	0.5165 0.6275	0.5155 0.6065	0.5215 0.5926	0.5443 0.5621	Ave		0.5634				7.1		30.0			
1,4-Dioxane	+++++ 0.1244	0.1026 0.1255	0.1107 0.1188	0.1100 0.1111	0.1114 0.0998	Ave		0.1127				7.8		30.0			
Methyl methacrylate	+++++ 0.2534	+++++ 0.2814	+++++ 0.2766	0.1921 0.2732	0.2185 0.2613	Ave		0.2509				13.3		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.4476	+++++ 0.4761	0.4073 0.4607	0.3703 0.4462	0.4067 0.4120	Ave		0.4284				8.2		30.0			
cis-1,3-Dichloropropene	0.4432 0.4616	0.4182 0.4890	0.4016 0.4666	0.4077 0.4542	0.4258 0.4244	Ave		0.4392				6.4		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
trans-1,3-Dichloropropene	0.5110 0.5036	0.4535 0.5257	0.4406 0.5134	0.4431 0.5163	0.4525 0.4903	Ave		0.4850				7.0		30.0			
Toluene	1.2824 1.1325	1.1432 1.1561	1.0870 1.0939	1.0545 1.0385	1.0799 0.9486	Ave		1.1017				7.9		30.0			
1,1,2-Trichloroethane	0.3289 0.3161	0.3191 0.3218	0.2970 0.3044	0.2890 0.2905	0.3016 0.2671	Ave		0.3035				6.1		30.0			
2-Hexanone	+++++ 0.2856	+++++ 0.3067	0.1978 0.3130	0.1839 0.2994	0.2390 0.2768	Ave		0.2628				19.0		30.0			
Dibromochloromethane	0.5478 0.6218	0.4611 0.6757	0.5045 0.6734	0.4783 0.6763	0.5239 0.6415	Ave		0.5804				14.9		30.0			
Octane	0.3713 0.3761	0.3521 0.3823	0.3634 0.3590	0.3351 0.3411	0.3561 0.3074	Ave		0.3544				6.2		30.0			
1,2-Dibromoethane (EDB)	0.5777 0.5703	0.4862 0.5934	0.5028 0.5775	0.5036 0.5627	0.5214 0.5228	Ave		0.5418				7.1		30.0			
Tetrachloroethene	0.4510 0.4222	0.4302 0.4299	0.4096 0.4116	0.3928 0.3938	0.4006 0.3646	Ave		0.4106				5.9		30.0			
Chlorobenzene	1.0111 0.8808	0.9072 0.8981	0.8780 0.8583	0.8277 0.8176	0.8488 0.7523	Ave		0.8680				7.8		30.0			
Ethylbenzene	1.6592 1.4956	1.4733 1.5265	1.4692 1.4423	1.3826 1.3480	1.4274 1.1942	Ave		1.4418				8.4		30.0			
m-Xylene & p-Xylene	1.2623 1.1995	1.1484 1.2020	1.1693 1.1112	1.0926 1.0102	1.1299 0.8551	Ave		1.1181				10.3		30.0			
Bromoform	0.4567 0.5340	0.3917 0.5876	0.3879 0.5961	0.3803 0.6243	0.4243 0.6099	Ave		0.4993				20.2		30.0			
Styrene	+++++ 0.7708	+++++ 0.8353	0.5730 0.8116	0.5596 0.7867	0.6410 0.7271	Ave		0.7131				15.2		30.0			
Nonane	0.6231 0.6749	0.6344 0.6650	0.6202 0.5965	0.5897 0.5334	0.6338 0.4526	Ave		0.6024				11.0		30.0			
o-Xylene	1.3802 1.2416	1.2323 1.2309	1.2402 1.1408	1.1662 1.0563	1.1911 0.9246	Ave		1.1804				10.4		30.0			
1,1,2,2-Tetrachloroethane	0.7571 0.7998	0.6769 0.7375	0.6943 0.6416	0.6940 0.7009	0.7398 0.6230	Ave		0.7065				7.6		30.0			
1,2,3-Trichloropropane	0.2821 0.2687	0.2608 0.2698	0.2586 0.2533	0.2448 0.2410	0.2532 0.2251	Ave		0.2557				6.4		30.0			
Isopropylbenzene	+++++ 1.6847	1.7627 1.6664	1.6980 1.5413	1.5734 1.4182	1.6200 1.2451	Ave		1.5789				10.2		30.0			
Propylbenzene	0.4393 0.4800	0.4121 0.4854	0.4266 0.4494	0.4019 0.4134	0.4353 0.3689	Ave		0.4312				8.2		30.0			
2-Chlorotoluene	0.4307 0.4308	0.4121 0.4227	0.4100 0.3945	0.3900 0.3647	0.4077 0.3250	Ave		0.3988				8.2		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
4-Ethyltoluene	1.6721 1.8578	1.5887 1.8488	1.6064 1.7062	1.5559 1.5414	1.6697 1.3406	Ave		1.6388				9.3		30.0			
1,3,5-Trimethylbenzene	0.6886 0.7368	0.6438 0.7377	0.6390 0.6854	0.6228 0.6329	0.6583 0.5712	Ave		0.6617				7.8		30.0			
Alpha Methyl Styrene	+++++ 0.5961	+++++ 0.6811	+++++ 0.6723	0.3867 0.6319	0.4651 0.5717	Ave		0.5721				19.1		30.0			
Decane	0.7782 0.9615	0.7577 0.9673	0.8036 0.8765	0.7851 0.7693	0.8536 0.6351	Ave		0.8188				12.2		30.0			
tert-Butylbenzene	1.6747 1.7037	1.5629 1.6867	1.5711 1.5356	1.5162 1.3829	1.5602 1.1822	Ave		1.5376				10.2		30.0			
1,2,4-Trimethylbenzene	1.4061 1.5971	1.3356 1.5702	1.4117 1.4079	1.3483 1.2376	1.4396 1.0385	Ave		1.3793				11.6		30.0			
1,3-Dichlorobenzene	0.9382 0.9839	0.8463 0.9937	0.8839 0.9167	0.8388 0.8391	0.8924 0.7369	Ave		0.8870				8.7		30.0			
sec-Butylbenzene	2.1386 2.2501	1.9617 2.2330	1.9986 2.0283	1.9397 1.7523	2.0522 1.4290	Ave		1.9784				12.2		30.0			
Benzyl chloride	0.9176 1.2280	0.8673 1.3521	0.8700 1.2619	0.8429 1.1005	1.0250 0.9090	Ave		1.0374				18.1		30.0			
1,4-Dichlorobenzene	0.9388 0.9885	0.8643 0.9957	0.8741 0.9128	0.8360 0.8274	0.8810 0.7278	Ave		0.8846				9.0		30.0			
4-Isopropyltoluene	1.7285 1.9959	1.5857 2.0202	1.7817 1.8554	1.6423 1.6625	1.7503 1.3675	Ave		1.7390				11.1		30.0			
1,2,3-Trimethylbenzene	1.5856 1.7943	1.5711 1.7803	1.5668 1.6018	1.4899 1.4272	1.6163 1.2294	Ave		1.5663				10.4		30.0			
1,2-Dichlorobenzene	0.8942 0.9621	0.8150 0.9678	0.8654 0.8979	0.8005 0.8158	0.8702 0.7264	Ave		0.8615				8.7		30.0			
Butylbenzene	1.4292 1.8444	1.3568 1.8896	1.4519 1.7531	1.4134 1.5467	1.5664 1.2564	Ave		1.5508				13.8		30.0			
Undecane	0.7892 1.0726	0.7390 1.1100	0.7934 1.0270	0.8096 0.9132	0.8805 0.7285	Ave		0.8863				15.8		30.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.5969	+++++ 0.6647	0.3685 0.6164	0.3739 0.6149	0.4386 0.5398	Ave		0.5267				22.2		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 0.9191	+++++ 0.9859	0.7212 0.9676	0.6936 0.9342	0.7408 0.8332	Ave		0.8495				13.9		30.0			
Dodecane	+++++ 0.9928	+++++ 1.1283	0.5865 1.0229	0.6183 0.9289	0.6706 0.6900	Ave		0.8298				25.4		30.0			
1,2,4-Trichlorobenzene	+++++ 0.7149	0.4150 0.8253	0.4838 0.8320	0.4553 0.8417	0.5017 0.7379	Ave		0.6453				27.7		30.0			
Naphthalene	1.0448 1.6712	0.9243 1.9078	1.1299 1.8929	1.1276 1.8463	1.2769 1.5182	Ave		1.4340				26.4		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Hexachlorobutadiene	0.7046 0.7752	0.6195 0.8332	0.6587 0.8074	0.6012 0.7762	0.6084 0.6733	Ave		0.7058				12.3		30.0			
1,2,3-Trichlorobenzene	+++++ 0.6757	+++++ 0.7953	0.4965 0.7779	0.4801 0.7989	0.4939 0.7046	Ave		0.6529				21.7		30.0			
2-Methylnaphthalene	+++++ 0.2487	+++++ 0.4641	+++++ 0.4569	+++++ 0.4755	0.1340 0.3372	Ave		0.3527				39.5		50.0			
1-Methylnaphthalene	+++++ 0.2715	+++++ 0.5022	+++++ 0.4656	0.2315 0.4794	0.1676 0.3359	Ave		0.3505				38.1		50.0			
4-Bromofluorobenzene (Surr)	0.7650 0.7800	0.7779 0.7658	0.7890 0.7351	0.7826 0.7176	0.7941 0.6764	Ave		0.7584				5.0		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Lab Sample ID: ICV 140-17762/14 Calibration Date: 01/30/2018 21:11

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RA30ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4879	0.5051		2.56	2.47	3.5	35.0
Propene	Ave	0.9557	0.9570		2.47	2.47	0.1	35.0
Dichlorodifluoromethane	Ave	3.756	4.377		2.88	2.47	16.6	35.0
Chloromethane	Ave	0.3421	0.3220		2.32	2.47	-5.9	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.544	2.591		2.52	2.47	1.9	35.0
Vinyl chloride	Ave	1.049	1.041		2.45	2.47	-0.8	35.0
1,3-Butadiene	Ave	0.6765	0.6768		2.47	2.47	0.0	35.0
Butane	Ave	1.124	1.183		2.60	2.47	5.2	35.0
Bromomethane	Ave	0.9705	0.9841		2.50	2.47	1.4	35.0
Chloroethane	Ave	0.4754	0.4775		2.48	2.47	0.5	35.0
Ethanol	Ave	0.2999	0.2849		11.7	12.3	-5.0	35.0
Vinyl bromide	Ave	0.9514	1.041		2.70	2.47	9.4	35.0
2-Methylbutane	Ave	0.7921	0.8138		2.54	2.47	2.8	35.0
Acrolein	Ave	0.2209	0.2275		2.54	2.47	3.0	35.0
Trichlorofluoromethane	Ave	3.567	3.678		2.55	2.47	3.1	35.0
Acetonitrile	Ave	0.2718	0.2877		2.61	2.47	5.8	35.0
Acetone	Ave	0.4182	0.3903		6.91	7.41	-6.7	35.0
Isopropyl alcohol	Ave	1.608	1.805		8.32	7.41	12.3	35.0
Pentane	Ave	0.2789	0.2842		2.52	2.47	1.9	35.0
Ethyl ether	Ave	1.010	1.023		2.50	2.47	1.4	35.0
1,1-Dichloroethene	Ave	1.514	1.434		2.34	2.47	-5.3	35.0
Acrylonitrile	Ave	0.9563	0.9635		2.49	2.47	0.8	35.0
tert-Butyl alcohol	Ave	3.014	3.014		2.47	2.47	0.0	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.239	3.252		2.48	2.47	0.4	35.0
Methylene Chloride	Ave	1.564	1.381		2.18	2.47	-11.7	35.0
3-Chloropropene	Ave	1.257	1.307		2.57	2.47	4.0	35.0
Carbon disulfide	Ave	4.190	4.077		2.40	2.47	-2.7	35.0
trans-1,2-Dichloroethene	Ave	1.537	1.515		2.44	2.47	-1.4	35.0
Methyl tert-butyl ether	Ave	4.739	4.873		2.54	2.47	2.8	35.0
1,1-Dichloroethane	Ave	2.927	2.890		2.44	2.47	-1.2	35.0
Vinyl acetate	Ave	2.829	3.271		2.85	2.47	15.6	35.0
2-Butanone (MEK)	Ave	0.7255	0.7119		2.42	2.47	-1.9	35.0
Hexane	Ave	1.173	1.154		2.43	2.47	-1.7	35.0
cis-1,2-Dichloroethene	Ave	1.647	1.637		2.45	2.47	-0.6	35.0
Ethyl acetate	Ave	2.540	2.598		2.53	2.47	2.3	35.0
Chloroform	Ave	3.701	3.702		2.47	2.47	0.0	35.0
Tetrahydrofuran	Ave	1.295	1.329		2.54	2.47	2.7	35.0
1,1,1-Trichloroethane	Ave	3.888	4.070		2.58	2.47	4.7	35.0
1,2-Dichloroethane	Ave	0.4231	0.4407		2.57	2.47	4.2	35.0
1-Butanol	Ave	0.0506	0.0556		2.72	2.47	10.0	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Lab Sample ID: ICV 140-17762/14 Calibration Date: 01/30/2018 21:11

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RA30ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzene	Ave	0.7642	0.7746		2.50	2.47	1.4	35.0
Cyclohexane	Ave	0.1227	0.1250		2.51	2.47	1.8	35.0
Carbon tetrachloride	Ave	0.6160	0.6889		2.76	2.47	11.8	35.0
2,2,4-Trimethylpentane	Ave	1.108	1.146		2.55	2.47	3.4	35.0
1,2-Dichloropropane	Ave	0.2659	0.2696		2.50	2.47	1.4	35.0
Heptane	Ave	0.2649	0.2721		2.54	2.47	2.7	35.0
Trichloroethene	Ave	0.3611	0.3691		2.52	2.47	2.2	35.0
Dibromomethane	Ave	0.3145	0.3283		2.58	2.47	4.4	35.0
Bromodichloromethane	Ave	0.5634	0.6271		2.75	2.47	11.3	35.0
1,4-Dioxane	Ave	0.1127	0.1179		2.58	2.47	4.7	35.0
Methyl methacrylate	Ave	0.2509	0.2746		2.70	2.47	9.4	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4284	0.4624		2.67	2.47	7.9	35.0
cis-1,3-Dichloropropene	Ave	0.4392	0.4887		2.75	2.47	11.3	35.0
trans-1,3-Dichloropropene	Ave	0.4850	0.5351		2.72	2.47	10.3	35.0
Toluene	Ave	1.102	1.122		2.52	2.47	1.9	35.0
1,1,2-Trichloroethane	Ave	0.3035	0.3092		2.52	2.47	1.9	35.0
2-Hexanone	Ave	0.2628	0.2981		2.80	2.47	13.5	35.0
Dibromochloromethane	Ave	0.5804	0.6993		2.98	2.47	20.5	35.0
Octane	Ave	0.3544	0.3754		2.62	2.47	5.9	35.0
1,2-Dibromoethane (EDB)	Ave	0.5418	0.5896		2.69	2.47	8.8	35.0
Tetrachloroethene	Ave	0.4106	0.4276		2.57	2.47	4.1	35.0
Chlorobenzene	Ave	0.8680	0.8977		2.55	2.47	3.4	35.0
Ethylbenzene	Ave	1.442	1.497		2.56	2.47	3.8	35.0
m-Xylene & p-Xylene	Ave	1.118	1.183		5.23	4.94	5.8	35.0
Bromoform	Ave	0.4993	0.6381		3.16	2.47	27.8	35.0
Styrene	Ave	0.7131	0.8370		2.90	2.47	17.4	35.0
Nonane	Ave	0.6024	0.6373		2.61	2.47	5.8	35.0
o-Xylene	Ave	1.180	1.193		2.49	2.47	1.0	35.0
1,1,2,2-Tetrachloroethane	Ave	0.7065	0.7765		2.71	2.47	9.9	35.0
1,2,3-Trichloropropane	Ave	0.2557	0.2673		2.58	2.47	4.5	35.0
Isopropylbenzene	Ave	1.579	1.681		2.63	2.47	6.5	35.0
Propylbenzene	Ave	0.4312	0.4920		2.82	2.47	14.1	35.0
2-Chlorotoluene	Ave	0.3988	0.4292		2.66	2.47	7.6	35.0
4-Ethyltoluene	Ave	1.639	1.745		2.63	2.47	6.5	35.0
1,3,5-Trimethylbenzene	Ave	0.6617	0.7303		2.73	2.47	10.4	35.0
Alpha Methyl Styrene	Ave	0.5721	0.6952		3.00	2.47	21.5	35.0
Decane	Ave	0.8188	0.9370		2.83	2.47	14.4	35.0
tert-Butylbenzene	Ave	1.538	1.672		2.69	2.47	8.8	35.0
1,2,4-Trimethylbenzene	Ave	1.379	1.533		2.74	2.47	11.1	35.0
1,3-Dichlorobenzene	Ave	0.8870	0.9882		2.75	2.47	11.4	35.0
sec-Butylbenzene	Ave	1.978	2.196		2.74	2.47	11.0	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Lab Sample ID: ICV 140-17762/14 Calibration Date: 01/30/2018 21:11

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RA30ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzyl chloride	Ave	1.037	1.335		3.18	2.47	28.7	35.0
1,4-Dichlorobenzene	Ave	0.8846	0.9798		2.74	2.47	10.8	35.0
4-Isopropyltoluene	Ave	1.739	1.961		2.78	2.47	12.7	35.0
1,2,3-Trimethylbenzene	Ave	1.566	1.539		2.43	2.47	-1.7	35.0
1,2-Dichlorobenzene	Ave	0.8615	0.9599		2.75	2.47	11.4	35.0
Butylbenzene	Ave	1.551	1.840		2.93	2.47	18.7	35.0
Undecane	Ave	0.8863	1.046		2.91	2.47	18.0	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.5267	0.4263		2.00	2.47	-19.1	35.0
1,2,4,5-Tetramethylbenzene	Ave	0.8495	1.694		4.92	2.47	99.4*	35.0
Dodecane	Ave	0.8298	0.9946		2.96	2.47	19.9	35.0
1,2,4-Trichlorobenzene	Ave	0.6453	0.7696		2.94	2.47	19.3	35.0
Naphthalene	Ave	1.434	1.710		2.95	2.47	19.3	35.0
Hexachlorobutadiene	Ave	0.7058	0.7878		2.76	2.47	11.6	35.0
1,2,3-Trichlorobenzene	Ave	0.6529	0.7394		2.80	2.47	13.3	35.0
2-Methylnaphthalene	Ave	0.3527	0.1484		2.38	5.67	-57.9*	50.0
1-Methylnaphthalene	Ave	0.3505	0.1569		2.54	5.68	-55.3*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7584	0.7641		4.03	4.00	0.8	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Lab Sample ID: CCVIS 140-18442/2 Calibration Date: 02/27/2018 11:01

Instrument ID: MR Calib Start Date: 06/28/2017 15:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/28/2017 21:58

Lab File ID: RCCVB27.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetaldehyde	Ave	0.3474	0.2513			10.0	-27.7	30.0
2-Methylpentane	Ave	1.822	2.224			2.00	22.1	30.0
2,3-Dimethylpentane	Ave	0.1274	0.1650			2.00	29.6	30.0
Thiophene	Ave	0.3433	0.4316			2.00	25.7	30.0
Methylcyclohexane	Ave	0.4439	0.5648			2.00	27.2	30.0
3-Methylthiophene	Ave	0.6908	0.8984			2.00	30.1*	30.0
2,3-Dimethylheptane	Ave	0.5998	0.6316			2.00	5.3	30.0
2-Ethylthiophene	Ave	0.9153	1.094			2.00	19.5	30.0
Butylcyclohexane	Ave	0.7978	1.164			2.00	45.9*	30.0
Indane	Ave	1.030	1.396			2.00	35.6*	30.0
Indene	QuaF		0.999			2.00		30.0
1,2,3,5-Tetramethylbenzene	Ave	0.9142	1.093			2.00	19.5	30.0
1,2,3,4-Tetramethylbenzene	Ave	1.236	1.425			2.00	15.3	30.0
Benzo(b)thiophene	Ave	0.9147	0.8480			2.00	-7.3	30.0
1,2-Dimethyl-4-Ethylbenzene	QuaF					2.00		
2-Methylthiophene	Ave	0.6999				2.00		

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Lab Sample ID: CCVIS 140-18442/2 Calibration Date: 02/27/2018 11:01

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RCCVB27.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4879	0.4812		1.97	2.00	-1.4	30.0
Propene	Ave	0.9557	0.7925		1.66	2.00	-17.1	30.0
Dichlorodifluoromethane	Ave	3.756	4.170		2.22	2.00	11.0	30.0
Chloromethane	Ave	0.3421	0.3336		1.95	2.00	-2.5	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.544	2.744		2.16	2.00	7.8	30.0
Vinyl chloride	Ave	1.049	0.999		1.90	2.00	-4.8	30.0
1,3-Butadiene	Ave	0.6765	0.6493		1.92	2.00	-4.0	30.0
Butane	Ave	1.124	1.097		1.95	2.00	-2.4	30.0
Bromomethane	Ave	0.9705	0.999		2.06	2.00	3.0	30.0
Chloroethane	Ave	0.4754	0.4697		1.98	2.00	-1.2	30.0
Ethanol	Ave	0.2999	0.1820		6.07	10.0	-39.3*	30.0
Vinyl bromide	Ave	0.9514	1.048		2.20	2.00	10.2	30.0
2-Methylbutane	Ave	0.7921	0.7526		1.90	2.00	-5.0	30.0
Acrolein	Ave	0.2209	0.2981		2.70	2.00	35.0*	30.0
Trichlorofluoromethane	Ave	3.567	3.758		2.11	2.00	5.3	30.0
Acetonitrile	Ave	0.2718	0.2389		1.76	2.00	-12.1	30.0
Acetone	Ave	0.4182	0.4359		2.08	2.00	4.2	30.0
Isopropyl alcohol	Ave	1.608	1.909		2.38	2.00	18.8	30.0
Pentane	Ave	0.2789	0.3011		2.16	2.00	8.0	30.0
Ethyl ether	Ave	1.010	0.9092		1.80	2.00	-10.0	30.0
1,1-Dichloroethene	Ave	1.514	1.468		1.94	2.00	-3.0	30.0
Acrylonitrile	Ave	0.9563	0.8752		1.83	2.00	-8.5	30.0
tert-Butyl alcohol	Ave	3.014	2.628		1.74	2.00	-12.8	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.239	3.316		2.05	2.00	2.4	30.0
Methylene Chloride	Ave	1.564	1.418		1.81	2.00	-9.4	30.0
3-Chloropropene	Ave	1.257	1.156		1.84	2.00	-8.1	30.0
Carbon disulfide	Ave	4.190	4.049		1.93	2.00	-3.4	30.0
trans-1,2-Dichloroethene	Ave	1.537	1.525		1.98	2.00	-0.8	30.0
Methyl tert-butyl ether	Ave	4.739	4.605		1.94	2.00	-2.8	30.0
1,1-Dichloroethane	Ave	2.927	2.676		1.83	2.00	-8.6	30.0
Vinyl acetate	Ave	2.829	2.709		1.92	2.00	-4.2	30.0
2-Butanone (MEK)	Ave	0.7255	0.6094		1.68	2.00	-16.0	30.0
Hexane	Ave	1.173	1.047		1.79	2.00	-10.7	30.0
cis-1,2-Dichloroethene	Ave	1.647	1.605		1.95	2.00	-2.6	30.0
Ethyl acetate	Ave	2.540	2.126		1.67	2.00	-16.3	30.0
Chloroform	Ave	3.701	3.555		1.92	2.00	-3.9	30.0
Tetrahydrofuran	Ave	1.295	1.065		1.64	2.00	-17.8	30.0
1,1,1-Trichloroethane	Ave	3.888	3.858		1.98	2.00	-0.8	30.0
1,2-Dichloroethane	Ave	0.4231	0.4152		1.96	2.00	-1.9	30.0
1-Butanol	Ave	0.0506	0.0380		1.50	2.00	-24.8	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Lab Sample ID: CCVIS 140-18442/2 Calibration Date: 02/27/2018 11:01

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RCCVB27.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzene	Ave	0.7642	0.7603		1.99	2.00	-0.5	30.0
Cyclohexane	Ave	0.1227	0.1189		1.94	2.00	-3.1	30.0
Carbon tetrachloride	Ave	0.6160	0.6794		2.21	2.00	10.3	30.0
2,2,4-Trimethylpentane	Ave	1.108	1.041		1.88	2.00	-6.0	30.0
1,2-Dichloropropane	Ave	0.2659	0.2450		1.84	2.00	-7.8	30.0
Heptane	Ave	0.2649	0.2561		1.93	2.00	-3.3	30.0
Trichloroethene	Ave	0.3611	0.3742		2.07	2.00	3.6	30.0
Dibromomethane	Ave	0.3145	0.3167		2.01	2.00	0.7	30.0
Bromodichloromethane	Ave	0.5634	0.5945		2.11	2.00	5.5	30.0
1,4-Dioxane	Ave	0.1127	0.1019		1.81	2.00	-9.6	30.0
Methyl methacrylate	Ave	0.2509	0.2187		1.74	2.00	-12.9	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4284	0.3822		1.78	2.00	-10.8	30.0
cis-1,3-Dichloropropene	Ave	0.4392	0.4439		2.02	2.00	1.1	30.0
trans-1,3-Dichloropropene	Ave	0.4850	0.4973		2.05	2.00	2.5	30.0
Toluene	Ave	1.102	1.149		2.09	2.00	4.3	30.0
1,1,2-Trichloroethane	Ave	0.3035	0.3064		2.02	2.00	0.9	30.0
2-Hexanone	Ave	0.2628	0.2625		2.00	2.00	-0.1	30.0
Dibromochloromethane	Ave	0.5804	0.6938		2.39	2.00	19.5	30.0
Octane	Ave	0.3544	0.3777		2.13	2.00	6.6	30.0
1,2-Dibromoethane (EDB)	Ave	0.5418	0.5749		2.12	2.00	6.1	30.0
Tetrachloroethene	Ave	0.4106	0.4506		2.19	2.00	9.7	30.0
Chlorobenzene	Ave	0.8680	0.9054		2.09	2.00	4.3	30.0
Ethylbenzene	Ave	1.442	1.455		2.02	2.00	0.9	30.0
m-Xylene & p-Xylene	Ave	1.118	1.168		4.18	4.00	4.5	30.0
Bromoform	Ave	0.4993	0.5817		2.33	2.00	16.5	30.0
Styrene	Ave	0.7131	0.7820		2.19	2.00	9.7	30.0
Nonane	Ave	0.6024	0.5970		1.98	2.00	-0.9	30.0
o-Xylene	Ave	1.180	1.152		1.95	2.00	-2.4	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7065	0.7348		2.08	2.00	4.0	30.0
1,2,3-Trichloropropane	Ave	0.2557	0.2567		2.01	2.00	0.4	30.0
Isopropylbenzene	Ave	1.579	1.628		2.06	2.00	3.1	30.0
Propylbenzene	Ave	0.4312	0.4940		2.29	2.00	14.5	30.0
2-Chlorotoluene	Ave	0.3988	0.4258		2.14	2.00	6.8	30.0
4-Ethyltoluene	Ave	1.639	1.759		2.15	2.00	7.3	30.0
1,3,5-Trimethylbenzene	Ave	0.6617	0.8552		2.59	2.00	29.3	30.0
Alpha Methyl Styrene	Ave	0.5721	0.6703		2.34	2.00	17.2	30.0
Decane	Ave	0.8188	0.9011		2.20	2.00	10.0	30.0
tert-Butylbenzene	Ave	1.538	1.763		2.29	2.00	14.7	30.0
1,2,4-Trimethylbenzene	Ave	1.379	1.607		2.33	2.00	16.5	30.0
1,3-Dichlorobenzene	Ave	0.8870	1.034		2.33	2.00	16.5	30.0
sec-Butylbenzene	Ave	1.978	2.301		2.33	2.00	16.3	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Lab Sample ID: CCVIS 140-18442/2 Calibration Date: 02/27/2018 11:01

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RCCVB27.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzyl chloride	Ave	1.037	1.292		2.49	2.00	24.6	30.0
1,4-Dichlorobenzene	Ave	0.8846	1.032		2.33	2.00	16.6	30.0
4-Isopropyltoluene	Ave	1.739	2.140		2.46	2.00	23.1	30.0
1,2,3-Trimethylbenzene	Ave	1.566	1.306		1.67	2.00	-16.6	30.0
1,2-Dichlorobenzene	Ave	0.8615	1.002		2.33	2.00	16.3	30.0
Butylbenzene	Ave	1.551	1.919		2.47	2.00	23.7	30.0
Undecane	Ave	0.8863	0.9948		2.24	2.00	12.2	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.5267	0.4217		1.60	2.00	-19.9	30.0
1,2,4,5-Tetramethylbenzene	Ave	0.8495	1.776		4.18	2.00	109.1*	30.0
Dodecane	Ave	0.8298	0.9160		2.21	2.00	10.4	30.0
1,2,4-Trichlorobenzene	Ave	0.6453	0.8076		2.50	2.00	25.2	30.0
Naphthalene	Ave	1.434	1.706		2.38	2.00	19.0	30.0
Hexachlorobutadiene	Ave	0.7058	0.8249		2.34	2.00	16.9	30.0
1,2,3-Trichlorobenzene	Ave	0.6529	0.7318		2.24	2.00	12.1	30.0
4-Bromofluorobenzene (Surr)	Ave	0.7584	0.7189		3.79	4.00	-5.2	30.0

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
IA-138-A-24	140-10789-1	104
IA-093-A-24	140-10789-2	103
IA-018-A-24	140-10789-3	103
IA-DUP01-A-24	140-10789-4	103
IA-174-A-24	140-10789-5	102
IA-118-A-24	140-10789-6	103
IA-081-A-24	140-10789-7	100
IA-079-A-24	140-10789-8	102
IA-DUP02-A-24	140-10789-9	101
IA-117-A-24	140-10789-10	102
IA-078-A-24	140-10789-11	103
IA-136-A-24	140-10789-12	104
IA-168-A-24	140-10789-13	102
IA-076-A-24	140-10789-14	101
IA-075-A-24	140-10789-15	101
IA-021-A-24	140-10789-16	102
IA-015-A-24	140-10789-17	105
	MB 140-18442/4	100
	LCS 140-18442/1002	95

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Matrix: Air Level: Low Lab File ID: RCCVB27-LCS.d

Lab ID: LCS 140-18442/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.99	99	70-130	
Carbon tetrachloride	2.00	2.21	110	70-130	
Chlorodifluoromethane	2.00	1.97	99	60-140	
Chloroform	2.00	1.92	96	70-130	
cis-1,2-Dichloroethene	2.00	1.95	97	70-130	
Dichlorodifluoromethane	2.00	2.22	111	60-140	
1,1-Dichloroethane	2.00	1.83	91	70-130	
1,2-Dichloroethane	2.00	1.96	98	70-130	
1,1-Dichloroethene	2.00	1.94	97	70-130	
Ethylbenzene	2.00	2.02	101	70-130	
Methylene Chloride	2.00	1.81	91	70-130	
Methyl tert-butyl ether	2.00	1.94	97	60-140	
Naphthalene	2.00	2.38	119	60-140	
Tetrachloroethene	2.00	2.19	110	70-130	
Toluene	2.00	2.09	104	70-130	
trans-1,2-Dichloroethene	2.00	1.98	99	70-130	
1,2,4-Trichlorobenzene	2.00	2.50	125	60-140	
1,1,1-Trichloroethane	2.00	1.98	99	70-130	
1,1,2-Trichloroethane	2.00	2.02	101	70-130	
Trichloroethene	2.00	2.07	104	70-130	
1,2,3-Trimethylbenzene	2.00	1.67	83	70-130	
1,2,4-Trimethylbenzene	2.00	2.33	117	70-130	
1,3,5-Trimethylbenzene	2.00	2.59	129	70-130	
Vinyl chloride	2.00	1.90	95	70-130	
Xylenes, Total	6.00	6.13	102	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Sample No.: ICIS 140-17762/9 Date Analyzed: 01/30/2018 17:15

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RA30IC07.D Heated Purge: (Y/N) N

Calibration ID: 1371

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		397524	7.71	2418900	9.85	2104378	14.86
UPPER LIMIT		556534	8.04	3386460	10.18	2946129	15.19
LOWER LIMIT		238514	7.38	1451340	9.52	1262627	14.53
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-17762/14		374886	7.72	2292324	9.85	1999070	14.86

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Sample No.: CCVIS 140-18442/2 Date Analyzed: 02/27/2018 11:01

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RCCVB27.D Heated Purge: (Y/N) N

Calibration ID: 1371

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		365059	7.69	2149629	9.83	1777009	14.84
UPPER LIMIT		511083	8.02	3009481	10.16	2487813	15.17
LOWER LIMIT		219035	7.36	1289777	9.50	1066205	14.51
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-18442/1002		365059	7.69	2149629	9.83	1777009	14.84
MB 140-18442/4		364203	7.67	2165918	9.82	1739889	14.84
140-10789-1	IA-138-A-24	344024	7.68	2023176	9.82	1649798	14.84
140-10789-2	IA-093-A-24	340371	7.68	2014431	9.82	1691252	14.84
140-10789-3	IA-018-A-24	356690	7.68	2127372	9.82	1770126	14.84
140-10789-4	IA-DUP01-A-24	352750	7.68	2090960	9.82	1734360	14.84
140-10789-5	IA-174-A-24	343895	7.68	2037454	9.82	1698136	14.84
140-10789-6	IA-118-A-24	337507	7.69	1988204	9.83	1643309	14.84
140-10789-7	IA-081-A-24	350765	7.69	2082073	9.83	1671896	14.84
140-10789-8	IA-079-A-24	356738	7.69	2124362	9.83	1742127	14.84
140-10789-9	IA-DUP02-A-24	361320	7.70	2150505	9.83	1748222	14.84
140-10789-10	IA-117-A-24	365805	7.70	2178554	9.83	1754675	14.84
140-10789-11	IA-078-A-24	355336	7.70	2112070	9.84	1722674	14.84
140-10789-12	IA-136-A-24	365393	7.71	2175358	9.84	1747429	14.84
140-10789-13	IA-168-A-24	367026	7.71	2186288	9.84	1732132	14.84
140-10789-14	IA-076-A-24	366986	7.71	2176450	9.84	1757659	14.84
140-10789-15	IA-075-A-24	364327	7.71	2170700	9.84	1711113	14.84
140-10789-16	IA-021-A-24	368057	7.71	2190928	9.84	1768652	14.84
140-10789-17	IA-015-A-24	361225	7.69	2147292	9.83	1758944	14.84

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Instrument ID: MR Start Date: 01/30/2018 11:12

Analysis Batch Number: 17762 End Date: 01/30/2018 23:36

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-17762/1		01/30/2018 11:12	1	RBFBA30.D	RTX-5 0.32(mm)
IC 140-17762/3		01/30/2018 12:29	1	RA30IC01.D	RTX-5 0.32(mm)
IC 140-17762/4		01/30/2018 13:16	1	RA30IC02.D	RTX-5 0.32(mm)
140-10625-A-5 MDLV		01/30/2018 13:16	1		RTX-5 0.32(mm)
ZZZZZ		01/30/2018 13:16	1		RTX-5 0.32(mm)
IC 140-17762/5		01/30/2018 14:04	1	RA30IC03.D	RTX-5 0.32(mm)
140-10625-A-6 MDLV		01/30/2018 14:04	1		RTX-5 0.32(mm)
ZZZZZ		01/30/2018 14:04	1		RTX-5 0.32(mm)
IC 140-17762/6		01/30/2018 14:50	1	RA30IC04.D	RTX-5 0.32(mm)
140-10625-A-7 MDLV		01/30/2018 14:50	1		RTX-5 0.32(mm)
ZZZZZ		01/30/2018 14:50	1		RTX-5 0.32(mm)
IC 140-17762/7		01/30/2018 15:39	1	RA30IC05.D	RTX-5 0.32(mm)
140-10625-A-8 MDLV		01/30/2018 15:39	1		RTX-5 0.32(mm)
ZZZZZ		01/30/2018 15:39	1		RTX-5 0.32(mm)
IC 140-17762/8		01/30/2018 16:27	1	RA30IC06.D	RTX-5 0.32(mm)
ICIS 140-17762/9		01/30/2018 17:15	1	RA30IC07.D	RTX-5 0.32(mm)
IC 140-17762/10		01/30/2018 18:03	1	RA30IC08.D	RTX-5 0.32(mm)
IC 140-17762/11		01/30/2018 18:50	1	RA30IC09.D	RTX-5 0.32(mm)
IC 140-17762/12		01/30/2018 19:38	1	RA30IC10.D	RTX-5 0.32(mm)
ICV 140-17762/14		01/30/2018 21:11	1	RA30ICV.D	RTX-5 0.32(mm)
ZZZZZ		01/30/2018 23:36	1		RTX-5 0.32(mm)

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Instrument ID: MR Start Date: 02/27/2018 10:29

Analysis Batch Number: 18442 End Date: 02/28/2018 06:42

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-18442/1		02/27/2018 10:29	1	RBFBB27x.D	RTX-5 0.32(mm)
CCVIS 140-18442/2		02/27/2018 11:01	1	RCCVB27.D	RTX-5 0.32(mm)
LCS 140-18442/1002		02/27/2018 11:01	1	RCCVB27-LCS.d	RTX-5 0.32(mm)
MB 140-18442/4		02/27/2018 12:54	1	R500BB27.D	RTX-5 0.32(mm)
140-10789-1		02/27/2018 14:45	1	RB27P101.D	RTX-5 0.32(mm)
140-10789-2		02/27/2018 15:33	1	RB27P102.D	RTX-5 0.32(mm)
140-10789-3		02/27/2018 16:20	1	RB27P103.D	RTX-5 0.32(mm)
140-10789-4		02/27/2018 17:08	1	RB27P104.D	RTX-5 0.32(mm)
140-10789-5		02/27/2018 17:56	1	RB27P105.D	RTX-5 0.32(mm)
140-10789-6		02/27/2018 18:43	1	RB27P106.D	RTX-5 0.32(mm)
140-10789-7		02/27/2018 19:30	1	RB27P107.D	RTX-5 0.32(mm)
140-10789-8		02/27/2018 20:17	1	RB27P108.D	RTX-5 0.32(mm)
140-10789-9		02/27/2018 21:04	1	RB27P109.D	RTX-5 0.32(mm)
140-10789-10		02/27/2018 21:52	1	RB27P110.D	RTX-5 0.32(mm)
140-10789-11		02/27/2018 22:39	1	RB27P111.D	RTX-5 0.32(mm)
140-10789-12		02/27/2018 23:26	1	RB27P112.D	RTX-5 0.32(mm)
140-10789-13		02/28/2018 00:13	1	RB27P113.D	RTX-5 0.32(mm)
140-10789-14		02/28/2018 01:00	1	RB27P114.D	RTX-5 0.32(mm)
140-10789-15		02/28/2018 01:47	1	RB27P115.D	RTX-5 0.32(mm)
140-10789-16		02/28/2018 02:34	1	RB27P116D.D	RTX-5 0.32(mm)
ZZZZZ		02/28/2018 03:21	1		RTX-5 0.32(mm)
140-10789-17		02/28/2018 04:08	1	RB27P201.D	RTX-5 0.32(mm)
ZZZZZ		02/28/2018 04:59	1		RTX-5 0.32(mm)
ZZZZZ		02/28/2018 05:50	1		RTX-5 0.32(mm)
ZZZZZ		02/28/2018 06:42	1		RTX-5 0.32(mm)

VOC

Initial Calibration 1/30/2018

Analyte: Trichloroethene

IS AREA	COMPOUND OF INTEREST AREA	IS AMOUNT PPB	COMPOUND AMOUNT PPB	RRF
2324388	4489	4	0.02	0.3863
2394140	8207	4	0.04	0.3428
2404366	16817	4	0.08	0.3497
2397193	32437	4	0.16	0.3383
2352829	80726	4	0.4	0.3431
242753	216055	4	10	0.3560
2418900	481860	4	2	0.3984
2445825	990611	4	4	0.4050
2463428	1689959	4	8	0.3430
2495007	3246702	4	16	0.3253

AVERAGE RRF 0.3592

%RSD 6.5635

Continuing Calibration 1/30/18 at 21:11

Analyte: Trichloroethene

PPB	Amount	% D
2.47	2.52	1.98

Sample Calc

SAMPLE IDENTIFICATION	IA-138-A-24
COMPOUND	Trichloroethene
COMPOUND AREA	14970
INTERNAL STANDARD AMOUNT (ppbv)	4
DILUTION FACTOR	1
INTERNAL STANDARD AREA	2023176
AVERAGE RRF	0.3611
SAMPLE VOLUME (mL)	100
FINAL VOLUME (mL)	500

MW= 131.4

GAS CONSTANT = 24.45

on column

0.0820 ppbv

0.44 µg/m³

final result

0.41 ppbv

2.2 µg/m³

LCS %R		SPIKE AMOUNT	LCS CONCENTRATION
103.50	Trichloroethene	2	2.07

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-138-A-24 | Lab Sample ID: 140-10789-1

Matrix: Air | Lab File ID: RB27P101.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:30

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 14:45

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.23	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.15	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.37	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.11	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.97	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.075	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.41		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10789-1

SDG No.:

Client Sample ID: IA-138-A-24 | Lab Sample ID: 140-10789-1

Matrix: Air | Lab File ID: RB27P101.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:30

Sample wt/vol: 100(mL) | Date Analyzed: 02/27/2018 14:45

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18442 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.74	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.96	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.45	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.41	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.2		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180226-7503.b\RB27P101.D
Lims ID: 140-10789-A-1
Client ID: IA-138-A-24
Sample Type: Client
Inject. Date: 27-Feb-2018 14:45:30 ALS Bottle#: 1 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007503-006
Misc. Info.: 140-10789-a-1
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20180226-7503.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Feb-2018 15:35:26 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: tajh Date: 27-Feb-2018 15:26:34

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.676	7.687	-0.011	76	344024	4.00	
* 2 1,4-Difluorobenzene	114	9.816	9.827	-0.011	94	2023176	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.842	14.842	0.000	87	1649798	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.551	16.552	-0.001	89	1305490	4.17	
6 Chlorodifluoromethane	67	3.453	3.464	-0.011	95	3094	0.0737	
8 Dichlorodifluoromethane	85	3.497	3.513	-0.016	99	18078	0.0560	
27 1,1-Dichloroethene	96	5.190	5.206	-0.016	83	2944	0.0226	
31 Methylene Chloride	84	5.465	5.476	-0.011	86	26129	0.1942	
45 1,1,1-Trichloroethane	97	8.668	8.679	-0.011	96	5021	0.0150	
47 Benzene	78	9.245	9.250	-0.005	96	18002	0.0466	
50 Carbon tetrachloride	117	9.272	9.288	-0.016	96	9517	0.0305	
56 Trichloroethene	130	10.577	10.582	-0.005	97	14970	0.0820	
65 Toluene	91	12.771	12.772	-0.001	93	41339	0.0910	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
cis-1,2-Dichloroethene	1.9071 1.6125	1.8156 1.6678	1.6641 1.5780	1.6147 1.5302	1.6025 1.4817	Ave		1.6474				7.8		30.0			
Ethyl acetate	+++++ 2.7290	+++++ 2.8405	2.1840 2.6632	2.2813 2.5958	2.5408 2.4854	Ave		2.5400				8.7		30.0			
Chloroform	4.2863 3.7052	3.8694 3.7903	3.7705 3.5491	3.6794 3.4047	3.6984 3.2578	Ave		3.7011				7.5		30.0			
Tetrahydrofuran	+++++ 1.3407	+++++ 1.3730	1.3680 1.2688	1.3174 1.2195	1.3030 1.1665	Ave		1.2946				5.6		30.0			
1,1,1-Trichloroethane	4.1703 3.9689	4.0153 4.0994	3.8140 3.8790	3.6871 3.7835	3.8389 3.6271	Ave		3.8883				4.5		30.0			
1,2-Dichloroethane	0.4598 0.4390	0.4262 0.4435	0.4288 0.4170	0.3913 0.4087	0.4251 0.3915	Ave		0.4231				5.2		30.0			
Benzene	0.8742 0.7844	0.8183 0.7925	0.7957 0.7383	0.7735 0.6873	0.7655 0.6121	Ave		0.7642				9.5		30.0			
1-Butanol	+++++ 0.0491	+++++ 0.0535	+++++ 0.0554	+++++ 0.0549	0.0399 0.0507	Ave		0.0506				11.4		30.0			
Cyclohexane	+++++ 0.1282	0.1302 0.1319	0.1361 0.1198	0.1248 0.1109	0.1254 0.0971	Ave		0.1227				9.8		30.0			
Carbon tetrachloride	0.6377 0.6481	0.5867 0.6494	0.5971 0.6370	0.5827 0.6239	0.6061 0.5914	Ave		0.6160				4.2		30.0			
2,2,4-Trimethylpentane	+++++ 1.1700	+++++ 1.1823	1.1763 1.1037	1.1213 1.0350	1.1405 0.9359	Ave		1.1081				7.6		30.0			
1,2-Dichloropropane	0.2892 0.2749	0.2827 0.2781	0.2783 0.2608	0.2653 0.2439	0.2652 0.2201	Ave		0.2659				7.7		30.0			
Heptane	+++++ 0.2794	0.2806 0.2826	0.2727 0.2668	0.2557 0.2502	0.2719 0.2244	Ave		0.2649				7.1		30.0			
Trichloroethene	0.3941 0.3561	0.3498 0.3989	0.3569 0.4050	0.3383 0.3430	0.3431 0.3253	Ave		0.3611				7.8		30.0			
Dibromomethane	+++++ 0.3180	+++++ 0.3337	0.3335 0.3154	0.3130 0.3075	0.3081 0.2866	Ave		0.3145				4.8		30.0			
Bromodichloromethane	0.5552 0.5927	0.5165 0.6275	0.5155 0.6065	0.5215 0.5926	0.5443 0.5621	Ave		0.5634				7.1		30.0			
1,4-Dioxane	+++++ 0.1244	0.1026 0.1255	0.1107 0.1188	0.1100 0.1111	0.1114 0.0998	Ave		0.1127				7.8		30.0			
Methyl methacrylate	+++++ 0.2534	+++++ 0.2814	+++++ 0.2766	0.1921 0.2732	0.2185 0.2613	Ave		0.2509				13.3		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.4476	+++++ 0.4761	0.4073 0.4607	0.3703 0.4462	0.4067 0.4120	Ave		0.4284				8.2		30.0			
cis-1,3-Dichloropropene	0.4432 0.4616	0.4182 0.4890	0.4016 0.4666	0.4077 0.4542	0.4258 0.4244	Ave		0.4392				6.4		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Hexachlorobutadiene	0.7046 0.7752	0.6195 0.8332	0.6587 0.8074	0.6012 0.7762	0.6084 0.6733	Ave		0.7058				12.3		30.0			
1,2,3-Trichlorobenzene	+++++ 0.6757	+++++ 0.7953	0.4965 0.7779	0.4801 0.7989	0.4939 0.7046	Ave		0.6529				21.7		30.0			
2-Methylnaphthalene	+++++ 0.2487	+++++ 0.4641	+++++ 0.4569	+++++ 0.4755	0.1340 0.3372	Ave		0.3527				39.5		50.0			
1-Methylnaphthalene	+++++ 0.2715	+++++ 0.5022	+++++ 0.4656	0.2315 0.4794	0.1676 0.3359	Ave		0.3505				38.1		50.0			
4-Bromofluorobenzene (Surr)	0.7650 0.7800	0.7779 0.7658	0.7890 0.7351	0.7826 0.7176	0.7941 0.6764	Ave		0.7584				5.0		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chloroform	CBM	Ave	7907 370515	14558 752364	28954 1431329	57203 2787766	141724 5369459	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	+++++ 134069	+++++ 272546	10505 511682	20481 998545	49933 1922640	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	7693 396883	15107 813727	29288 1564396	57324 3097922	147109 5978105	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	5237 266293	9999 535650	20209 1019982	37522 2013816	100014 3907140	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	9957 475845	19199 957247	37499 1805776	74171 3386082	180099 6108554	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	+++++ 29797	+++++ 64569	+++++ 135506	+++++ 270253	9384 506348	+++++ 1.00	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	+++++ 77754	3056 159306	6414 293021	11967 546616	29509 968821	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	7263 393178	13765 784365	28139 1557932	55870 3073958	142596 5902097	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	+++++ 709763	+++++ 1428084	55433 2699507	107521 5099511	268337 9340512	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	3294 166795	6633 335945	13116 637774	25436 1201630	62400 2196910	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	+++++ 169496	6584 341354	12852 652666	24522 1232469	63962 2239236	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	4489 216055	8207 481860	16817 990611	32437 1689959	80726 3246702	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	+++++ 192925	+++++ 403081	15715 771427	30017 1514919	72482 2859943	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	6323 359583	12118 757973	24293 1483398	50003 2919706	128060 5610234	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	+++++ 75444	2408 151582	5216 290497	10547 547334	26213 995848	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	+++++ 153737	+++++ 339847	+++++ 676432	18423 1346179	51419 2607373	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	+++++ 271515	+++++ 575108	19192 1126777	35511 2198186	95687 4112261	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
cis-1,3-Dichloropropene	DFBZ	Ave	5048 280020	9812 590578	18927 1141143	39090 2237825	100184 4235998	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	5113 264281	9248 552390	18004 1089547	37170 2203158	93053 4251750	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Toluene	CBZd 5	Ave	12831 594266	23313 1214847	44415 2321715	88464 4431626	222095 8226314	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	3291 165862	6507 338126	12134 646119	24240 1239731	62032 2316335	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC01.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 30-Jan-2018 12:29:30 ALS Bottle#: 9 Worklist Smp#: 3
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-003
Misc. Info.: 134528
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:02:45 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 30-Jan-2018 13:35:00

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.692	7.710	-0.018	86	376476	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.844	9.852	-0.008	95	2324388	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.858	14.859	-0.001	89	2041864	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.568	16.570	-0.002	86	1562115	4.00	4.04	
6 Chlorodifluoromethane	67	3.475	3.471	0.004	97	1114	0.0196	0.0243	
7 Propene	41	3.481	3.477	0.004	85	2863	0.0196	0.0318	
8 Dichlorodifluoromethane	85	3.518	3.519	-0.001	100	9712	0.0196	0.0275	
9 Chloromethane	52	3.648	3.653	-0.005	98	1546	0.0196	0.0480	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.669	3.675	-0.006	90	5510	0.0196	0.0230	
12 Vinyl chloride	62	3.793	3.789	0.004	41	2301	0.0196	0.0233	
14 Butadiene	54	3.863	3.863	0.000	68	1660	0.0196	0.0261	
15 Bromomethane	94	4.095	4.098	-0.003	95	2402	0.0196	0.0263	
16 Chloroethane	64	4.203	4.208	-0.005	76	1269	0.0196	0.0284	
17 Ethanol	31	4.306	4.313	-0.007	90	4299	0.0980	0.1523	
18 Vinyl bromide	106	4.440	4.441	-0.001	97	2560	0.0196	0.0286	
19 2-Methylbutane	43	4.494	4.498	-0.004	85	1726	0.0196	0.0232	
20 Acrolein	56	4.651	4.656	-0.005	32	2244	0.0196	0.1079	
21 Trichlorofluoromethane	101	4.651	4.659	-0.008	98	7040	0.0196	0.0210	
22 Acetonitrile	40	4.829	4.719	0.110	49	52	0.0196	0.002032	
23 Acetone	58	4.748	4.748	0.000	99	8407	0.0588	0.2136	
24 Isopropyl alcohol	45	4.839	4.843	-0.004	84	11498	0.0588	0.0760	
25 Pentane	72	4.845	4.847	-0.002	79	779	0.0196	0.0297	
26 Ethyl ether	31	4.985	4.975	0.010	84	2420	0.0196	0.0255	
27 1,1-Dichloroethene	96	5.211	5.218	-0.007	95	3363	0.0196	0.0236	
28 Acrylonitrile	53	5.282	5.288	-0.006	88	3069	0.0196	0.0341	
29 2-Methyl-2-propanol	59	5.330	5.325	0.005	94	6634	0.0196	0.0234	
30 1,1,2-Trichloro-1,2,2-trif	101	5.379	5.390	-0.011	94	6795	0.0196	0.0223	
31 Methylene Chloride	84	5.481	5.492	-0.011	90	18478	0.0196	0.1255	
32 3-Chloro-1-propene	39	5.503	5.514	-0.011	93	3037	0.0196	0.0257	
33 Carbon disulfide	76	5.616	5.625	-0.009	99	9012	0.0196	0.0229	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC02.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 30-Jan-2018 13:16:30 ALS Bottle#: 9 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-004
Misc. Info.: 134528
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:02:50 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 30-Jan-2018 13:52:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.703	7.710	-0.007	86	383916	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.849	9.852	-0.003	95	2394140	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.858	14.859	-0.001	89	2080924	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.568	16.570	-0.002	86	1618846	4.00	4.10	
6 Chlorodifluoromethane	67	3.486	3.471	0.015	96	2123	0.0392	0.0453	
7 Propene	41	3.486	3.477	0.009	90	5102	0.0392	0.0556	
8 Dichlorodifluoromethane	85	3.529	3.519	0.010	100	17336	0.0392	0.0481	
9 Chloromethane	52	3.664	3.653	0.011	99	2252	0.0392	0.0686	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.685	3.675	0.010	93	10542	0.0392	0.0432	
12 Vinyl chloride	62	3.799	3.789	0.010	96	4884	0.0392	0.0485	
13 Butane	43	3.869	3.863	0.006	81	5263	0.0392	0.0488	
14 Butadiene	54	3.874	3.863	0.011	68	2949	0.0392	0.0454	
15 Bromomethane	94	4.106	4.098	0.008	95	4220	0.0392	0.0453	
16 Chloroethane	64	4.208	4.208	0.000	96	2193	0.0392	0.0481	
17 Ethanol	31	4.305	4.313	-0.008	90	7445	0.1960	0.2587	
18 Vinyl bromide	106	4.440	4.441	-0.001	97	4302	0.0392	0.0471	
19 2-Methylbutane	43	4.505	4.498	0.007	78	3188	0.0392	0.0419	
20 Acrolein	56	4.667	4.656	0.011	30	3603	0.0392	0.1700	
21 Trichlorofluoromethane	101	4.667	4.659	0.008	99	14659	0.0392	0.0428	
22 Acetonitrile	40	4.694	4.716	-0.022	84	1047	0.0392	0.0401	
23 Acetone	58	4.753	4.748	0.005	99	16017	0.1176	0.3990	
24 Isopropyl alcohol	45	4.845	4.843	0.002	80	23064	0.1176	0.1495	
25 Pentane	72	4.850	4.847	0.003	75	1224	0.0392	0.0457	
26 Ethyl ether	31	4.985	4.975	0.010	81	4487	0.0392	0.0463	
27 1,1-Dichloroethene	96	5.217	5.218	-0.001	94	6378	0.0392	0.0439	
28 Acrylonitrile	53	5.287	5.288	-0.001	91	3947	0.0392	0.0430	
29 2-Methyl-2-propanol	59	5.330	5.325	0.005	93	13003	0.0392	0.0449	
30 1,1,2-Trichloro-1,2,2-trif	101	5.389	5.390	-0.001	95	12506	0.0392	0.0402	
31 Methylene Chloride	84	5.492	5.492	0.000	92	21070	0.0392	0.1403	
32 3-Chloro-1-propene	39	5.513	5.514	-0.001	97	5502	0.0392	0.0456	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC03.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 30-Jan-2018 14:04:30 ALS Bottle#: 9 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-005
Misc. Info.: 134528
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:02:54 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 30-Jan-2018 15:38:38

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.697	7.710	-0.013	85	391790	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.844	9.852	-0.008	95	2404366	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.858	14.859	-0.001	89	2084615	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.568	16.570	-0.002	86	1644837	4.00	4.16	
6 Chlorodifluoromethane	67	3.470	3.471	-0.001	95	4119	0.0784	0.0862	
7 Propene	41	3.470	3.477	-0.007	62	9912	0.0784	0.1059	
8 Dichlorodifluoromethane	85	3.513	3.519	-0.006	100	30290	0.0784	0.0823	
9 Chloromethane	52	3.642	3.653	-0.011	99	3537	0.0784	0.1056	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.669	3.675	-0.006	93	20579	0.0784	0.0826	
12 Vinyl chloride	62	3.783	3.789	-0.006	99	7942	0.0784	0.0773	
13 Butane	43	3.858	3.863	-0.005	78	9031	0.0784	0.0820	
14 Butadiene	54	3.853	3.863	-0.010	79	5828	0.0784	0.0880	
15 Bromomethane	94	4.090	4.098	-0.008	97	8417	0.0784	0.0885	
16 Chloroethane	64	4.198	4.208	-0.010	96	4147	0.0784	0.0891	
17 Ethanol	31	4.300	4.313	-0.013	90	14354	0.3920	0.4887	
18 Vinyl bromide	106	4.430	4.441	-0.011	98	7850	0.0784	0.0842	
19 2-Methylbutane	43	4.489	4.498	-0.009	81	6778	0.0784	0.0874	
20 Acrolein	56	4.645	4.656	-0.011	31	5394	0.0784	0.2493	
21 Trichlorofluoromethane	101	4.651	4.659	-0.008	98	28702	0.0784	0.0821	
22 Acetonitrile	40	4.688	4.713	-0.025	97	1986	0.0784	0.0746	
23 Acetone	58	4.742	4.748	-0.006	99	28281	0.2352	0.6904	
24 Isopropyl alcohol	45	4.834	4.843	-0.009	92	44345	0.2352	0.2816	
25 Pentane	72	4.834	4.847	-0.013	82	2351	0.0784	0.0861	
26 Ethyl ether	31	4.974	4.975	-0.001	84	8803	0.0784	0.0890	
27 1,1-Dichloroethene	96	5.206	5.218	-0.012	96	11837	0.0784	0.0798	
28 Acrylonitrile	53	5.276	5.288	-0.012	94	7448	0.0784	0.0795	
29 2-Methyl-2-propanol	59	5.325	5.325	0.000	93	25307	0.0784	0.0857	
30 1,1,2-Trichloro-1,2,2-trif	101	5.384	5.390	-0.006	95	25548	0.0784	0.0805	
31 Methylene Chloride	84	5.476	5.492	-0.016	93	26512	0.0784	0.1730	
32 3-Chloro-1-propene	39	5.503	5.514	-0.011	96	10380	0.0784	0.0843	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC04.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 30-Jan-2018 14:50:30 ALS Bottle#: 10 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-006
Misc. Info.: 134526
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:03:00 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 30-Jan-2018 15:38:15

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.708	7.710	-0.002	85	388675	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.854	9.852	0.002	95	2397193	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.858	14.859	-0.001	89	2097206	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.568	16.570	-0.002	89	1641285	4.00	4.13	
6 Chlorodifluoromethane	67	3.481	3.471	0.010	96	7784	0.1600	0.1642	
7 Propene	41	3.486	3.477	0.009	97	16712	0.1600	0.1800	
8 Dichlorodifluoromethane	85	3.529	3.519	0.010	100	68839	0.1600	0.1886	
9 Chloromethane	52	3.659	3.653	0.006	99	6766	0.1600	0.2036	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.680	3.675	0.005	93	38610	0.1600	0.1562	
12 Vinyl chloride	62	3.799	3.789	0.010	99	16500	0.1600	0.1619	
13 Butane	43	3.869	3.863	0.006	79	18455	0.1600	0.1690	
14 Butadiene	54	3.869	3.863	0.006	71	11132	0.1600	0.1693	
15 Bromomethane	94	4.101	4.098	0.003	98	15024	0.1600	0.1593	
16 Chloroethane	64	4.214	4.208	0.006	98	7784	0.1600	0.1685	
17 Ethanol	31	4.306	4.313	-0.007	91	24919	0.8000	0.8552	
18 Vinyl bromide	106	4.440	4.441	-0.001	97	15440	0.1600	0.1670	
19 2-Methylbutane	43	4.500	4.498	0.002	81	12656	0.1600	0.1644	
20 Acrolein	56	4.661	4.656	0.005	29	3830	0.1600	0.1784	
21 Trichlorofluoromethane	101	4.661	4.659	0.002	100	57868	0.1600	0.1669	
22 Acetonitrile	40	4.699	4.713	-0.014	98	3781	0.1600	0.1431	
23 Acetone	58	4.753	4.748	0.005	99	28378	0.4800	0.6983	
24 Isopropyl alcohol	45	4.834	4.843	-0.009	96	82100	0.4800	0.5256	
25 Pentane	72	4.850	4.847	0.003	98	4428	0.1600	0.1634	
26 Ethyl ether	31	4.985	4.975	0.010	81	16886	0.1600	0.1721	
27 1,1-Dichloroethene	96	5.217	5.218	-0.001	95	22742	0.1600	0.1545	
28 Acrylonitrile	53	5.287	5.288	-0.001	91	15000	0.1600	0.1614	
29 2-Methyl-2-propanol	59	5.325	5.325	0.000	93	47907	0.1600	0.1636	
30 1,1,2-Trichloro-1,2,2-trif	101	5.395	5.390	0.005	95	49793	0.1600	0.1582	
31 Methylene Chloride	84	5.492	5.492	0.000	92	37255	0.1600	0.2451	
32 3-Chloro-1-propene	39	5.513	5.514	-0.001	95	20149	0.1600	0.1650	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC05.D
Lims ID: IC L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 30-Jan-2018 15:39:30 ALS Bottle#: 10 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-007
Misc. Info.: 134526
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:03:09 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 30-Jan-2018 17:18:19

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.708	7.710	-0.002	85	383206	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.849	9.852	-0.003	95	2352829	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.858	14.859	-0.001	89	2056588	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.573	16.570	0.003	88	1633174	4.00	4.19	
6 Chlorodifluoromethane	67	3.475	3.471	0.004	96	19042	0.4000	0.4073	
7 Propene	41	3.481	3.477	0.004	98	39604	0.4000	0.4326	
8 Dichlorodifluoromethane	85	3.524	3.519	0.005	100	147314	0.4000	0.4094	
9 Chloromethane	52	3.653	3.653	0.000	99	14731	0.4000	0.4495	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.675	3.675	0.000	97	96019	0.4000	0.3939	
12 Vinyl chloride	62	3.788	3.789	-0.001	99	38877	0.4000	0.3869	
13 Butane	43	3.863	3.863	0.000	90	43962	0.4000	0.4083	
14 Butadiene	54	3.863	3.863	0.000	95	25683	0.4000	0.3963	
15 Bromomethane	94	4.095	4.098	-0.003	98	37574	0.4000	0.4041	
16 Chloroethane	64	4.209	4.208	0.000	97	18456	0.4000	0.4053	
17 Ethanol	31	4.306	4.313	-0.007	91	59239	2.00	2.06	
18 Vinyl bromide	106	4.440	4.441	-0.001	97	36894	0.4000	0.4048	
19 2-Methylbutane	43	4.494	4.498	-0.004	83	30876	0.4000	0.4069	
20 Acrolein	56	4.651	4.656	-0.005	29	10635	0.4000	0.5026	
21 Trichlorofluoromethane	101	4.656	4.659	-0.003	99	138405	0.4000	0.4050	
22 Acetonitrile	40	4.694	4.713	-0.019	98	11541	0.4000	0.4432	
23 Acetone	58	4.748	4.748	0.000	100	66025	1.20	1.65	
24 Isopropyl alcohol	45	4.834	4.843	-0.009	97	196181	1.20	1.27	
25 Pentane	72	4.845	4.847	-0.002	98	10720	0.4000	0.4012	
26 Ethyl ether	31	4.974	4.975	-0.001	81	40771	0.4000	0.4215	
27 1,1-Dichloroethene	96	5.217	5.218	-0.001	95	56370	0.4000	0.3885	
28 Acrylonitrile	53	5.287	5.288	-0.001	93	35688	0.4000	0.3895	
29 2-Methyl-2-propanol	59	5.319	5.325	-0.006	93	117307	0.4000	0.4062	
30 1,1,2-Trichloro-1,2,2-trif	101	5.389	5.390	-0.001	95	126008	0.4000	0.4061	
31 Methylene Chloride	84	5.486	5.492	-0.006	92	67350	0.4000	0.4494	
32 3-Chloro-1-propene	39	5.513	5.514	-0.001	98	47897	0.4000	0.3977	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC06.D
Lims ID: IC L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 30-Jan-2018 16:27:30 ALS Bottle#: 11 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-008
Misc. Info.: 134525
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:03:16 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 30-Jan-2018 17:22:47

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.714	7.710	0.004	84	399358	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.854	9.852	0.002	95	2422753	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.858	14.859	-0.001	89	2095606	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.573	16.570	0.003	89	1634670	4.00	4.11	
6 Chlorodifluoromethane	67	3.470	3.471	-0.001	96	49960	1.00	1.03	
7 Propene	41	3.475	3.477	-0.002	97	101480	1.00	1.06	
8 Dichlorodifluoromethane	85	3.518	3.519	-0.001	100	385761	1.00	1.03	
9 Chloromethane	52	3.653	3.653	0.000	100	33564	1.00	0.9828	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.675	3.675	0.000	93	252275	1.00	0.99	
12 Vinyl chloride	62	3.788	3.789	-0.001	99	100495	1.00	0.9596	
13 Butane	43	3.863	3.863	0.000	89	117697	1.00	1.05	
14 Butadiene	54	3.863	3.863	0.000	93	67588	1.00	1.00	
15 Bromomethane	94	4.095	4.098	-0.003	98	97562	1.00	1.01	
16 Chloroethane	64	4.208	4.208	0.000	98	47978	1.00	1.01	
17 Ethanol	31	4.311	4.313	-0.002	91	156896	5.01	5.24	
18 Vinyl bromide	106	4.440	4.441	-0.001	97	97338	1.00	1.02	
19 2-Methylbutane	43	4.500	4.498	0.002	81	79273	1.00	1.00	
20 Acrolein	56	4.651	4.656	-0.005	95	21312	1.00	0.9664	
21 Trichlorofluoromethane	101	4.661	4.659	0.002	99	362096	1.00	1.02	
22 Acetonitrile	40	4.699	4.713	-0.014	97	27104	1.00	1.00	
23 Acetone	58	4.742	4.748	-0.006	99	133362	3.01	3.19	
24 Isopropyl alcohol	45	4.839	4.843	-0.004	97	528496	3.01	3.29	
25 Pentane	72	4.845	4.847	-0.002	97	28211	1.00	1.01	
26 Ethyl ether	31	4.969	4.975	-0.006	79	105952	1.00	1.05	
27 1,1-Dichloroethene	96	5.217	5.218	-0.001	95	147316	1.00	0.9743	
28 Acrylonitrile	53	5.287	5.288	-0.001	94	97550	1.00	1.02	
29 2-Methyl-2-propanol	59	5.319	5.325	-0.006	93	309191	1.00	1.03	
30 1,1,2-Trichloro-1,2,2-trif	101	5.389	5.390	-0.001	95	330843	1.00	1.02	
31 Methylene Chloride	84	5.492	5.492	0.000	92	152260	1.00	0.9750	
32 3-Chloro-1-propene	39	5.513	5.514	-0.001	97	129123	1.00	1.03	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC07.D
Lims ID: ICIS L7
Client ID:
Sample Type: ICIS Calib Level: 7
Inject. Date: 30-Jan-2018 17:15:30 ALS Bottle#: 12 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-009
Misc. Info.: 134523
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:03:23 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 30-Jan-2018 18:02:14

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.714	7.710	0.004	85	397524	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.849	9.852	-0.003	95	2418900	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.859	14.859	-0.001	88	2104378	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.568	16.570	-0.002	90	1611533	4.00	4.04	
6 Chlorodifluoromethane	67	3.464	3.471	-0.007	96	99602	2.00	2.05	
7 Propene	41	3.475	3.477	-0.002	97	201013	2.00	2.12	
8 Dichlorodifluoromethane	85	3.513	3.519	-0.006	100	768499	2.00	2.06	
9 Chloromethane	52	3.648	3.653	-0.005	99	69549	2.00	2.05	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.669	3.675	-0.006	93	513872	2.00	2.03	
12 Vinyl chloride	62	3.783	3.789	-0.006	99	201144	2.00	1.93	
13 Butane	43	3.858	3.863	-0.005	89	229678	2.00	2.06	
14 Butadiene	54	3.858	3.863	-0.005	94	136978	2.00	2.04	
15 Bromomethane	94	4.095	4.098	-0.003	97	194501	2.00	2.02	
16 Chloroethane	64	4.203	4.208	-0.005	99	92980	2.00	1.97	
17 Ethanol	31	4.311	4.313	-0.002	91	309152	9.99	10.4	
18 Vinyl bromide	106	4.435	4.441	-0.006	97	190610	2.00	2.02	
19 2-Methylbutane	43	4.494	4.498	-0.004	82	156213	2.00	1.98	
20 Acrolein	56	4.651	4.656	-0.005	93	40157	2.00	1.83	
21 Trichlorofluoromethane	101	4.656	4.659	-0.003	99	708040	2.00	2.00	
22 Acetonitrile	40	4.699	4.713	-0.014	98	55420	2.00	2.05	
23 Acetone	58	4.742	4.748	-0.006	99	255969	5.99	6.16	
24 Isopropyl alcohol	45	4.839	4.843	-0.004	94	1027986	5.99	6.43	
25 Pentane	72	4.845	4.847	-0.002	96	56821	2.00	2.05	
26 Ethyl ether	31	4.964	4.975	-0.011	78	210233	2.00	2.10	
27 1,1-Dichloroethene	96	5.217	5.218	-0.001	96	302733	2.00	2.01	
28 Acrylonitrile	53	5.287	5.288	-0.001	93	201452	2.00	2.12	
29 2-Methyl-2-propanol	59	5.319	5.325	-0.006	93	628551	2.00	2.10	
30 1,1,2-Trichloro-1,2,2-trif	101	5.390	5.390	0.000	96	667885	2.00	2.08	
31 Methylene Chloride	84	5.492	5.492	0.000	90	294696	2.00	1.90	
32 3-Chloro-1-propene	39	5.514	5.514	0.000	97	251667	2.00	2.01	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC08.D
Lims ID: IC L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 30-Jan-2018 18:03:30 ALS Bottle#: 13 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-010
Misc. Info.: 134524
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:03:29 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 30-Jan-2018 18:45:29

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.713	7.710	0.003	83	403296	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.854	9.852	0.002	95	2445825	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.858	14.859	-0.001	88	2122398	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.573	16.570	0.003	90	1560168	4.00	3.88	
6 Chlorodifluoromethane	67	3.470	3.471	-0.001	95	192008	4.00	3.90	
7 Propene	41	3.475	3.477	-0.002	97	373101	4.00	3.87	
8 Dichlorodifluoromethane	85	3.518	3.519	-0.001	100	1380786	4.00	3.65	
9 Chloromethane	52	3.653	3.653	0.000	99	127494	4.00	3.70	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.675	3.675	0.000	92	975595	4.00	3.80	
12 Vinyl chloride	62	3.788	3.789	-0.001	99	392525	4.00	3.71	
13 Butane	43	3.863	3.863	0.000	90	443357	4.00	3.91	
14 Butadiene	54	3.863	3.863	0.000	95	265156	4.00	3.89	
15 Bromomethane	94	4.101	4.098	0.003	98	381835	4.00	3.90	
16 Chloroethane	64	4.208	4.208	0.000	99	183236	4.00	3.82	
17 Ethanol	31	4.322	4.313	0.009	90	599728	20.0	19.8	
18 Vinyl bromide	106	4.446	4.441	0.005	97	373599	4.00	3.89	
19 2-Methylbutane	43	4.500	4.498	0.002	82	305420	4.00	3.82	
20 Acrolein	56	4.656	4.656	0.000	95	69130	4.00	3.10	
21 Trichlorofluoromethane	101	4.661	4.659	0.002	100	1366159	4.00	3.80	
22 Acetonitrile	40	4.705	4.713	-0.008	97	108488	4.00	3.96	
23 Acetone	58	4.748	4.748	0.000	99	451316	12.0	10.7	
24 Isopropyl alcohol	45	4.845	4.843	0.002	94	1940134	12.0	12.0	
25 Pentane	72	4.850	4.847	0.003	97	109148	4.00	3.88	
26 Ethyl ether	31	4.969	4.975	-0.006	76	385484	4.00	3.79	
27 1,1-Dichloroethene	96	5.222	5.218	0.004	96	580273	4.00	3.80	
28 Acrylonitrile	53	5.292	5.288	0.004	93	380336	4.00	3.94	
29 2-Methyl-2-propanol	59	5.319	5.325	-0.006	93	1185900	4.00	3.90	
30 1,1,2-Trichloro-1,2,2-trif	101	5.395	5.390	0.005	97	1265800	4.00	3.88	
31 Methylene Chloride	84	5.497	5.492	0.005	90	539025	4.00	3.42	
32 3-Chloro-1-propene	39	5.519	5.514	0.005	96	453252	4.00	3.58	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC09.D
Lims ID: IC L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 30-Jan-2018 18:50:30 ALS Bottle#: 14 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-011
Misc. Info.: 134508
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:03:33 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 30-Jan-2018 19:34:59

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.724	7.710	0.014	81	409398	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.860	9.852	0.008	95	2463428	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.864	14.859	0.005	88	2133724	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.573	16.570	0.003	88	1531137	4.00	3.78	
6 Chlorodifluoromethane	67	3.470	3.471	-0.001	95	373011	8.00	7.47	
7 Propene	41	3.475	3.477	-0.002	97	698857	8.00	7.14	
8 Dichlorodifluoromethane	85	3.518	3.519	-0.001	100	2777340	8.00	7.23	
9 Chloromethane	52	3.658	3.653	0.005	99	239224	8.00	6.83	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.680	3.675	0.005	92	1877362	8.00	7.21	
12 Vinyl chloride	62	3.793	3.789	0.004	99	789520	8.00	7.35	
13 Butane	43	3.869	3.863	0.006	90	873129	8.00	7.59	
14 Butadiene	54	3.869	3.863	0.006	93	526420	8.00	7.60	
15 Bromomethane	94	4.106	4.098	0.008	98	764670	8.00	7.70	
16 Chloroethane	64	4.219	4.208	0.011	98	369095	8.00	7.59	
17 Ethanol	31	4.327	4.313	0.014	91	1162228	40.0	37.9	
18 Vinyl bromide	106	4.451	4.441	0.010	97	739337	8.00	7.59	
19 2-Methylbutane	43	4.505	4.498	0.007	82	602150	8.00	7.43	
20 Acrolein	56	4.661	4.656	0.005	96	193944	8.00	8.58	
21 Trichlorofluoromethane	101	4.667	4.659	0.008	99	2671794	8.00	7.32	
22 Acetonitrile	40	4.710	4.713	-0.003	97	212047	8.00	7.62	
23 Acetone	58	4.753	4.748	0.005	99	874182	24.0	20.4	
24 Isopropyl alcohol	45	4.856	4.843	0.013	81	3554966	24.0	21.6	
25 Pentane	72	4.856	4.847	0.009	75	205846	8.00	7.21	
26 Ethyl ether	31	4.974	4.975	-0.001	76	726094	8.00	7.03	
27 1,1-Dichloroethene	96	5.233	5.218	0.015	97	1133673	8.00	7.31	
28 Acrylonitrile	53	5.298	5.288	0.010	94	735807	8.00	7.52	
29 2-Methyl-2-propanol	59	5.330	5.325	0.005	93	2316983	8.00	7.51	
30 1,1,2-Trichloro-1,2,2-trif	101	5.400	5.390	0.010	97	2438487	8.00	7.36	
31 Methylene Chloride	84	5.508	5.492	0.016	89	1033868	8.00	6.46	
32 3-Chloro-1-propene	39	5.524	5.514	0.010	95	964101	8.00	7.49	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
Lims ID: IC L10
Client ID:
Sample Type: IC Calib Level: 10
Inject. Date: 30-Jan-2018 19:38:30 ALS Bottle#: 15 Worklist Smp#: 12
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-012
Misc. Info.: 134507
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:03:37 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 31-Jan-2018 16:10:49

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.724	7.710	0.014	91	412046	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.860	9.852	0.008	94	2495007	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.864	14.859	0.005	87	2168094	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.573	16.570	0.003	93	1466410	4.00	3.57	
6 Chlorodifluoromethane	67	3.453	3.471	-0.018	97	719553	16.0	14.3	
7 Propene	41	3.464	3.477	-0.013	96	1277376	16.0	13.0	
8 Dichlorodifluoromethane	85	3.507	3.519	-0.012	100	5412793	16.0	14.0	
9 Chloromethane	52	3.648	3.653	-0.005	99	462204	16.0	13.1	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.669	3.675	-0.006	91	3561275	16.0	13.6	
12 Vinyl chloride	62	3.782	3.789	-0.007	99	1447608	16.0	13.4	
13 Butane	43	3.858	3.863	-0.005	78	1618667	16.0	14.0	
14 Butadiene	54	3.858	3.863	-0.005	79	990068	16.0	14.2	
15 Bromomethane	94	4.095	4.098	-0.003	98	1458793	16.0	14.6	
16 Chloroethane	64	4.214	4.208	0.006	99	704038	16.0	14.4	
17 Ethanol	31	4.332	4.313	0.019	91	2165410	80.0	70.1	
18 Vinyl bromide	106	4.446	4.441	0.005	97	1433559	16.0	14.6	
19 2-Methylbutane	43	4.500	4.498	0.002	81	1164068	16.0	14.3	
20 Acrolein	56	4.661	4.656	0.005	96	327310	16.0	14.4	
21 Trichlorofluoromethane	101	4.661	4.659	0.002	99	5028632	16.0	13.7	
22 Acetonitrile	40	4.710	4.713	-0.003	96	414724	16.0	14.8	
23 Acetone	58	4.753	4.748	0.005	99	1641135	48.0	38.1	
24 Isopropyl alcohol	45	4.861	4.843	0.018	93	6176210	48.0	37.3	
25 Pentane	72	4.850	4.847	0.003	96	368799	16.0	12.8	
26 Ethyl ether	31	4.974	4.975	-0.001	75	1351034	16.0	13.0	
27 1,1-Dichloroethene	96	5.228	5.218	0.010	97	2191529	16.0	14.0	
28 Acrylonitrile	53	5.298	5.288	0.010	93	1416916	16.0	14.4	
29 2-Methyl-2-propanol	59	5.335	5.325	0.010	92	4364855	16.0	14.1	
30 1,1,2-Trichloro-1,2,2-trif	101	5.395	5.390	0.005	96	4568598	16.0	13.7	
31 Methylene Chloride	84	5.503	5.492	0.011	89	1959635	16.0	12.2	
32 3-Chloro-1-propene	39	5.524	5.514	0.010	95	1802055	16.0	13.9	

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Lab Sample ID: ICV 140-17762/14 Calibration Date: 01/30/2018 21:11

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RA30ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzene	Ave	0.7642	0.7746		2.50	2.47	1.4	35.0
Cyclohexane	Ave	0.1227	0.1250		2.51	2.47	1.8	35.0
Carbon tetrachloride	Ave	0.6160	0.6889		2.76	2.47	11.8	35.0
2,2,4-Trimethylpentane	Ave	1.108	1.146		2.55	2.47	3.4	35.0
1,2-Dichloropropane	Ave	0.2659	0.2696		2.50	2.47	1.4	35.0
Heptane	Ave	0.2649	0.2721		2.54	2.47	2.7	35.0
Trichloroethene	Ave	0.3611	0.3691		2.52	2.47	2.2	35.0
Dibromomethane	Ave	0.3145	0.3283		2.58	2.47	4.4	35.0
Bromodichloromethane	Ave	0.5634	0.6271		2.75	2.47	11.3	35.0
1,4-Dioxane	Ave	0.1127	0.1179		2.58	2.47	4.7	35.0
Methyl methacrylate	Ave	0.2509	0.2746		2.70	2.47	9.4	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4284	0.4624		2.67	2.47	7.9	35.0
cis-1,3-Dichloropropene	Ave	0.4392	0.4887		2.75	2.47	11.3	35.0
trans-1,3-Dichloropropene	Ave	0.4850	0.5351		2.72	2.47	10.3	35.0
Toluene	Ave	1.102	1.122		2.52	2.47	1.9	35.0
1,1,2-Trichloroethane	Ave	0.3035	0.3092		2.52	2.47	1.9	35.0
2-Hexanone	Ave	0.2628	0.2981		2.80	2.47	13.5	35.0
Dibromochloromethane	Ave	0.5804	0.6993		2.98	2.47	20.5	35.0
Octane	Ave	0.3544	0.3754		2.62	2.47	5.9	35.0
1,2-Dibromoethane (EDB)	Ave	0.5418	0.5896		2.69	2.47	8.8	35.0
Tetrachloroethene	Ave	0.4106	0.4276		2.57	2.47	4.1	35.0
Chlorobenzene	Ave	0.8680	0.8977		2.55	2.47	3.4	35.0
Ethylbenzene	Ave	1.442	1.497		2.56	2.47	3.8	35.0
m-Xylene & p-Xylene	Ave	1.118	1.183		5.23	4.94	5.8	35.0
Bromoform	Ave	0.4993	0.6381		3.16	2.47	27.8	35.0
Styrene	Ave	0.7131	0.8370		2.90	2.47	17.4	35.0
Nonane	Ave	0.6024	0.6373		2.61	2.47	5.8	35.0
o-Xylene	Ave	1.180	1.193		2.49	2.47	1.0	35.0
1,1,2,2-Tetrachloroethane	Ave	0.7065	0.7765		2.71	2.47	9.9	35.0
1,2,3-Trichloropropane	Ave	0.2557	0.2673		2.58	2.47	4.5	35.0
Isopropylbenzene	Ave	1.579	1.681		2.63	2.47	6.5	35.0
Propylbenzene	Ave	0.4312	0.4920		2.82	2.47	14.1	35.0
2-Chlorotoluene	Ave	0.3988	0.4292		2.66	2.47	7.6	35.0
4-Ethyltoluene	Ave	1.639	1.745		2.63	2.47	6.5	35.0
1,3,5-Trimethylbenzene	Ave	0.6617	0.7303		2.73	2.47	10.4	35.0
Alpha Methyl Styrene	Ave	0.5721	0.6952		3.00	2.47	21.5	35.0
Decane	Ave	0.8188	0.9370		2.83	2.47	14.4	35.0
tert-Butylbenzene	Ave	1.538	1.672		2.69	2.47	8.8	35.0
1,2,4-Trimethylbenzene	Ave	1.379	1.533		2.74	2.47	11.1	35.0
1,3-Dichlorobenzene	Ave	0.8870	0.9882		2.75	2.47	11.4	35.0
sec-Butylbenzene	Ave	1.978	2.196		2.74	2.47	11.0	35.0

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-10789-1

SDG No.:

Matrix: Air Level: Low Lab File ID: RCCVB27-LCS.d

Lab ID: LCS 140-18442/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.99	99	70-130	
Carbon tetrachloride	2.00	2.21	110	70-130	
Chlorodifluoromethane	2.00	1.97	99	60-140	
Chloroform	2.00	1.92	96	70-130	
cis-1,2-Dichloroethene	2.00	1.95	97	70-130	
Dichlorodifluoromethane	2.00	2.22	111	60-140	
1,1-Dichloroethane	2.00	1.83	91	70-130	
1,2-Dichloroethane	2.00	1.96	98	70-130	
1,1-Dichloroethene	2.00	1.94	97	70-130	
Ethylbenzene	2.00	2.02	101	70-130	
Methylene Chloride	2.00	1.81	91	70-130	
Methyl tert-butyl ether	2.00	1.94	97	60-140	
Naphthalene	2.00	2.38	119	60-140	
Tetrachloroethene	2.00	2.19	110	70-130	
Toluene	2.00	2.09	104	70-130	
trans-1,2-Dichloroethene	2.00	1.98	99	70-130	
1,2,4-Trichlorobenzene	2.00	2.50	125	60-140	
1,1,1-Trichloroethane	2.00	1.98	99	70-130	
1,1,2-Trichloroethane	2.00	2.02	101	70-130	
Trichloroethene	2.00	2.07	104	70-130	
1,2,3-Trimethylbenzene	2.00	1.67	83	70-130	
1,2,4-Trimethylbenzene	2.00	2.33	117	70-130	
1,3,5-Trimethylbenzene	2.00	2.59	129	70-130	
Vinyl chloride	2.00	1.90	95	70-130	
Xylenes, Total	6.00	6.13	102	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

	ANALYTE		ORIGINAL		DUPLICATE		RL	RPD	RPD > 50%	ORIGINAL SAMPLE CONC >2xRL	DUPLICATE SAMPLE CONC >2xRL	DIFFERENCE >2XRL
IA-018-A-24	1,1,1-TRICHLOROETHANE	OV	0.06	U	0.06	U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
IA-018-A-24	1,1,2-TRICHLOROETHANE	OV	0.11	U	0.11	U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
IA-018-A-24	1,1-DICHLOROETHANE	OV	0.05	U	0.05	U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
IA-018-A-24	1,1-DICHLOROETHENE	OV	0.18	J	0.2	J	0.4	10.53	FALSE	FALSE	FALSE	FALSE
IA-018-A-24	1,2,3-TRIMETHYLBENZENE	OV	0.17	U	0.17	U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
IA-018-A-24	1,2,4-TRICHLOROBENZENE	OV	0.2	U	0.2	U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
IA-018-A-24	1,2,4-TRIMETHYLBENZENE	OV	0.13	U	0.13	U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
IA-018-A-24	1,2-DICHLOROETHANE	OV	0.095	U	0.095	U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
IA-018-A-24	1,3,5-TRIMETHYLBENZENE	OV	0.13	U	0.13	U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
IA-018-A-24	BENZENE	OV	0.26	J	0.22	J	0.4	16.67	FALSE	FALSE	FALSE	FALSE
IA-018-A-24	CARBON TETRACHLORIDE	OV	0.098	J	0.094	J	0.4	4.17	FALSE	FALSE	FALSE	FALSE
IA-018-A-24	CHLORODIFLUOROMETHANE	OV	0.37	J	0.36	J	0.4	2.74	FALSE	FALSE	FALSE	FALSE
IA-018-A-24	CHLOROFORM	OV	0.2	J	0.24	J	0.4	18.18	FALSE	FALSE	FALSE	FALSE
IA-018-A-24	CIS-1,2-DICHLOROETHENE	OV	0.12	U	0.12	U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
IA-018-A-24	DICHLORODIFLUOROMETHANE	OV	0.36	J	0.32	J	0.4	11.76	FALSE	FALSE	FALSE	FALSE
IA-018-A-24	ETHYLBENZENE	OV	0.16	J	0.14	U	0.4	13.33	FALSE	FALSE	FALSE	FALSE
IA-018-A-24	METHYL TERT-BUTYL ETHER	OV	0.34	U	0.34	U	2	0.00	FALSE	FALSE	FALSE	FALSE
IA-018-A-24	METHYLENE CHLORIDE	OV	2.3		0.82	J	1	94.87	TRUE	TRUE	FALSE	FALSE
IA-018-A-24	NAPHTHALENE	OV	1.1		0.91		0.2	18.91	FALSE	TRUE	TRUE	FALSE
IA-018-A-24	TETRACHLOROETHENE	OV	0.08	U	0.08	U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
IA-018-A-24	TOLUENE	OV	0.87		0.6	U	0.6	36.73	FALSE	FALSE	FALSE	FALSE
IA-018-A-24	TOTAL XYLENES	OV	0.65	J	0.12	U	0.8	137.66	TRUE	FALSE	FALSE	FALSE
IA-018-A-24	TRANS-1,2-DICHLOROETHENE	OV	0.1	U	0.1	U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
IA-018-A-24	TRICHLOROETHENE	OV	0.39		0.46		0.2	16.47	FALSE	FALSE	TRUE	FALSE
IA-018-A-24	VINYL CHLORIDE	OV	0.15	U	0.15	U	0.2	0.00	FALSE	FALSE	FALSE	FALSE
IA-079-A-24	1,1,1-TRICHLOROETHANE	OV	0.06	U	0.06	U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
IA-079-A-24	1,1,2-TRICHLOROETHANE	OV	0.11	U	0.11	U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
IA-079-A-24	1,1-DICHLOROETHANE	OV	0.05	U	0.05	U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
IA-079-A-24	1,1-DICHLOROETHENE	OV	0.07	U	0.07	U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
IA-079-A-24	1,2,3-TRIMETHYLBENZENE	OV	0.17	U	0.17	U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
IA-079-A-24	1,2,4-TRICHLOROBENZENE	OV	0.2	U	0.2	U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
IA-079-A-24	1,2,4-TRIMETHYLBENZENE	OV	0.21	J	0.42		0.4	66.67	TRUE	FALSE	FALSE	FALSE
IA-079-A-24	1,2-DICHLOROETHANE	OV	0.095	U	0.095	U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
IA-079-A-24	1,3,5-TRIMETHYLBENZENE	OV	0.13	U	0.13	U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
IA-079-A-24	BENZENE	OV	0.19	J	3.2		0.4	177.58	TRUE	FALSE	TRUE	TRUE
IA-079-A-24	CARBON TETRACHLORIDE	OV	0.076	J	0.077	J	0.4	1.31	FALSE	FALSE	FALSE	FALSE
IA-079-A-24	CHLORODIFLUOROMETHANE	OV	0.54		0.52		0.4	3.77	FALSE	FALSE	FALSE	FALSE
IA-079-A-24	CHLOROFORM	OV	0.075	U	0.075	U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
IA-079-A-24	CIS-1,2-DICHLOROETHENE	OV	0.12	U	0.12	U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
IA-079-A-24	DICHLORODIFLUOROMETHANE	OV	0.34	J	0.38	J	0.4	11.11	FALSE	FALSE	FALSE	FALSE
IA-079-A-24	ETHYLBENZENE	OV	0.28	J	0.79		0.4	95.33	TRUE	FALSE	FALSE	FALSE
IA-079-A-24	METHYL TERT-BUTYL ETHER	OV	0.34	U	0.34	U	2	0.00	FALSE	FALSE	FALSE	FALSE
IA-079-A-24	METHYLENE CHLORIDE	OV	0.95	J	0.97	J	1	2.08	FALSE	FALSE	FALSE	FALSE
IA-079-A-24	NAPHTHALENE	OV	0.2	U	0.2	U	0.2	0.00	FALSE	FALSE	FALSE	FALSE
IA-079-A-24	TETRACHLOROETHENE	OV	0.08	U	0.33	J	0.4	121.95	TRUE	FALSE	FALSE	FALSE
IA-079-A-24	TOLUENE	OV	9.2		12		0.6	26.42	FALSE	TRUE	TRUE	TRUE
IA-079-A-24	TOTAL XYLENES	OV	1.2		3.3		0.8	93.33	TRUE	FALSE	TRUE	TRUE
IA-079-A-24	TRANS-1,2-DICHLOROETHENE	OV	0.1	U	0.1	U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
IA-079-A-24	TRICHLOROETHENE	OV	0.07	U	0.07	U	0.2	0.00	FALSE	FALSE	FALSE	FALSE
IA-079-A-24	VINYL CHLORIDE	OV	0.15	U	0.15	U	0.2	0.00	FALSE	FALSE	FALSE	FALSE

TETRA TECH

INTERNAL CORRESPONDENCE

TO: **M. MARTIN** **DATE:** **APRIL 4, 2018**

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

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
LOCKHEED MARTIN CORPORATION (LMC) – MIDDLE RIVER CENTER (MRC)
SDG 140-10790-1

SAMPLES: 19/Indoor Air/VOC

SV-015-A-24	SV-078-A-24	SV-079-A-24	SV-081-A-24
SV-093-A-24	SV-100-B-24	SV-101-B-24	SV-116-A-24
SV-118-A-24	SV-126-C-24	SV-136-A-24	SV-138-A-24
SV-170-A-24	SV-171-A-24	SV-173-A-24	SV-174-A-24
SV-DUP01-A-24	SV-DUP02-A-24	SV-DUP02-C-24	

Overview

The sample set for LMC - MRC, SDG 140-10790-1 consisted of nineteen (19) soil vapor air samples. All samples were analyzed for select Volatile Organic Compounds (VOC). Three field duplicate sample pairs were included in this SDG: SV-116-A-24/SV-DUP01-A-24, SV-079-A-24/SV-DUP02-A-24, and SV-149-C-24/SV-DUP02-C-24. Sample SV-149-C-24 was included in SDG 140-10791-1.

The samples were collected by Tetra Tech on February 20 and 21, 2018 and analyzed by TestAmerica. All analyses were conducted in accordance with EPA Method TO-15 analytical and reporting protocols.

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

Major

No major issues were identified.

Minor

- The continuing calibration performed on 02/28/18 at 10:49 had a Percent Difference (%D) for 1,2,4-trichlorobenzene and naphthalene, which exceeded the 30% quality control limit affecting samples in analysis batch 18437. The non-detected results reported for these compounds in the affected samples were qualified as estimated, (UJ), respectively.

- The continuing calibration performed on 03/05/2018 at 10:17 had a %D for 1,2,4-trichlorobenzene, which exceeded the 30% quality control limit affecting samples in analysis batch 18533. The non-detected results reported for this compound in the affected samples were qualified as estimated, (UJ), respectively.

- Methylene chloride was detected in laboratory method blanks at the following maximum concentrations:

Compound	Maximum Concentration	Action Level
Methylene Chloride(1)	0.149 ppb	1.49 ppb
Methylene Chloride(1)	0.519 ug/m^3	5.19 ug/m^3

1 Concentration in method blank affecting samples in batch 18437.

An action level of 10X the maximum contaminant level for the common laboratory contaminant has been used to evaluate sample data for blank contamination. Dilution factor, if applicable, was taken into consideration when evaluating for blank contamination. Detected results for methylene chloride less than the blank action level were qualified as nondetect (U).

- Field duplicate imprecision (difference > 2x reporting limit) was noted for 1,2,3-trimethylbenzene in field duplicate pair SV-079-A-24/SV-DUP02-A-24. Detected results for 1,2,3-trimethylbenzene were qualified as estimated (J) in samples SV-079-A-24 and SV-DUP02-A-24.

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

Notes

All internal standard areas were within ±40% of the standard.

The surrogate spike compound and Laboratory Control Sample (LCS) had Percent Recoveries (%Rs) within the quality control limits.

Twenty-five VOC target compounds were reported for the TO-15 analysis of the samples.

All sample canisters opened to the approximately -30 psig (-29 psig) and finished at approximately 0 psig.

Non-detected results were reported to the MDL.

Executive Summary

Laboratory Performance: Continuing calibration noncompliance was noted for 1,2,4-trichlorobenzene and naphthalene. Methylene chloride was detected in a laboratory method blank.

Other Factors Affecting Data Quality: Results below the RL were estimated. Field duplicate imprecision was noted for 1,2,3-trimethylbenzene.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Review" (January 2017) and EPA Method TO-15 analytical and reporting protocols. The text of this report has been formulated to address only those areas affecting data quality.



Tetra Tech
Leanne M. Ganser
Environmental Scientist/Data Validator

Tetra Tech
Joseph A. Samchuck
Data Validation Manager

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

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted method detection limit for sample and method.
J	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

Appendix A

Qualified Analytical Results

Qualifier Codes:

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

PROJ_NO: 08388	NSAMPLE	SV-015-A-24			SV-078-A-24			SV-079-A-24			SV-081-A-24		
SDG: 140-10790-1	LAB_ID	140-10790-13			140-10790-18			140-10790-16			140-10790-15		
FRACTION: OV-M3	SAMP_DATE	2/21/2018			2/21/2018			2/21/2018			2/21/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		1.7	J	P	0.85	J	P	1.3	J	P	3.9		
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		2.7			0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		8.9			0.28	U		0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		1.5	J	P			
1,2,4-TRICHLOROBENZENE		1.4	UJ	C	1.4	UJ	C	1.4	UJ	C	1.4	UJ	C
1,2,4-TRIMETHYLBENZENE		0.62	J	P	1.7	J	P	1.2	J	P	67		
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		220		
BENZENE		2.2			0.43	J	P	0.41	J	P	0.37	U	
CARBON TETRACHLORIDE		0.48	J	P	0.51	J	P	0.47	U		0.55	J	P
CHLORODIFLUOROMETHANE		2.9			1.4	J	P	20			4		
CHLOROFORM		0.49	J	P	0.48	J	P	0.4	J	P	2.1		
CIS-1,2-DICHLOROETHENE		1.2	J	P	0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		3.5			1.9	J	P	2.9			2.9		
ETHYLBENZENE		0.99	J	P	1.4	J	P	3.2			2.1		
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		3.7	U	A	4.9			2.8	U	A	3.4	U	A
NAPHTHALENE		1	UJ	C	1	U		1	UJ	C	4.8	J	C
TETRACHLOROETHENE		0.54	U		22			25			13		
TOLUENE		9.8			6.9			2.3	U		5.5		
TOTAL XYLENES		4.2			7			15			19		
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.53	J	P	0.4	U	
TRICHLOROETHENE		6.3			12			87			0.54	J	P
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 08388	NSAMPLE	SV-081-A-24-DL			SV-093-A-24			SV-100-B-24			SV-101-B-24		
SDG: 140-10790-1	LAB_ID	140-10790-15			140-10790-5			140-10790-4			140-10790-3		
FRACTION: OV-M3	SAMP_DATE	2/21/2018			2/21/2018			2/20/2018			2/20/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE					0.94	J	P	0.56	J	P	200		
1,1,2-TRICHLOROETHANE					0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE					1.5	J	P	0.2	U		0.2	U	
1,1-DICHLOROETHENE					1	J	P	0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		880			0.84	U		0.84	U		2.2		
1,2,4-TRICHLOROBENZENE					1.4	UJ	C	1.4	UJ	C	1.4	UJ	C
1,2,4-TRIMETHYLBENZENE					0.61	U		0.63	J	P	4.3		
1,2-DICHLOROETHANE					0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE					0.64	U		0.64	U		2		
BENZENE					0.78	J	P	0.37	U		0.37	U	
CARBON TETRACHLORIDE					0.66	J	P	2.9			3.8		
CHLORODIFLUOROMETHANE					1.4	J	P	1.8			2.1		
CHLOROFORM					0.37	U		2.3			0.62	J	P
CIS-1,2-DICHLOROETHENE					0.69	J	P	0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE					2.6			4			7.7		
ETHYLBENZENE					0.59	U		0.59	U		0.71	J	P
METHYL TERT-BUTYL ETHER					1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE					2.8	U	A	4.6	U	A	2.8	U	A
NAPHTHALENE					1	UJ	C	1	UJ	C	4.2	J	C
TETRACHLOROETHENE					0.54	U		5.7			58		
TOLUENE					2.3	U		2.3	U		8.2		
TOTAL XYLENES					0.52	U		0.52	U		4		
TRANS-1,2-DICHLOROETHENE					0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE					2.5			6.4			94		
VINYL CHLORIDE					0.37	U		0.37	U		0.37	U	

PROJ_NO: 08388	NSAMPLE	SV-116-A-24			SV-118-A-24			SV-118-A-24-DL			SV-126-C-24		
SDG: 140-10790-1	LAB_ID	140-10790-8			140-10790-14			140-10790-14			140-10790-2		
FRACTION: OV-M3	SAMP_DATE	2/21/2018			2/21/2018			2/21/2018			2/20/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	J	P	11						0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U					0.57	U	
1,1-DICHLOROETHANE		0.2	U		30						1.5	J	P
1,1-DICHLOROETHENE		0.34	J	P	230								
1,2,3-TRIMETHYLBENZENE		0.84	U		3.8						0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	UJ	C	1.4	UJ	C				1.4	UJ	C
1,2,4-TRIMETHYLBENZENE		0.61	U		9.6						1.4	J	P
1,2-DICHLOROETHANE		0.38	U		0.38	U					0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		6.1						0.69	J	P
BENZENE		0.53	J	P	0.61	J	P				210		
CARBON TETRACHLORIDE		0.56	J	P	0.51	J	P				1.2	J	P
CHLORODIFLUOROMETHANE		1.3	J	P	4.1						1	J	P
CHLOROFORM		0.82	J	P	2.6						0.62	J	P
CIS-1,2-DICHLOROETHENE		0.48	U		91						300		
DICHLORODIFLUOROMETHANE		2.6			2.9						2.9		
ETHYLBENZENE		0.59	U		9.8						1.5	J	P
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U					1.2	U	
METHYLENE CHLORIDE		2.8	U	A	5.4						4.8	U	A
NAPHTHALENE		1	UJ	C	1	UJ	C				1.9	J	C
TETRACHLOROETHENE		16			16						11		
TOLUENE		2.3	U		2.4						13		
TOTAL XYLENES		0.52	U		91						5.1		
TRANS-1,2-DICHLOROETHENE		0.4	U		8						30		
TRICHLOROETHENE		3.5						1500					
VINYL CHLORIDE		0.37	U		1.1								

PROJ_NO: 08388	NSAMPLE	SV-126-C-24-DL			SV-136-A-24			SV-138-A-24			SV-170-A-24		
SDG: 140-10790-1	LAB_ID	140-10790-2			140-10790-19			140-10790-7			140-10790-12		
FRACTION: OV-M3	SAMP_DATE	2/20/2018			2/21/2018			2/21/2018			2/21/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE					0.65	U		0.43	J	P	1.2	J	P
1,1,2-TRICHLOROETHANE					1.1	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE					0.4	U		2.5			0.5	J	P
1,1-DICHLOROETHENE		540			0.56	U		12			8.4		
1,2,3-TRIMETHYLBENZENE					1.7	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE					2.9	UJ	C	1.4	UJ	C	1.4	U	
1,2,4-TRIMETHYLBENZENE					4.4			0.61	U		0.93	J	P
1,2-DICHLOROETHANE					0.77	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE					1.7	J	P	0.64	U		0.64	U	
BENZENE					2	J	P	0.74	J	P	0.81	J	P
CARBON TETRACHLORIDE					0.94	U		0.79	J	P	0.52	J	P
CHLORODIFLUOROMETHANE					1.7	J	P	1.5			1.2	J	P
CHLOROFORM					8			0.37	J	P	0.37	U	
CIS-1,2-DICHLOROETHENE					1.8	J	P	7			2.6		
DICHLORODIFLUOROMETHANE					2.9	J	P	2.9			2.5		
ETHYLBENZENE					5.4			0.59	U		0.87	J	P
METHYL TERT-BUTYL ETHER					2.5	U		1.2	U		1.2	U	
METHYLENE CHLORIDE					4.5	U		3.2	U	A	3	J	P
NAPHTHALENE					2.1	U		1	UJ	C	1	U	
TETRACHLOROETHENE					1.1	U		12			0.54	U	
TOLUENE					50			2.3	U		4.9		
TOTAL XYLENES					33			0.52	U		4.3		
TRANS-1,2-DICHLOROETHENE					0.79	U		0.4	U		0.4	U	
TRICHLOROETHENE		540			380			83			26		
VINYL CHLORIDE		2700			0.74	U		0.37	U		0.37	U	

PROJ_NO: 08388	NSAMPLE	SV-171-A-24			SV-171-A-24-DL			SV-173-A-24			SV-173-A-24-DL		
SDG: 140-10790-1	LAB_ID	140-10790-11			140-10790-11			140-10790-10			140-10790-10		
FRACTION: OV-M3	SAMP_DATE	2/21/2018			2/21/2018			2/21/2018			2/21/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		1.9	J	P				8.5					
1,1,2-TRICHLOROETHANE		0.57	U					0.7	J	P			
1,1-DICHLOROETHANE		23						71					
1,1-DICHLOROETHENE					510						1300		
1,2,3-TRIMETHYLBENZENE		0.84	U					0.84	U				
1,2,4-TRICHLOROBENZENE		1.4	UJ	C				1.4	UJ	C			
1,2,4-TRIMETHYLBENZENE		0.95	J	P				0.68	J	P			
1,2-DICHLOROETHANE		0.52	J	P				1.3	J	P			
1,3,5-TRIMETHYLBENZENE		0.64	U					0.64	U				
BENZENE		0.86	J	P				1	J	P			
CARBON TETRACHLORIDE		0.47	U					0.47	U				
CHLORODIFLUOROMETHANE		1.4	J	P				1.9					
CHLOROFORM		8.5						14					
CIS-1,2-DICHLOROETHENE		92						310					
DICHLORODIFLUOROMETHANE		2.5						3.4					
ETHYLBENZENE		0.84	J	P				0.59	U				
METHYL TERT-BUTYL ETHER		1.2	U					1.2	U				
METHYLENE CHLORIDE		5.8						4.5	U	A			
NAPHTHALENE		1	UJ	C				1	UJ	C			
TETRACHLOROETHENE		11						4					
TOLUENE		4.3						2.3	U				
TOTAL XYLENES		4.3						1.3	J	P			
TRANS-1,2-DICHLOROETHENE		5						13					
TRICHLOROETHENE					3100						12000		
VINYL CHLORIDE		0.37	J	P				1.3					

PROJ_NO: 08388	NSAMPLE	SV-174-A-24			SV-DUP01-A-24			SV-DUP02-A-24			SV-DUP02-C-24		
SDG: 140-10790-1	LAB_ID	140-10790-6			140-10790-9			140-10790-17			140-10790-1		
FRACTION: OV-M3	SAMP_DATE	2/21/2018			2/21/2018			2/21/2018			2/20/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF				SV-116-A-24			SV-079-A-24			SV-149-C-24		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		34			0.37	J	P	1.1	J	P	0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		18			0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		43			0.45	J	P	0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		7.6			0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	UJ	C	1.4	UJ	C	1.4	UJ	C	1.4	UJ	C
1,2,4-TRIMETHYLBENZENE		0.98	J	P	0.61	U		1.7	J	P	1.6	J	P
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		2			0.64	U	
BENZENE		0.38	J	P	0.59	J	P	0.41	J	P	0.81	J	P
CARBON TETRACHLORIDE		0.49	J	P	0.6	J	P	0.47	U		0.48	J	P
CHLORODIFLUOROMETHANE		1.2	J	P	1.4			17			2.3		
CHLOROFORM		4.8			0.89	J	P	0.37	U		10		
CIS-1,2-DICHLOROETHENE		9.1			0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		2.7			2.7			2			2.9		
ETHYLBENZENE		0.75	J	P	0.59	U		3.3			1.5	J	P
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		3.4	U	A	3.1	U	A	4.9			3.7	U	A
NAPHTHALENE		1	UJ	C	1.4	J	C	1	U		1	UJ	C
TETRACHLOROETHENE		1	J	P	12			30			0.54	U	
TOLUENE		3			2.3	U		2.3			11		
TOTAL XYLENES		4.1			0.52	U		15			7.6		
TRANS-1,2-DICHLOROETHENE		0.49	J	P	0.4	U		0.53	J	P	0.4	U	
TRICHLOROETHENE		270			4.6			96			3.6		
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 08388	NSAMPLE	SV-015-A-24			SV-078-A-24			SV-079-A-24			SV-081-A-24		
SDG: 140-10790-1	LAB_ID	140-10790-13			140-10790-18			140-10790-16			140-10790-15		
FRACTION: OV	SAMP_DATE	2/21/2018			2/21/2018			2/21/2018			2/21/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	PPBV			PPBV			PPBV			PPBV		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.32	J	P	0.16	J	P	0.23	J	P	0.71		
1,1,2-TRICHLOROETHANE		0.11	U		0.11	U		0.11	U		0.11	U	
1,1-DICHLOROETHANE		0.68			0.05	U		0.05	U		0.05	U	
1,1-DICHLOROETHENE		2.2			0.07	U		0.07	U		0.07	U	
1,2,3-TRIMETHYLBENZENE		0.17	U		0.17	U		0.32	J	GP			
1,2,4-TRICHLOROBENZENE		0.2	UJ	C	0.2	UJ	C	0.2	UJ	C	0.2	UJ	C
1,2,4-TRIMETHYLBENZENE		0.13	J	P	0.35	J	P	0.24	J	P	14		
1,2-DICHLOROETHANE		0.095	U		0.095	U		0.095	U		0.095	U	
1,3,5-TRIMETHYLBENZENE		0.13	U		0.13	U		0.13	U		44		
BENZENE		0.67			0.13	J	P	0.13	J	P	0.12	U	
CARBON TETRACHLORIDE		0.076	J	P	0.082	J	P	0.075	U		0.087	J	P
CHLORODIFLUOROMETHANE		0.81			0.38	J	P	5.7			1.1		
CHLOROFORM		0.1	J	P	0.098	J	P	0.082	J	P	0.44		
CIS-1,2-DICHLOROETHENE		0.29	J	P	0.12	U		0.12	U		0.12	U	
DICHLORODIFLUOROMETHANE		0.7			0.38	J	P	0.58			0.58		
ETHYLBENZENE		0.23	J	P	0.32	J	P	0.74			0.47		
METHYL TERT-BUTYL ETHER		0.34	U		0.34	U		0.34	U		0.34	U	
METHYLENE CHLORIDE		1.1	U	A	1.4			0.8	U	A	0.99	U	A
NAPHTHALENE		0.2	UJ	C	0.2	U		0.2	UJ	C	0.91	J	C
TETRACHLOROETHENE		0.08	U		3.2			3.7			2		
TOLUENE		2.6			1.8			0.6	U		1.5		
TOTAL XYLENES		0.96			1.6			3.4			4.4		
TRANS-1,2-DICHLOROETHENE		0.1	U		0.1	U		0.13	J	P	0.1	U	
TRICHLOROETHENE		1.2			2.2			16			0.1	J	P
VINYL CHLORIDE		0.15	U		0.15	U		0.15	U		0.15	U	

PROJ_NO: 08388	NSAMPLE	SV-081-A-24-DL			SV-093-A-24			SV-100-B-24			SV-101-B-24		
SDG: 140-10790-1	LAB_ID	140-10790-15			140-10790-5			140-10790-4			140-10790-3		
FRACTION: OV	SAMP_DATE	2/21/2018			2/21/2018			2/20/2018			2/20/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	PPBV			PPBV			PPBV			PPBV		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE					0.17	J	P	0.1	J	P	36		
1,1,2-TRICHLOROETHANE					0.11	U		0.11	U		0.11	U	
1,1-DICHLOROETHANE					0.36	J	P	0.05	U		0.05	U	
1,1-DICHLOROETHENE					0.26	J	P	0.07	U		0.07	U	
1,2,3-TRIMETHYLBENZENE		180			0.17	U		0.17	U		0.46		
1,2,4-TRICHLOROBENZENE					0.2	UJ	C	0.2	UJ	C	0.2	UJ	C
1,2,4-TRIMETHYLBENZENE					0.13	U		0.13	J	P	0.88		
1,2-DICHLOROETHANE					0.095	U		0.095	U		0.095	U	
1,3,5-TRIMETHYLBENZENE					0.13	U		0.13	U		0.42		
BENZENE					0.24	J	P	0.12	U		0.12	U	
CARBON TETRACHLORIDE					0.1	J	P	0.46			0.61		
CHLORODIFLUOROMETHANE					0.38	J	P	0.52			0.61		
CHLOROFORM					0.075	U		0.47			0.13	J	P
CIS-1,2-DICHLOROETHENE					0.18	J	P	0.12	U		0.12	U	
DICHLORODIFLUOROMETHANE					0.52			0.81			1.6		
ETHYLBENZENE					0.14	U		0.14	U		0.16	J	P
METHYL TERT-BUTYL ETHER					0.34	U		0.34	U		0.34	U	
METHYLENE CHLORIDE					0.81	U	A	1.3	U	A	0.8	U	A
NAPHTHALENE					0.2	UJ	C	0.2	UJ	C	0.81	J	C
TETRACHLOROETHENE					0.08	U		0.84			8.6		
TOLUENE					0.6	U		0.6	U		2.2		
TOTAL XYLENES					0.12	U		0.12	U		0.92		
TRANS-1,2-DICHLOROETHENE					0.1	U		0.1	U		0.1	U	
TRICHLOROETHENE					0.46			1.2			18		
VINYL CHLORIDE					0.15	U		0.15	U		0.15	U	

PROJ_NO: 08388	NSAMPLE	SV-116-A-24			SV-118-A-24			SV-118-A-24-DL			SV-126-C-24		
SDG: 140-10790-1	LAB_ID	140-10790-8			140-10790-14			140-10790-14			140-10790-2		
FRACTION: OV	SAMP_DATE	2/21/2018			2/21/2018			2/21/2018			2/20/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	PPBV			PPBV			PPBV			PPBV		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.061	J	P	2.1						0.06	U	
1,1,2-TRICHLOROETHANE		0.11	U		0.11	U					0.11	U	
1,1-DICHLOROETHANE		0.05	U		7.5						0.36	J	P
1,1-DICHLOROETHENE		0.085	J	P	57								
1,2,3-TRIMETHYLBENZENE		0.17	U		0.76						0.17	U	
1,2,4-TRICHLOROBENZENE		0.2	UJ	C	0.2	UJ	C				0.2	UJ	C
1,2,4-TRIMETHYLBENZENE		0.13	U		2						0.29	J	P
1,2-DICHLOROETHANE		0.095	U		0.095	U					0.095	U	
1,3,5-TRIMETHYLBENZENE		0.13	U		1.2						0.14	J	P
BENZENE		0.17	J	P	0.19	J	P				64		
CARBON TETRACHLORIDE		0.089	J	P	0.081	J	P				0.19	J	P
CHLORODIFLUOROMETHANE		0.38	J	P	1.2						0.29	J	P
CHLOROFORM		0.17	J	P	0.53						0.13	J	P
CIS-1,2-DICHLOROETHENE		0.12	U		23						75		
DICHLORODIFLUOROMETHANE		0.52			0.59						0.59		
ETHYLBENZENE		0.14	U		2.3						0.35	J	P
METHYL TERT-BUTYL ETHER		0.34	U		0.34	U					0.34	U	
METHYLENE CHLORIDE		0.79	U	A	1.5						1.4	U	A
NAPHTHALENE		0.2	UJ	C	0.2	UJ	C				0.37	J	C
TETRACHLOROETHENE		2.3			2.4						1.7		
TOLUENE		0.6	U		0.65						3.6		
TOTAL XYLENES		0.12	U		21						1.2		
TRANS-1,2-DICHLOROETHENE		0.1	U		2						7.5		
TRICHLOROETHENE		0.65						280					
VINYL CHLORIDE		0.15	U		0.44								

PROJ_NO: 08388	NSAMPLE	SV-126-C-24-DL			SV-136-A-24			SV-138-A-24			SV-170-A-24		
SDG: 140-10790-1	LAB_ID	140-10790-2			140-10790-19			140-10790-7			140-10790-12		
FRACTION: OV	SAMP_DATE	2/20/2018			2/21/2018			2/21/2018			2/21/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	PPBV			PPBV			PPBV			PPBV		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE					0.12	U		0.079	J	P	0.21	J	P
1,1,2-TRICHLOROETHANE					0.21	U		0.11	U		0.11	U	
1,1-DICHLOROETHANE					0.1	U		0.63			0.12	J	P
1,1-DICHLOROETHENE		140			0.14	U		3			2.1		
1,2,3-TRIMETHYLBENZENE					0.34	U		0.17	U		0.17	U	
1,2,4-TRICHLOROBENZENE					0.39	UJ	C	0.2	UJ	C	0.2	U	
1,2,4-TRIMETHYLBENZENE					0.89			0.13	U		0.19	J	P
1,2-DICHLOROETHANE					0.19	U		0.095	U		0.095	U	
1,3,5-TRIMETHYLBENZENE					0.34	J	P	0.13	U		0.13	U	
BENZENE					0.61	J	P	0.23	J	P	0.25	J	P
CARBON TETRACHLORIDE					0.15	U		0.13	J	P	0.082	J	P
CHLORODIFLUOROMETHANE					0.49	J	P	0.42			0.34	J	P
CHLOROFORM					1.6			0.076	J	P	0.075	U	
CIS-1,2-DICHLOROETHENE					0.46	J	P	1.8			0.65		
DICHLORODIFLUOROMETHANE					0.59	J	P	0.59			0.51		
ETHYLBENZENE					1.2			0.14	U		0.2	J	P
METHYL TERT-BUTYL ETHER					0.68	U		0.34	U		0.34	U	
METHYLENE CHLORIDE					1.3	U		0.92	U	A	0.86	J	P
NAPHTHALENE					0.4	U		0.2	UJ	C	0.2	U	
TETRACHLOROETHENE					0.16	U		1.7			0.08	U	
TOLUENE					13			0.6	U		1.3		
TOTAL XYLENES					7.5			0.12	U		1		
TRANS-1,2-DICHLOROETHENE					0.2	U		0.1	U		0.1	U	
TRICHLOROETHENE		100			70			15			4.8		
VINYL CHLORIDE		1100			0.29	U		0.15	U		0.15	U	

PROJ_NO: 08388	NSAMPLE	SV-171-A-24			SV-171-A-24-DL			SV-173-A-24			SV-173-A-24-DL		
SDG: 140-10790-1	LAB_ID	140-10790-11			140-10790-11			140-10790-10			140-10790-10		
FRACTION: OV	SAMP_DATE	2/21/2018			2/21/2018			2/21/2018			2/21/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	PPBV			PPBV			PPBV			PPBV		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.35	J	P				1.6					
1,1,2-TRICHLOROETHANE		0.11	U					0.13	J	P			
1,1-DICHLOROETHANE		5.6						18					
1,1-DICHLOROETHENE					130						320		
1,2,3-TRIMETHYLBENZENE		0.17	U					0.17	U				
1,2,4-TRICHLOROBENZENE		0.2	UJ	C				0.2	UJ	C			
1,2,4-TRIMETHYLBENZENE		0.19	J	P				0.14	J	P			
1,2-DICHLOROETHANE		0.13	J	P				0.31	J	P			
1,3,5-TRIMETHYLBENZENE		0.13	U					0.13	U				
BENZENE		0.27	J	P				0.33	J	P			
CARBON TETRACHLORIDE		0.075	U					0.075	U				
CHLORODIFLUOROMETHANE		0.39	J	P				0.53					
CHLOROFORM		1.7						2.9					
CIS-1,2-DICHLOROETHENE		23						77					
DICHLORODIFLUOROMETHANE		0.51						0.69					
ETHYLBENZENE		0.19	J	P				0.14	U				
METHYL TERT-BUTYL ETHER		0.34	U					0.34	U				
METHYLENE CHLORIDE		1.7						1.3	U	A			
NAPHTHALENE		0.2	UJ	C				0.2	UJ	C			
TETRACHLOROETHENE		1.7						0.58					
TOLUENE		1.2						0.6	U				
TOTAL XYLENES		0.98						0.31	J	P			
TRANS-1,2-DICHLOROETHENE		1.3						3.3					
TRICHLOROETHENE					580						2200		
VINYL CHLORIDE		0.15	J	P				0.51					

PROJ_NO: 08388	NSAMPLE	SV-174-A-24			SV-DUP01-A-24			SV-DUP02-A-24			SV-DUP02-C-24		
SDG: 140-10790-1	LAB_ID	140-10790-6			140-10790-9			140-10790-17			140-10790-1		
FRACTION: OV	SAMP_DATE	2/21/2018			2/21/2018			2/21/2018			2/20/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	PPBV			PPBV			PPBV			PPBV		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF				SV-116-A-24			SV-079-A-24			SV-149-C-24		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		6.2			0.068	J	P	0.2	J	P	0.06	U	
1,1,2-TRICHLOROETHANE		0.11	U		0.11	U		0.11	U		0.11	U	
1,1-DICHLOROETHANE		4.4			0.05	U		0.05	U		0.05	U	
1,1-DICHLOROETHENE		11			0.11	J	P	0.07	U		0.07	U	
1,2,3-TRIMETHYLBENZENE		0.17	U		0.17	U		1.6	J	G	0.17	U	
1,2,4-TRICHLOROBENZENE		0.2	UJ	C	0.2	UJ	C	0.2	UJ	C	0.2	UJ	C
1,2,4-TRIMETHYLBENZENE		0.2	J	P	0.13	U		0.35	J	P	0.32	J	P
1,2-DICHLOROETHANE		0.095	U		0.095	U		0.095	U		0.095	U	
1,3,5-TRIMETHYLBENZENE		0.13	U		0.13	U		0.4			0.13	U	
BENZENE		0.12	J	P	0.19	J	P	0.13	J	P	0.25	J	P
CARBON TETRACHLORIDE		0.078	J	P	0.095	J	P	0.075	U		0.077	J	P
CHLORODIFLUOROMETHANE		0.34	J	P	0.4			4.8			0.66		
CHLOROFORM		0.98			0.18	J	P	0.075	U		2.1		
CIS-1,2-DICHLOROETHENE		2.3			0.12	U		0.12	U		0.12	U	
DICHLORODIFLUOROMETHANE		0.55			0.55			0.41			0.59		
ETHYLBENZENE		0.17	J	P	0.14	U		0.75			0.34	J	P
METHYL TERT-BUTYL ETHER		0.34	U		0.34	U		0.34	U		0.34	U	
METHYLENE CHLORIDE		0.97	U	A	0.89	U	A	1.4			1.1	U	A
NAPHTHALENE		0.2	UJ	C	0.26	J	C	0.2	U		0.2	UJ	C
TETRACHLOROETHENE		0.15	J	P	1.8			4.5			0.08	U	
TOLUENE		0.8			0.6	U		0.61			2.9		
TOTAL XYLENES		0.95			0.12	U		3.4			1.8		
TRANS-1,2-DICHLOROETHENE		0.12	J	P	0.1	U		0.13	J	P	0.1	U	
TRICHLOROETHENE		50			0.86			18			0.67		
VINYL CHLORIDE		0.15	U		0.15	U		0.15	U		0.15	U	

Appendix B

Results as Reported by the Laboratory

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-DUP02-C-24 Lab Sample ID: 140-10790-1

Matrix: Air Lab File ID: GB28P101.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 00:00

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 14:32

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.25	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.077	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.66		0.40	0.075
67-66-3	Chloroform	119.38	2.1		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.59		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.34	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	B	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.9		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.67		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.32	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.8		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	108		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-DUP02-C-24 Lab Sample ID: 140-10790-1

Matrix: Air Lab File ID: GB28P101.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 00:00

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 14:32

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.81	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.3		1.4	0.27
67-66-3	Chloroform	119.38	10		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.5	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.7	B	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	11		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	3.6		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.6	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.6		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	108		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-126-C-24 | Lab Sample ID: 140-10790-2

Matrix: Air | Lab File ID: GB28P102.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:37

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 15:14

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18437 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	64		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.19	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.29	J	0.40	0.075
67-66-3	Chloroform	119.38	0.13	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	75		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.59		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.36	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	*1,1-Dichloroethene*	*96.94*	*160*	*E*	*0.40*	*0.070*
100-41-4	Ethylbenzene	106.17	0.35	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4	B	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.37		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.7		0.40	0.080
108-88-3	Toluene	92.14	3.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	7.5		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	*Trichloroethene*	*131.39*	*110*	*E*	*0.20*	*0.070*
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.29	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.14	J	0.40	0.13
75-01-4	*Vinyl chloride*	*62.50*	*600*	*E*	*0.20*	*0.15*
1330-20-7	Xylenes, Total	106.17	1.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	109		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-126-C-24 Lab Sample ID: 140-10790-2

Matrix: Air Lab File ID: GB28P102.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 11:37

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 15:14

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	210		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	1.2	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.0	J	1.4	0.27
67-66-3	Chloroform	119.38	0.62	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	300		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	1.5	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	*1,1-Dichloroethene*	*96.94*	*650*	*E*	*1.6*	*0.28*
100-41-4	Ethylbenzene	106.17	1.5	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.8	B	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.9		1.0	1.0
127-18-4	Tetrachloroethene	165.83	11		2.7	0.54
108-88-3	Toluene	92.14	13		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	30		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	*Trichloroethene*	*131.39*	*590*	*E*	*1.1*	*0.38*
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.4	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.69	J	2.0	0.64
75-01-4	*Vinyl chloride*	*62.50*	*1500*	*E*	*0.51*	*0.37*
1330-20-7	Xylenes, Total	106.17	5.1		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	109		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-126-C-24 DL Lab Sample ID: 140-10790-2 DL

Matrix: Air Lab File ID: GC02P101.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 11:37

Sample wt/vol: 11(mL) Date Analyzed: 03/02/2018 15:47

Soil Aliquot Vol: Dilution Factor: 4.02

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18524 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	96.94	140		15	2.6
79-01-6	Trichloroethene	131.39	100		7.3	2.6
75-01-4	Vinyl chloride	62.50	1100		7.3	5.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-126-C-24 DL Lab Sample ID: 140-10790-2 DL

Matrix: Air Lab File ID: GC02P101.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 11:37

Sample wt/vol: 11(mL) Date Analyzed: 03/02/2018 15:47

Soil Aliquot Vol: Dilution Factor: 4.02

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18524 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	96.94	540		58	10
79-01-6	Trichloroethene	131.39	540		39	14
75-01-4	Vinyl chloride	62.50	2700		19	14

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-101-B-24 Lab Sample ID: 140-10790-3

Matrix: Air Lab File ID: GB28P103R.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 11:56

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 03:51

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.61		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.61		0.40	0.075
67-66-3	Chloroform	119.38	0.13	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	1.6		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.16	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.80	J B	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.81		0.20	0.20
127-18-4	Tetrachloroethene	165.83	8.6		0.40	0.080
108-88-3	Toluene	92.14	2.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	36		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	18		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.46		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.88		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.42		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.92		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-101-B-24 | Lab Sample ID: 140-10790-3

Matrix: Air | Lab File ID: GB28P103R.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:56

Sample wt/vol: 100(mL) | Date Analyzed: 03/01/2018 03:51

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18437 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	3.8		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.1		1.4	0.27
67-66-3	Chloroform	119.38	0.62	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	7.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.71	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J B	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	4.2		1.0	1.0
127-18-4	Tetrachloroethene	165.83	58		2.7	0.54
108-88-3	Toluene	92.14	8.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	200		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	94		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	2.2		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	4.3		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	2.0		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.0		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-100-B-24 Lab Sample ID: 140-10790-4

Matrix: Air Lab File ID: GB28P104.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 12:00

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 16:40

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.46		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.52		0.40	0.075
67-66-3	Chloroform	119.38	0.47		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.81		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.3	B	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.84		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.10	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.2		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.13	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-100-B-24 | Lab Sample ID: 140-10790-4

Matrix: Air | Lab File ID: GB28P104.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 12:00

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 16:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18437 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	2.9		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.8		1.4	0.27
67-66-3	Chloroform	119.38	2.3		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	4.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.6	B	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	5.7		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.56	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	6.4		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.63	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-093-A-24 Lab Sample ID: 140-10790-5

Matrix: Air Lab File ID: GB28P105.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:36

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 17:21

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.24	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.10	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.38	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.18	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.52		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.36	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.26	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.81	J B	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.17	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.46		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-093-A-24 | Lab Sample ID: 140-10790-5

Matrix: Air | Lab File ID: GB28P105.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 11:36

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 17:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18437 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.78	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.66	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	0.69	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	1.5	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.0	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J B	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.94	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-174-A-24 | Lab Sample ID: 140-10790-6

Matrix: Air | Lab File ID: GB28P106.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 11:38

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 18:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18437 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.12	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.078	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	0.98		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	2.3		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.55		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	4.4		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	11		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.17	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.97	J B	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.15	J	0.40	0.080
108-88-3	Toluene	92.14	0.80		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.12	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	6.2		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	50		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.20	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.95		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-174-A-24 Lab Sample ID: 140-10790-6

Matrix: Air Lab File ID: GB28P106.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:38

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 18:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.38	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.49	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	4.8		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	9.1		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	18		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	43		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.75	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.4	J B	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.0	J	2.7	0.54
108-88-3	Toluene	92.14	3.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	0.49	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	34		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	270		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.98	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.1		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-138-A-24 Lab Sample ID: 140-10790-7

Matrix: Air Lab File ID: GB28P107.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:39

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 18:44

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.23	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.13	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.42		0.40	0.075
67-66-3	Chloroform	119.38	0.076	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	1.8		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.59		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.63		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	3.0		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.92	J B	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.7		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.079	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	15		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-138-A-24 | Lab Sample ID: 140-10790-7

Matrix: Air | Lab File ID: GB28P107.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 11:39

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 18:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18437 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.74	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.79	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	0.37	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	7.0		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	2.5		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	12		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.2	J B	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	12		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.43	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	83		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-116-A-24 Lab Sample ID: 140-10790-8

Matrix: Air Lab File ID: GB28P108.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:41

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 19:26

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.089	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.38	J	0.40	0.075
67-66-3	Chloroform	119.38	0.17	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.52		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.085	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.79	J B	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	2.3		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.061	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.65		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-116-A-24 Lab Sample ID: 140-10790-8

Matrix: Air Lab File ID: GB28P108.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:41

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 19:26

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.53	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.56	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	0.82	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.34	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J B	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	16		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.33	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	3.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-DUP01-A-24 Lab Sample ID: 140-10790-9

Matrix: Air Lab File ID: GB28P109.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 00:00

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 20:07

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.095	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.40		0.40	0.075
67-66-3	Chloroform	119.38	0.18	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.55		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.11	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.89	J B	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.26		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.8		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.068	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.86		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-DUP01-A-24 Lab Sample ID: 140-10790-9

Matrix: Air Lab File ID: GB28P109.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 00:00

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 20:07

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.59	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.60	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4		1.4	0.27
67-66-3	Chloroform	119.38	0.89	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.45	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.1	J B	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.4		1.0	1.0
127-18-4	Tetrachloroethene	165.83	12		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.37	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	4.6		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-173-A-24 | Lab Sample ID: 140-10790-10

Matrix: Air | Lab File ID: GB28P110.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 11:43

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 20:49

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18437 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.33	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.53		0.40	0.075
67-66-3	Chloroform	119.38	2.9		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	77		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.69		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	18		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	0.31	J	0.40	0.095
75-35-4	*1,1-Dichloroethene*	*96.94*	*370*	*E*	*0.40*	*0.070*
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.3	B	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.58		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	3.3		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	1.6		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	0.13	J	0.40	0.11
79-01-6	*Trichloroethene*	*131.39*	*900*	*E*	*0.20*	*0.070*
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	0.51		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.31	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	108		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-173-A-24 Lab Sample ID: 140-10790-10

Matrix: Air Lab File ID: GB28P110.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:43

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 20:49

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.0	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9		1.4	0.27
67-66-3	Chloroform	119.38	14		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	310		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	71		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	1.3	J	1.6	0.38
75-35-4	*1,1-Dichloroethene*	*96.94*	*1500*	*E*	*1.6*	*0.28*
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.5	B	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	4.0		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	13		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	8.5		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	0.70	J	2.2	0.57
79-01-6	*Trichloroethene*	*131.39*	*4800*	*E*	*1.1*	*0.38*
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.68	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	1.3		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	108		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-173-A-24 DL Lab Sample ID: 140-10790-10 DL

Matrix: Air Lab File ID: GC02P102.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:43

Sample wt/vol: 11(mL) Date Analyzed: 03/02/2018 16:28

Soil Aliquot Vol: Dilution Factor: 3.42

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18524 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	96.94	320		12	2.2
79-01-6	Trichloroethene	131.39	2200		6.2	2.2

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-173-A-24 DL Lab Sample ID: 140-10790-10 DL

Matrix: Air Lab File ID: GC02P102.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:43

Sample wt/vol: 11(mL) Date Analyzed: 03/02/2018 16:28

Soil Aliquot Vol: Dilution Factor: 3.42

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18524 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	96.94	1300		49	8.6
79-01-6	Trichloroethene	131.39	12000		33	12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-171-A-24 | Lab Sample ID: 140-10790-11

Matrix: Air | Lab File ID: GB28P111.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 11:44

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 21:32

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18437 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.27	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.39	J	0.40	0.075
67-66-3	Chloroform	119.38	1.7		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	23		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.51		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	5.6		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	0.13	J	0.40	0.095
75-35-4	*1,1-Dichloroethene*	*96.94*	*150*	*E*	*0.40*	*0.070*
100-41-4	Ethylbenzene	106.17	0.19	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.7	B	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.7		0.40	0.080
108-88-3	Toluene	92.14	1.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	1.3		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.35	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	*Trichloroethene*	*131.39*	*500*	*E*	*0.20*	*0.070*
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.19	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	0.15	J	0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.98		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-171-A-24 | Lab Sample ID: 140-10790-11

Matrix: Air | Lab File ID: GB28P111.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 11:44

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 21:32

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18437 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.86	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4	J	1.4	0.27
67-66-3	Chloroform	119.38	8.5		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	92		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	23		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	0.52	J	1.6	0.38
75-35-4	*1,1-Dichloroethene*	*96.94*	*580*	*E*	*1.6*	*0.28*
100-41-4	Ethylbenzene	106.17	0.84	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	5.8	B	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	11		2.7	0.54
108-88-3	Toluene	92.14	4.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	5.0		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.9	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	*Trichloroethene*	*131.39*	*2700*	*E*	*1.1*	*0.38*
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.95	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	0.37	J	0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.3		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-171-A-24 DL Lab Sample ID: 140-10790-11 DL

Matrix: Air Lab File ID: GC02P103.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:44

Sample wt/vol: 11(mL) Date Analyzed: 03/02/2018 17:09

Soil Aliquot Vol: Dilution Factor: 3.38

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18524 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	96.94	130		12	2.2
79-01-6	Trichloroethene	131.39	580		6.1	2.2

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	108		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-171-A-24 DL Lab Sample ID: 140-10790-11 DL

Matrix: Air Lab File ID: GC02P103.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:44

Sample wt/vol: 11(mL) Date Analyzed: 03/02/2018 17:09

Soil Aliquot Vol: Dilution Factor: 3.38

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18524 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	96.94	510		49	8.5
79-01-6	Trichloroethene	131.39	3100		33	12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	108		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-170-A-24 | Lab Sample ID: 140-10790-12

Matrix: Air | Lab File ID: GC02P104.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 11:46

Sample wt/vol: 100(mL) | Date Analyzed: 03/02/2018 18:32

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18524 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.25	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.082	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.65		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.51		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.12	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	2.1		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.20	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.86	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.3		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.21	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	4.8		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.19	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-170-A-24 | Lab Sample ID: 140-10790-12

Matrix: Air | Lab File ID: GC02P104.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 11:46

Sample wt/vol: 100(mL) | Date Analyzed: 03/02/2018 18:32

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18524 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.81	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.52	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	2.6		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.50	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	8.4		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.87	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.0	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.2	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	26		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.93	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.3		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-015-A-24 Lab Sample ID: 140-10790-13

Matrix: Air Lab File ID: GB28P113.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:48

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 22:56

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.67		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.076	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.81		0.40	0.075
67-66-3	Chloroform	119.38	0.10	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.29	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.70		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.68		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	2.2		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.23	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	B	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.32	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.2		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.13	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.96		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-015-A-24 | Lab Sample ID: 140-10790-13

Matrix: Air | Lab File ID: GB28P113.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 11:48

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 22:56

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18437 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.2		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.9		1.4	0.27
67-66-3	Chloroform	119.38	0.49	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	1.2	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	2.7		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	8.9		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.99	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.7	B	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	9.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.7	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	6.3		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.62	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-118-A-24 | Lab Sample ID: 140-10790-14

Matrix: Air | Lab File ID: GB28P114.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 11:49

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 23:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18437 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.081	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.2		0.40	0.075
67-66-3	Chloroform	119.38	0.53		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	23		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.59		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	7.5		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	57		0.40	0.070
100-41-4	Ethylbenzene	106.17	2.3		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.5	B	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	2.4		0.40	0.080
108-88-3	Toluene	92.14	0.65		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	2.0		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	2.1		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	*Trichloroethene*	*131.39*	*290*	*E*	*0.20*	*0.070*
526-73-8	1,2,3-Trimethylbenzene	120.19	0.76		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	2.0		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	1.2		0.40	0.13
75-01-4	Vinyl chloride	62.50	0.44		0.20	0.15
1330-20-7	Xylenes, Total	106.17	21		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-118-A-24 | Lab Sample ID: 140-10790-14

Matrix: Air | Lab File ID: GB28P114.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 11:49

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 23:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18437 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.61	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.51	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.1		1.4	0.27
67-66-3	Chloroform	119.38	2.6		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	91		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	30		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	230		1.6	0.28
100-41-4	Ethylbenzene	106.17	9.8		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.4	B	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	16		2.7	0.54
108-88-3	Toluene	92.14	2.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	8.0		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	11		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	*Trichloroethene*	*131.39*	*1600*	*E*	*1.1*	*0.38*
526-73-8	1,2,3-Trimethylbenzene	120.19	3.8		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	9.6		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	6.1		2.0	0.64
75-01-4	Vinyl chloride	62.50	1.1		0.51	0.37
1330-20-7	Xylenes, Total	106.17	91		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-118-A-24 DL Lab Sample ID: 140-10790-14 DL

Matrix: Air Lab File ID: RC05P106.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:49

Sample wt/vol: 25(mL) Date Analyzed: 03/05/2018 18:39

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18533 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	131.39	280		0.80	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-118-A-24 DL Lab Sample ID: 140-10790-14 DL

Matrix: Air Lab File ID: RC05P106.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:49

Sample wt/vol: 25(mL) Date Analyzed: 03/05/2018 18:39

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18533 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	131.39	1500		4.3	1.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-081-A-24 Lab Sample ID: 140-10790-15

Matrix: Air Lab File ID: GB28P115.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:53

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 00:20

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.087	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.1		0.40	0.075
67-66-3	Chloroform	119.38	0.44		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.58		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.47		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.99	J B	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.91		0.20	0.20
127-18-4	Tetrachloroethene	165.83	2.0		0.40	0.080
108-88-3	Toluene	92.14	1.5		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.71		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.10	J	0.20	0.070
526-73-8	*1,2,3-Trimethylbenzene*	*120.19*	*180*	*E*	*0.40*	*0.17*
95-63-6	1,2,4-Trimethylbenzene	120.20	14		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	44		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	4.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-081-A-24 Lab Sample ID: 140-10790-15

Matrix: Air Lab File ID: GB28P115.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:53

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 00:20

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.55	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.0		1.4	0.27
67-66-3	Chloroform	119.38	2.1		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.1		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.4	J B	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	4.8		1.0	1.0
127-18-4	Tetrachloroethene	165.83	13		2.7	0.54
108-88-3	Toluene	92.14	5.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	3.9		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.54	J	1.1	0.38
526-73-8	*1,2,3-Trimethylbenzene*	*120.19*	*900*	*E*	*2.0*	*0.84*
95-63-6	1,2,4-Trimethylbenzene	120.20	67		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	220		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	19		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-081-A-24 DL Lab Sample ID: 140-10790-15 DL

Matrix: Air Lab File ID: RC05P107.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:53

Sample wt/vol: 30(mL) Date Analyzed: 03/05/2018 19:27

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18533 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
526-73-8	1,2,3-Trimethylbenzene	120.19	180		1.3	0.57

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-081-A-24 DL Lab Sample ID: 140-10790-15 DL

Matrix: Air Lab File ID: RC05P107.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:53

Sample wt/vol: 30(mL) Date Analyzed: 03/05/2018 19:27

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18533 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
526-73-8	1,2,3-Trimethylbenzene	120.19	880		6.6	2.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-079-A-24 Lab Sample ID: 140-10790-16

Matrix: Air Lab File ID: GB28P116D.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:55

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 01:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	5.7		0.40	0.075
67-66-3	Chloroform	119.38	0.082	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.58		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.74		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.80	J B	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	3.7		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.13	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.23	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	16		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.32	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.24	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-079-A-24 Lab Sample ID: 140-10790-16

Matrix: Air Lab File ID: GB28P116D.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:55

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 01:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.41	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	20		1.4	0.27
67-66-3	Chloroform	119.38	0.40	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	3.2		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J B	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	25		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	0.53	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.3	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	87		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	1.5	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.2	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	15		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-DUP02-A-24 Lab Sample ID: 140-10790-17

Matrix: Air Lab File ID: RC05P108.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 00:00

Sample wt/vol: 100(mL) Date Analyzed: 03/05/2018 20:14

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18533 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	4.8		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.75		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	4.5		0.40	0.080
108-88-3	Toluene	92.14	0.61		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.13	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.20	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	18		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	1.6		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.35	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.40		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-DUP02-A-24 Lab Sample ID: 140-10790-17

Matrix: Air Lab File ID: RC05P108.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 00:00

Sample wt/vol: 100(mL) Date Analyzed: 03/05/2018 20:14

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18533 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.41	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	17		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	3.3		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.9		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	30		2.7	0.54
108-88-3	Toluene	92.14	2.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	0.53	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.1	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	96		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	7.6		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.7	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	2.0		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	15		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-078-A-24 | Lab Sample ID: 140-10790-18

Matrix: Air | Lab File ID: RC05P109.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 11:58

Sample wt/vol: 100(mL) | Date Analyzed: 03/05/2018 21:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18533 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.082	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.38	J	0.40	0.075
67-66-3	Chloroform	119.38	0.098	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.38	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.32	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	3.2		0.40	0.080
108-88-3	Toluene	92.14	1.8		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.16	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	2.2		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.35	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.6		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-078-A-24 Lab Sample ID: 140-10790-18

Matrix: Air Lab File ID: RC05P109.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 11:58

Sample wt/vol: 100(mL) Date Analyzed: 03/05/2018 21:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18533 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.43	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.51	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4	J	1.4	0.27
67-66-3	Chloroform	119.38	0.48	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.4	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.9		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	22		2.7	0.54
108-88-3	Toluene	92.14	6.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.85	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	12		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.7	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.0		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-136-A-24 | Lab Sample ID: 140-10790-19

Matrix: Air | Lab File ID: RC05P110.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 12:00

Sample wt/vol: 50(mL) | Date Analyzed: 03/05/2018 21:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18533 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.61	J	0.80	0.23
56-23-5	Carbon tetrachloride	153.81	ND		0.80	0.15
75-45-6	Chlorodifluoromethane	86.47	0.49	J	0.80	0.15
67-66-3	Chloroform	119.38	1.6		0.80	0.15
156-59-2	cis-1,2-Dichloroethene	96.94	0.46	J	0.80	0.24
75-71-8	Dichlorodifluoromethane	120.91	0.59	J	0.80	0.27
75-34-3	1,1-Dichloroethane	98.96	ND		0.80	0.10
107-06-2	1,2-Dichloroethane	98.96	ND		0.80	0.19
75-35-4	1,1-Dichloroethene	96.94	ND		0.80	0.14
100-41-4	Ethylbenzene	106.17	1.2		0.80	0.27
75-09-2	Methylene Chloride	84.93	ND		2.0	1.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		4.0	0.68
91-20-3	Naphthalene	128.17	ND		0.40	0.40
127-18-4	Tetrachloroethene	165.83	ND		0.80	0.16
108-88-3	Toluene	92.14	13		1.2	1.2
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.80	0.20
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.80	0.39
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.80	0.12
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.80	0.21
79-01-6	Trichloroethene	131.39	70		0.40	0.14
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.80	0.34
95-63-6	1,2,4-Trimethylbenzene	120.20	0.89		0.80	0.25
108-67-8	1,3,5-Trimethylbenzene	120.20	0.34	J	0.80	0.26
75-01-4	Vinyl chloride	62.50	ND		0.40	0.29
1330-20-7	Xylenes, Total	106.17	7.5		1.6	0.24

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-136-A-24 Lab Sample ID: 140-10790-19

Matrix: Air Lab File ID: RC05P110.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:00

Sample wt/vol: 50(mL) Date Analyzed: 03/05/2018 21:48

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18533 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.0	J	2.6	0.73
56-23-5	Carbon tetrachloride	153.81	ND		5.0	0.94
75-45-6	Chlorodifluoromethane	86.47	1.7	J	2.8	0.53
67-66-3	Chloroform	119.38	8.0		3.9	0.73
156-59-2	cis-1,2-Dichloroethene	96.94	1.8	J	3.2	0.95
75-71-8	Dichlorodifluoromethane	120.91	2.9	J	4.0	1.3
75-34-3	1,1-Dichloroethane	98.96	ND		3.2	0.40
107-06-2	1,2-Dichloroethane	98.96	ND		3.2	0.77
75-35-4	1,1-Dichloroethene	96.94	ND		3.2	0.56
100-41-4	Ethylbenzene	106.17	5.4		3.5	1.2
75-09-2	Methylene Chloride	84.93	ND		6.9	4.5
1634-04-4	Methyl tert-butyl ether	88.15	ND		14	2.5
91-20-3	Naphthalene	128.17	ND		2.1	2.1
127-18-4	Tetrachloroethene	165.83	ND		5.4	1.1
108-88-3	Toluene	92.14	50		4.5	4.5
156-60-5	trans-1,2-Dichloroethene	96.94	ND		3.2	0.79
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		5.9	2.9
71-55-6	1,1,1-Trichloroethane	133.41	ND		4.4	0.65
79-00-5	1,1,2-Trichloroethane	133.41	ND		4.4	1.1
79-01-6	Trichloroethene	131.39	380		2.1	0.75
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		3.9	1.7
95-63-6	1,2,4-Trimethylbenzene	120.20	4.4		3.9	1.2
108-67-8	1,3,5-Trimethylbenzene	120.20	1.7	J	3.9	1.3
75-01-4	Vinyl chloride	62.50	ND		1.0	0.74
1330-20-7	Xylenes, Total	106.17	33		6.9	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

Appendix C

Support Documentation

Job Narrative
140-10790-1

Receipt
The samples were received on 2/23/2018 at 10:30 AM. The samples arrived in good condition and properly preserved.

Air - GC/MS VOA - Method TO-15 LL
EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

The continuing calibration verification (CCV) associated with batch 140-18437 exhibited % difference of > 30% for 1,2,4-trichlorobenzene and naphthalene; however, the results were within the LCS acceptance limits. The EPA method requires that all target analytes in the continuing calibration verification standard be within 30% difference from the initial calibration. According to the laboratory standard operating procedure, the continuing calibration is acceptable if it meets the laboratory control sample acceptance criteria.

The continuing calibration verification (CCV) associated with batch 140-18533 exhibited % difference of > 30% for the following analyte(s) 1,2,4-Trichlorobenzene; however, the results were within the LCS acceptance limits. The EPA method requires that all target analytes in the continuing calibration verification standard be within 30% difference from the initial calibration. According to the laboratory standard operating procedure, the continuing calibration is acceptable if it meets the laboratory control sample acceptance criteria.

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

Comments
No additional comments.

Definitions/Glossary

Client: Tetra Tech, Inc.
Project/Site: Middle River, MD

TestAmerica Job ID: 140-10790-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Air - GC/MS VOA

Analysis Batch: 18437

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-10790-1	SV-DUP02-C-24	Total/NA	Air	TO 15 LL	
140-10790-2	SV-126-C-24	Total/NA	Air	TO 15 LL	
140-10790-3	SV-101-B-24	Total/NA	Air	TO 15 LL	
140-10790-4	SV-100-B-24	Total/NA	Air	TO 15 LL	
140-10790-5	SV-093-A-24	Total/NA	Air	TO 15 LL	
140-10790-6	SV-174-A-24	Total/NA	Air	TO 15 LL	
140-10790-7	SV-138-A-24	Total/NA	Air	TO 15 LL	
140-10790-8	SV-116-A-24	Total/NA	Air	TO 15 LL	
140-10790-9	SV-DUP01-A-24	Total/NA	Air	TO 15 LL	
140-10790-10	SV-173-A-24	Total/NA	Air	TO 15 LL	
140-10790-11	SV-171-A-24	Total/NA	Air	TO 15 LL	
140-10790-13	SV-015-A-24	Total/NA	Air	TO 15 LL	
140-10790-14	SV-118-A-24	Total/NA	Air	TO 15 LL	
140-10790-15	SV-081-A-24	Total/NA	Air	TO 15 LL	
140-10790-16	SV-079-A-24	Total/NA	Air	TO 15 LL	
MB 140-18437/5	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-18437/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 18524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-10790-2 - DL	SV-126-C-24	Total/NA	Air	TO 15 LL	
140-10790-10 - DL	SV-173-A-24	Total/NA	Air	TO 15 LL	
140-10790-11 - DL	SV-171-A-24	Total/NA	Air	TO 15 LL	
140-10790-12	SV-170-A-24	Total/NA	Air	TO 15 LL	
MB 140-18524/8	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-18524/1006	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 18533

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-10790-14 - DL	SV-118-A-24	Total/NA	Air	TO 15 LL	
140-10790-15 - DL	SV-081-A-24	Total/NA	Air	TO 15 LL	
140-10790-17	SV-DUP02-A-24	Total/NA	Air	TO 15 LL	
140-10790-18	SV-078-A-24	Total/NA	Air	TO 15 LL	
140-10790-19	SV-136-A-24	Total/NA	Air	TO 15 LL	
MB 140-18533/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-18533/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865.291.3000 fax 865.584.4315

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Tony Apanavage	Site Contact: Tony Apanavage	Date: 2/20/2018	COC No:
Tera Tech	Tel/Fax: (301)528-3021	Lab Contact: John McFadden	Carrier: Fedex	7 of 9 COCs
20251 Century Blvd. Ste 200	Analysis Turnaround Time			Job No. BALTIMORE 180325
Germantown, Maryland 20874	Calendar (C) or Work Days (W) _____			
Phone: (301)528-5552	TAT if different from Below ___Standard_____			SDG No.
	☐ 2 weeks			
Project Name: 112IC08388	☐ 1 week			
Site: Middle River, MD	☐ 2 days			
P O #	☐ 1 day			Sampler: MULLIS/PRYOR

140-10790 Chain of Custody

Sample Identification	Sample Date	Time Start	Time Stop	Canister Volume in Field "Hg (Start)	Canister Volume in Field "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	Sample Specific Notes:
SV-DUP02-C-24	2/20/2018	0000	0000	-30	0	10592	11823	X	
SV-126-C-24	2/20/2018	1026	1137	-29	0	11508	11639	X	Fedex ✓ O
SV-101-B-24	2/20/2018	1040	1156	-30	0	11505	11821	X	Received @ ambient
SV-100-B-24	2/20/2018	1100	1200	-31	-4	9710	10973	X	2 boxes, N. custody seal
									tr K# 7715 4919 2412
									" 4905 9980
									KW 2/23/18
									3 Ts
									19 flows
									19 cans

Special Instructions/QC Requirements & Comments: **Contracted Analyte List**

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Walt P	TT Inc	2/22/18/1150	[illegible]	2/22/18	1150
[illegible]		2/22/18	[illegible]	2/23/18 TAM	2/23/18 1030

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

Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865.291.3000 fax 865.584.4315

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Tony Apanavage	Site Contact: Tony Apanavage	Date: 2/21/2018	COC No:
Tera Tech	Tel/Fax: (301)528-3021	Lab Contact: John McFadden	Carrier: Fedex	8 of 9 COCs
20251 Century Blvd. Ste 200	Analysis Turnaround Time			Job No. 180381
Germantown, Maryland 20874	Calendar (C) or Work Days (W) _____			
Phone: (301)528-5552	TAT if different from Below ___Standard_____			
	☐ 2 weeks			SDG No.
Project Name: 112IC08388	☐ 1 week			
Site: Middle River, MD	☐ 2 days			
P O #	☐ 1 day			Sampler: MULLIS/PRYOR

Sample Identification	Sample Date	Time Start	Time Stop	Canister Volume in Field "Hg (Start)	Canister Volume in Field "Hg (Stop)	Flow Controller ID	Canister ID	TO-15								Sample Specific Notes:
SV-093-A-24	2/21/2018	0940	1136	-30	0	10791	11831	X								
SV-174-A-24	2/21/2018	0943	1138	-28	0	10432	09576	X								
SV-138-A-24	2/21/2018	0945	1139	-27	0	10655	09634	X								
SV-116-A-24	2/21/2018	0948	1141	-30	0	11535	10753	X								
SV-DUP01-A-24	2/21/2018	0000	0000	-30	0	10440	09593	X								
SV-173-A-24	2/21/2018	0953	1143	-30	0	09908	11827	X								
SV-171-A-24	2/21/2018	0955	1144	-30	0	11245	9799	X								
SV-170-A-24	2/21/2018	0957	1146	-30	-1	09859	11832	X								
SV-015-A-24	2/21/2018	1002	1148	-27	0	10591	10960	X								
SV-118-A-24	2/21/2018	1004	1149	-30	0	09714	10923	X								
SV-081-A-24	2/21/2018	1009	1153	-30	-2	10463	11572	X								
SV-079-A-24	2/21/2018	1013	1155	-30	0	10292	11615	X								
SV-DUP02-A-24	2/21/2018	0000	0000	-30	0	11497	11537	X								
SV-078-A-24	2/21/2018	1019	1158	-30	0	10863	10744	X								
SV-136-A-24	2/21/2018	1022	1200	-30	0	09564	11281	X								

Special Instructions/QC Requirements & Comments: **Contracted Analyte List**

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	TT Inc	2/22/18 1150	[signature]		2/22/18 1150
Relinquished by: [signature]	Company:	Date/Time: 2/22/18	Received by: [signature]	Company: TA-Knox	Date/Time: 2/23/18 1030
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Loc: 140
10790

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST **Log In Number:** _____

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	/			☐ **Containers, Broken**
2. Were ambient air containers received intact?			/	☑ Checked in lab
3. The coolers/containers custody seal if present, is it intact?			/	☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			/	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	/			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	/			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	/			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	/			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	/			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?	/			☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	/			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	/			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	/			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	/			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	/			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			/	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			/	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:_____			/	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			/	☐ If no, lab will adjust
20. For rad samples was sample activity info. Provided?			/	☐ Project missing info

Comments/Actions Taken

_____

Labeling Verified by: _____ **Date:** _____

pH test strip lot number: _____

Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative: _____	
Lot Number: _____	
Exp Date: _____	
Analyst: _____	
Date: _____	
Time: _____	

Project #: 1400245 PM Instructions: _____

Sample Receiving Associate: _____ Date: 2/23/18

QA026R30.doc, 080916

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 2/28/2018

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
afb	140-10790-A-1	11823	10631	b	1	0	1105	
afb	140-10790-A-2	11639	10549	b	1	0	1106	
afb	140-10790-A-3	11821	10631	b	1	0	1107	
afb	140-10790-A-4	10973	10549	b	1	-3.1	1108	
afb	140-10790-A-5	11831	10631	b	1	+0.6	1109	
afb	140-10790-A-6	09576	10600	b	1	+0.7	1110	
afb	140-10790-A-7	09634	10554	b	1	+0.6	1111	
afb	140-10790-A-8	10753	10549	b	1	+0.6	1112	
afb	140-10790-A-9	09583	10549	b	1	+0.6	1113	
afb	140-10790-A-10	11827	10631	b	1	+0.6	1114	
afb	140-10790-A-11	09799	10477	b	1	+0.7	1115	
afb	140-10790-A-12	11832	10631	b	1	0	1116	
afb	140-10790-A-13	10960	10477	b	1	0	1117	
afb	140-10790-A-14	10923	10549	b	1	0	1118	
afb	140-10790-A-15	11572	10554	b	1	0	1119	
afb	140-10790-A-16	11615	10549	b	1	0	1120	
afb	140-10790-A-17	11537	10477	b	1	0	1121	
afb	140-10790-A-18	10744	10549	b	1	0	1122	
afb	140-10790-A-19	11281	10600	b	1	0	1123	

Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Lab File ID: B28B200ML.D Lab Sample ID: MB 140-18437/5

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MG Date Analyzed: 02/28/2018 12:31

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-18437/1002	GCCVB28-LCS.d	02/28/2018 10:49
SV-DUP02-C-24	140-10790-1	GB28P101.D	02/28/2018 14:32
SV-126-C-24	140-10790-2	GB28P102.D	02/28/2018 15:14
SV-100-B-24	140-10790-4	GB28P104.D	02/28/2018 16:40
SV-093-A-24	140-10790-5	GB28P105.D	02/28/2018 17:21
SV-174-A-24	140-10790-6	GB28P106.D	02/28/2018 18:02
SV-138-A-24	140-10790-7	GB28P107.D	02/28/2018 18:44
SV-116-A-24	140-10790-8	GB28P108.D	02/28/2018 19:26
SV-DUP01-A-24	140-10790-9	GB28P109.D	02/28/2018 20:07
SV-173-A-24	140-10790-10	GB28P110.D	02/28/2018 20:49
SV-171-A-24	140-10790-11	GB28P111.D	02/28/2018 21:32
SV-015-A-24	140-10790-13	GB28P113.D	02/28/2018 22:56
SV-118-A-24	140-10790-14	GB28P114.D	02/28/2018 23:38
SV-081-A-24	140-10790-15	GB28P115.D	03/01/2018 00:20
SV-079-A-24	140-10790-16	GB28P116D.D	03/01/2018 01:03
SV-101-B-24	140-10790-3	GB28P103R.D	03/01/2018 03:51

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-18437/5

Matrix: Air | Lab File ID: B28B200ML.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 02/28/2018 12:31

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18437 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	0.149	J	0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-18437/5

Matrix: Air Lab File ID: B28B200ML.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 02/28/2018 12:31

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18437 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	0.519	J	0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Lab File ID: G500BC02.D Lab Sample ID: MB 140-18524/8

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MG Date Analyzed: 03/02/2018 15:06

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-18524/1006	GCCVC02A-LCS.d	03/02/2018 12:58
SV-126-C-24 DL	140-10790-2 DL	GC02P101.D	03/02/2018 15:47
SV-173-A-24 DL	140-10790-10 DL	GC02P102.D	03/02/2018 16:28
SV-171-A-24 DL	140-10790-11 DL	GC02P103.D	03/02/2018 17:09
SV-170-A-24	140-10790-12	GC02P104.D	03/02/2018 18:32

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-18524/8

Matrix: Air Lab File ID: G500BC02.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 03/02/2018 15:06

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18524 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-18524/8

Matrix: Air Lab File ID: G500BC02.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 03/02/2018 15:06

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18524 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Lab File ID: R500BC05.D Lab Sample ID: MB 140-18533/4

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MR Date Analyzed: 03/05/2018 12:14

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-18533/1002	RCCVC05-LCS.d	03/05/2018 10:17
SV-118-A-24 DL	140-10790-14 DL	RC05P106.D	03/05/2018 18:39
SV-081-A-24 DL	140-10790-15 DL	RC05P107.D	03/05/2018 19:27
SV-DUP02-A-24	140-10790-17	RC05P108.D	03/05/2018 20:14
SV-078-A-24	140-10790-18	RC05P109.D	03/05/2018 21:02
SV-136-A-24	140-10790-19	RC05P110.D	03/05/2018 21:48

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-18533/4

Matrix: Air | Lab File ID: R500BC05.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 03/05/2018 12:14

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18533 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-18533/4

Matrix: Air Lab File ID: R500BC05.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 03/05/2018 12:14

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18533 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Lab File ID: GBFBK13.D BFB Injection Date: 11/13/2017

Instrument ID: MG BFB Injection Time: 14:59

Analysis Batch No.: 15917

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.3	
75	30.0 - 60.0 % of mass 95	51.8	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	82.0	
175	5.0 - 9.0 % of mass 174	5.6	(6.8) 1
176	95.0 - 101.0 % of mass 174	79.5	(97.0) 1
177	5.0 - 9.0 % of mass 176	5.2	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-15917/3	GK13IC01.D	11/13/2017	16:15
	IC 140-15917/4	GK13IC02.D	11/13/2017	16:57
	IC 140-15917/5	GK13IC03.D	11/13/2017	17:39
	IC 140-15917/6	GK13IC04.D	11/13/2017	18:22
	IC 140-15917/7	GK13IC05.D	11/13/2017	19:05
	IC 140-15917/8	GK13IC06.D	11/13/2017	19:47
	ICIS 140-15917/9	GK13IC07.D	11/13/2017	20:29
	IC 140-15917/10	GK13IC08.D	11/13/2017	21:11
	IC 140-15917/11	GK13IC09.D	11/13/2017	21:54
	IC 140-15917/12	GK13IC10.D	11/13/2017	22:37
	ICV 140-15917/14	GICVK13.D	11/14/2017	00:02

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Lab File ID: GBFBB28.D BFB Injection Date: 02/28/2018

Instrument ID: MG BFB Injection Time: 10:17

Analysis Batch No.: 18437

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.6	
75	30.0 - 60.0 % of mass 95	52.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.3	(0.5) 1
174	50.0 - 120.00 % of mass 95	69.9	
175	5.0 - 9.0 % of mass 174	4.8	(6.8) 1
176	95.0 - 101.0 % of mass 174	67.4	(96.4) 1
177	5.0 - 9.0 % of mass 176	4.3	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-18437/2	GCCVB28.D	02/28/2018	10:49
	LCS 140-18437/1002	GCCVB28-LCS.d	02/28/2018	10:49
	MB 140-18437/5	B28B200ML.D	02/28/2018	12:31
SV-DUP02-C-24	140-10790-1	GB28P101.D	02/28/2018	14:32
SV-126-C-24	140-10790-2	GB28P102.D	02/28/2018	15:14
SV-100-B-24	140-10790-4	GB28P104.D	02/28/2018	16:40
SV-093-A-24	140-10790-5	GB28P105.D	02/28/2018	17:21
SV-174-A-24	140-10790-6	GB28P106.D	02/28/2018	18:02
SV-138-A-24	140-10790-7	GB28P107.D	02/28/2018	18:44
SV-116-A-24	140-10790-8	GB28P108.D	02/28/2018	19:26
SV-DUP01-A-24	140-10790-9	GB28P109.D	02/28/2018	20:07
SV-173-A-24	140-10790-10	GB28P110.D	02/28/2018	20:49
SV-171-A-24	140-10790-11	GB28P111.D	02/28/2018	21:32
SV-015-A-24	140-10790-13	GB28P113.D	02/28/2018	22:56
SV-118-A-24	140-10790-14	GB28P114.D	02/28/2018	23:38
SV-081-A-24	140-10790-15	GB28P115.D	03/01/2018	00:20
SV-079-A-24	140-10790-16	GB28P116D.D	03/01/2018	01:03
SV-101-B-24	140-10790-3	GB28P103R.D	03/01/2018	03:51

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Lab File ID: GBFBC02A.D BFB Injection Date: 03/02/2018

Instrument ID: MG BFB Injection Time: 12:25

Analysis Batch No.: 18524

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.3	
75	30.0 - 60.0 % of mass 95	52.8	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	81.2	
175	5.0 - 9.0 % of mass 174	5.5	(6.8) 1
176	95.0 - 101.0 % of mass 174	77.8	(95.8) 1
177	5.0 - 9.0 % of mass 176	5.0	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-18524/6	GCCVC02A.D	03/02/2018	12:58
	LCS 140-18524/1006	GCCVC02A-LCS .d	03/02/2018	12:58
	MB 140-18524/8	G500BC02.D	03/02/2018	15:06
SV-126-C-24 DL	140-10790-2 DL	GC02P101.D	03/02/2018	15:47
SV-173-A-24 DL	140-10790-10 DL	GC02P102.D	03/02/2018	16:28
SV-171-A-24 DL	140-10790-11 DL	GC02P103.D	03/02/2018	17:09
SV-170-A-24	140-10790-12	GC02P104.D	03/02/2018	18:32

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Lab File ID: RBFBA30.D BFB Injection Date: 01/30/2018

Instrument ID: MR BFB Injection Time: 11:12

Analysis Batch No.: 17762

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.1	
75	30.0 - 60.0 % of mass 95	54.8	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	78.1	
175	5.0 - 9.0 % of mass 174	5.7	(7.3) 1
176	95.0 - 101.0 % of mass 174	76.6	(98.2) 1
177	5.0 - 9.0 % of mass 176	5.0	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-17762/3	RA30IC01.D	01/30/2018	12:29
	IC 140-17762/4	RA30IC02.D	01/30/2018	13:16
	IC 140-17762/5	RA30IC03.D	01/30/2018	14:04
	IC 140-17762/6	RA30IC04.D	01/30/2018	14:50
	IC 140-17762/7	RA30IC05.D	01/30/2018	15:39
	IC 140-17762/8	RA30IC06.D	01/30/2018	16:27
	ICIS 140-17762/9	RA30IC07.D	01/30/2018	17:15
	IC 140-17762/10	RA30IC08.D	01/30/2018	18:03
	IC 140-17762/11	RA30IC09.D	01/30/2018	18:50
	IC 140-17762/12	RA30IC10.D	01/30/2018	19:38
	ICV 140-17762/14	RA30ICV.D	01/30/2018	21:11

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Lab File ID: RBFBC05.D BFB Injection Date: 03/05/2018

Instrument ID: MR BFB Injection Time: 09:45

Analysis Batch No.: 18533

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.8	
75	30.0 - 60.0 % of mass 95	55.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	84.0	
175	5.0 - 9.0 % of mass 174	6.2	(7.3) 1
176	95.0 - 101.0 % of mass 174	82.1	(97.7) 1
177	5.0 - 9.0 % of mass 176	5.5	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-18533/2	RCCVC05.D	03/05/2018	10:17
	LCS 140-18533/1002	RCCVC05-LCS.d	03/05/2018	10:17
	MB 140-18533/4	R500BC05.D	03/05/2018	12:14
SV-118-A-24 DL	140-10790-14 DL	RC05P106.D	03/05/2018	18:39
SV-081-A-24 DL	140-10790-15 DL	RC05P107.D	03/05/2018	19:27
SV-DUP02-A-24	140-10790-17	RC05P108.D	03/05/2018	20:14
SV-078-A-24	140-10790-18	RC05P109.D	03/05/2018	21:02
SV-136-A-24	140-10790-19	RC05P110.D	03/05/2018	21:48

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1 Analy Batch No.: 15917

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2017 16:15 Calibration End Date: 11/13/2017 22:37 Calibration ID: 1337

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-15917/3	GK13IC01.D
Level 2	IC 140-15917/4	GK13IC02.D
Level 3	IC 140-15917/5	GK13IC03.D
Level 4	IC 140-15917/6	GK13IC04.D
Level 5	IC 140-15917/7	GK13IC05.D
Level 6	IC 140-15917/8	GK13IC06.D
Level 7	ICIS 140-15917/9	GK13IC07.D
Level 8	IC 140-15917/10	GK13IC08.D
Level 9	IC 140-15917/11	GK13IC09.D
Level 10	IC 140-15917/12	GK13IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Chlorodifluoromethane	+++++ 0.4209	0.4741 0.3778	0.4890 0.3631	0.4015 0.3389	0.3904 0.3461	Ave		0.4002				13.2		30.0			
Propene	+++++ 1.2942	+++++ 1.1742	1.4339 1.0902	1.3826 1.0058	1.2116 0.9801	Ave		1.1966				14.0		30.0			
Dichlorodifluoromethane	+++++ 4.2687	4.7102 3.9109	4.2434 3.7103	4.1211 3.4967	3.8994 3.5726	Ave		3.9926				9.7		30.0			
Chloromethane	+++++ 0.4856	+++++ 0.4266	+++++ 0.4031	0.5283 0.3716	0.4379 0.3688	Ave		0.4317				13.6		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++ 2.6040	2.6490 2.4574	2.7020 2.4381	2.3871 2.3767	2.4295 2.6085	Ave		2.5169				4.9		30.0			
Vinyl chloride	1.9357 1.6167	1.7829 1.5085	1.6650 1.4276	1.5284 1.3540	1.4886 1.3938	Ave		1.5701				11.6		30.0			
1,3-Butadiene	+++++ 1.2734	+++++ 1.1671	1.3254 1.1011	1.2255 1.0267	1.1534 1.0249	Ave		1.1622				9.4		30.0			
Butane	+++++ 2.4587	+++++ 2.2121	2.7533 2.0602	2.4531 1.8895	2.3384 1.8366	Ave		2.2502				13.9		30.0			
Bromomethane	+++++ 1.4801	+++++ 1.4021	1.5021 1.3416	1.4094 1.2847	1.3709 1.3397	Ave		1.3913				5.3		30.0			
Chloroethane	+++++ 0.8384	+++++ 0.7765	0.8487 0.7405	0.8017 0.7131	0.7663 0.7370	Ave		0.7778				6.3		30.0			
Ethanol	+++++ 0.7651	+++++ 0.6439	0.7998 0.6811	0.7406 0.6282	0.7569 0.5700	Ave		0.6982				11.4		30.0			
Vinyl bromide	+++++ 1.4498	1.4149 1.3601	1.4580 1.3047	1.3403 1.2626	1.3032 1.3326	Ave		1.3585				5.0		30.0			
2-Methylbutane	+++++ 1.8716	2.3370 1.7013	2.0465 1.5831	1.7630 1.4868	1.7293 1.5330	Ave		1.7835				15.2		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1 Analy Batch No.: 15917

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2017 16:15 Calibration End Date: 11/13/2017 22:37 Calibration ID: 1337

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Trichlorofluoromethane	+++++ 4.3809	4.6634 4.0134	4.4068 3.8719	4.1208 3.7805	4.0463 3.9344	Ave		4.1354				7.0		30.0			
Acrolein	+++++ 0.3377	+++++ 0.3261	+++++ 0.3414	0.3514 0.3222	0.3132 0.3382	Ave		0.3329				3.9		30.0			
Acetonitrile	+++++ 0.5747	+++++ 0.4890	+++++ 0.5325	0.4160 0.5074	0.5128 0.4502	Ave		0.4975				10.5		30.0			
Acetone	+++++ 0.6862	+++++ 0.5664	+++++ 0.6053	+++++ 0.5595	0.8231 0.4809	Ave		0.6202				19.3		30.0			
Pentane	+++++ 0.2963	+++++ 0.2708	+++++ 0.2656	0.2760 0.2604	0.2756 0.2709	Ave		0.2737				4.2		30.0			
Isopropyl alcohol	+++++ 1.8952	+++++ 1.6084	1.9172 1.6809	1.7458 1.3805	1.8324 +++++	Ave		1.7229				10.9		30.0			
Ethyl ether	+++++ 1.5210	+++++ 1.3351	1.4931 1.3355	1.4082 1.3266	1.5010 1.2689	Ave		1.3987				6.9		30.0			
1,1-Dichloroethene	1.7502 1.4609	1.5168 1.3618	1.4246 1.3230	1.2646 1.3098	1.2861 1.3797	Ave		1.4077				10.2		30.0			
Acrylonitrile	+++++ 0.9596	+++++ 0.8283	0.8995 0.8932	0.8126 0.8745	0.9184 0.8340	Ave		0.8775				5.7		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	3.6567 3.1066	3.1502 2.9260	2.9962 2.8369	2.9172 2.7926	2.8230 2.9631	Ave		3.0169				8.4		30.0			
tert-Butyl alcohol	+++++ 2.5279	2.2922 2.1541	2.4015 2.2705	2.2114 2.0890	2.2379 2.3346	Ave		2.2799				5.8		30.0			
Methylene Chloride	+++++ 1.4251	+++++ 1.2601	+++++ 1.1850	2.2436 1.1339	1.5560 1.1655	Ave		1.4242				27.6		30.0			
3-Chloropropene	+++++ 1.4457	+++++ 1.2674	1.5312 1.2161	1.3992 1.1961	1.3315 1.2092	Ave		1.3246				9.4		30.0			
Carbon disulfide	+++++ 4.1086	+++++ 3.8051	4.0534 3.6756	3.8052 3.6313	3.7219 3.8432	Ave		3.8305				4.5		30.0			
trans-1,2-Dichloroethene	1.7541 1.4461	1.5580 1.3782	1.3541 1.3639	1.3369 1.3461	1.2781 1.4225	Ave		1.4238				9.7		30.0			
Methyl tert-butyl ether	+++++ 3.7627	3.7268 3.2357	3.5424 3.6305	3.1609 3.5993	3.6393 3.2995	Ave		3.5108				6.3		30.0			
1,1-Dichloroethane	3.5525 2.8572	3.1022 2.6631	2.8540 2.6446	2.7940 2.5777	2.6493 2.6406	Ave		2.8335				10.5		30.0			
Vinyl acetate	+++++ 3.7174	+++++ 3.2004	3.4707 3.6232	2.9712 3.5570	3.5837 3.2104	Ave		3.4167				7.6		30.0			
2-Butanone (MEK)	+++++ 0.6334	+++++ 0.5295	0.7110 0.6299	0.6425 0.6169	0.6553 0.5489	Ave		0.6209				9.3		30.0			
Hexane	+++++ 1.2427	+++++ 1.1685	1.3522 1.1361	1.2777 1.0863	1.1291 1.0815	Ave		1.1842				8.2		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1 Analy Batch No.: 15917

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2017 16:15 Calibration End Date: 11/13/2017 22:37 Calibration ID: 1337

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
cis-1,2-Dichloroethene	1.7741 1.4982	1.5249 1.4314	1.4959 1.4374	1.4499 1.4124	1.3413 1.4652	Ave		1.4831				7.7		30.0			
Ethyl acetate	+++++ 2.9400	+++++ 2.4680	2.6650 2.9172	2.4499 2.8494	2.8983 2.4913	Ave		2.7099				8.0		30.0			
Chloroform	3.9103 3.3083	3.5770 3.1112	3.3275 3.0912	3.2198 3.0077	3.0511 3.0501	Ave		3.2654				8.7		30.0			
Tetrahydrofuran	+++++ 1.5162	+++++ 1.2787	1.5723 1.4773	1.3462 1.4386	1.4921 1.2939	Ave		1.4269				7.6		30.0			
1,1,1-Trichloroethane	4.1906 3.4987	3.6924 3.3036	3.4470 3.2998	3.3138 3.2176	3.1294 3.2831	Ave		3.4376				9.0		30.0			
1,2-Dichloroethane	0.5117 0.4100	0.4505 0.3742	0.4316 0.3691	0.3877 0.3586	0.3568 0.3781	Ave		0.4028				12.2		30.0			
Benzene	1.1158 0.7924	0.8587 0.7364	0.7839 0.7148	0.7379 0.6985	0.6966 0.7357	Ave		0.7871				16.0		30.0			
Cyclohexane	+++++ 0.1335	+++++ 0.1226	0.1426 0.1184	0.1305 0.1148	0.1176 0.1205	Ave		0.1251				7.6		30.0			
Carbon tetrachloride	0.7088 0.6291	0.6098 0.5944	0.5973 0.5968	0.5681 0.5952	0.5334 0.6504	Ave		0.6083				7.8		30.0			
1-Butanol	+++++ 0.0946	+++++ 0.0834	+++++ 0.0831	+++++ 0.0819	0.0793 0.0982	Ave		0.0867				8.9		30.0			
2,2,4-Trimethylpentane	+++++ 1.3672	1.5226 1.2532	1.4131 1.2121	1.2981 1.1665	1.1966 1.2023	Ave		1.2924				9.2		30.0			
Heptane	+++++ 0.2926	0.3256 0.2738	0.2998 0.2671	0.2725 0.2600	0.2552 0.2748	Ave		0.2801				7.9		30.0			
1,2-Dichloropropane	+++++ 0.3066	0.3445 0.2774	0.3207 0.2778	0.2853 0.2707	0.2745 0.2714	Ave		0.2921				8.9		30.0			
Trichloroethene	0.4652 0.3688	0.3821 0.3588	0.3635 0.3455	0.3473 0.3501	0.3041 0.4002	Ave		0.3686				11.5		30.0			
Dibromomethane	+++++ 0.3329	0.4326 0.3103	0.3748 0.3064	0.3179 0.3025	0.2950 0.3293	Ave		0.3335				13.2		30.0			
Bromodichloromethane	+++++ 0.6113	0.5991 0.5748	0.5839 0.5709	0.5278 0.5670	0.5155 0.6011	Ave		0.5724				5.7		30.0			
1,4-Dioxane	+++++ 0.1105	+++++ 0.0941	0.1052 0.1081	0.0908 0.1051	0.0972 0.1066	Ave		0.1022				7.0		30.0			
Methyl methacrylate	+++++ 0.3158	+++++ 0.2641	0.2492 0.3141	0.2384 0.3122	0.2828 0.2892	Ave		0.2832				10.7		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.5375	+++++ 0.4341	0.5084 0.4922	0.4079 0.4649	0.4854 0.4900	Ave		0.4776				8.6		30.0			
cis-1,3-Dichloropropene	0.5075 0.4702	0.4397 0.4480	0.4523 0.4416	0.4038 0.4413	0.4096 0.4695	Ave		0.4483				6.7		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1 Analy Batch No.: 15917

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2017 16:15 Calibration End Date: 11/13/2017 22:37 Calibration ID: 1337

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
trans-1,3-Dichloropropene	0.4342 0.4373	0.4304 0.4122	0.4106 0.4009	0.3622 0.4246	0.3856 0.4414	Ave		0.4139				6.1		30.0			
Toluene	1.0429 0.9043	0.9626 0.8486	0.9133 0.8393	0.7821 0.8678	0.8513 0.8790	Ave		0.8891				8.2		30.0			
1,1,2-Trichloroethane	0.3033 0.2741	0.2815 0.2557	0.2792 0.2501	0.2453 0.2586	0.2541 0.2630	Ave		0.2665				6.7		30.0			
2-Hexanone	+++++ 0.2716	+++++ 0.2322	0.2518 0.2501	0.2147 0.2500	0.2290 0.2793	Ave		0.2473				8.7		30.0			
Dibromochloromethane	0.5416 0.5728	0.5126 0.5660	0.5075 0.5689	0.4644 0.6094	0.4724 0.6634	Ave		0.5479				11.2		30.0			
Octane	+++++ 0.3244	0.3327 0.3080	0.3192 0.3031	0.2916 0.3075	0.2942 0.3192	Ave		0.3111				4.4		30.0			
1,2-Dibromoethane (EDB)	+++++ 0.5098	0.4728 0.4820	0.4689 0.4701	0.4348 0.4973	0.4408 0.5244	Ave		0.4779				6.2		30.0			
Tetrachloroethene	0.4213 0.3335	0.3824 0.3188	0.3455 0.3140	0.3122 0.3328	0.3036 0.3657	Ave		0.3430				10.8		30.0			
Chlorobenzene	0.8433 0.7231	0.7521 0.6719	0.7272 0.6662	0.6567 0.7000	0.6517 0.7385	Ave		0.7131				8.2		30.0			
Ethylbenzene	1.3742 1.1894	1.1702 1.0825	1.1557 1.1009	0.9649 1.1355	1.1083 1.1255	Ave		1.1407				9.0		30.0			
m-Xylene & p-Xylene	+++++ 0.9298	0.9015 0.8276	0.9024 0.8564	0.7434 0.8908	0.8693 0.8668	Ave		0.8653				6.3		30.0			
Bromoform	+++++ 0.5176	+++++ 0.5363	0.4204 0.5814	0.3780 0.6486	0.4038 0.7062	Ave		0.5240				22.7		30.0			
Styrene	0.5999 0.6697	0.5201 0.6167	0.5206 0.6491	0.4604 0.7038	0.5617 0.7401	Ave		0.6042				14.7		30.0			
Nonane	+++++ 0.6466	0.6263 0.5909	0.6432 0.5621	0.5601 0.5546	0.5952 0.5326	Ave		0.5902				7.0		30.0			
o-Xylene	1.0869 0.9646	0.9289 0.8472	0.9499 0.8898	0.7858 0.9259	0.9216 0.9030	Ave		0.9204				8.5		30.0			
1,1,2,2-Tetrachloroethane	0.6533 0.6932	0.6079 0.5957	0.6355 0.6316	0.5342 0.6439	0.6321 0.6389	Ave		0.6266				6.6		30.0			
1,2,3-Trichloropropane	+++++ 0.2119	0.1993 0.1814	0.2064 0.1971	0.1669 0.2037	0.1957 0.2016	Ave		0.1960				7.0		30.0			
Isopropylbenzene	+++++ 1.3491	1.3682 1.1827	1.3327 1.2527	1.1039 1.2987	1.2911 1.2653	Ave		1.2716				6.6		30.0			
Propylbenzene	+++++ 0.3621	0.3270 0.3129	0.3289 0.3411	0.2729 0.3669	0.3245 +++++	Ave		0.3295				9.0		30.0			
2-Chlorotoluene	+++++ 0.3343	0.3272 0.3066	0.3121 0.3108	0.2736 0.3334	0.2981 +++++	Ave		0.3120				6.5		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1 Analy Batch No.: 15917

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2017 16:15 Calibration End Date: 11/13/2017 22:37 Calibration ID: 1337

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
4-Ethyltoluene	+++++ 1.3352	1.1081 1.1364	1.1913 1.2355	1.0106 1.2920	1.2010 1.2605	Ave		1.1967				8.4		30.0			
1,3,5-Trimethylbenzene	0.4807 0.5225	0.4770 0.4536	0.4624 0.5031	0.3977 0.5363	0.4907 0.5389	Ave		0.4863				8.8		30.0			
Alpha Methyl Styrene	+++++ 0.5103	0.3322 0.4660	0.3565 0.5246	0.3053 0.5662	0.4034 0.5736	Ave		0.4487				22.8		30.0			
Decane	+++++ 0.7857	0.6888 0.6911	0.7401 0.6921	0.6253 0.6831	0.7217 0.6552	Ave		0.6981				6.7		30.0			
tert-Butylbenzene	+++++ 1.1901	1.0319 1.0285	1.0714 1.1332	0.9066 1.1980	1.1104 1.2180	Ave		1.0987				9.1		30.0			
1,2,4-Trimethylbenzene	1.1091 1.1388	0.9655 0.9726	1.0084 1.0738	0.8528 1.1248	1.0434 1.1041	Ave		1.0393				8.7		30.0			
1,3-Dichlorobenzene	0.8365 0.7918	0.7336 0.7095	0.7293 0.7443	0.6029 0.8352	0.6783 0.9280	Ave		0.7589				12.2		30.0			
sec-Butylbenzene	+++++ 1.6578	1.3730 1.4153	1.4542 1.5502	1.2351 1.6298	1.5346 +++++	Ave		1.4813				9.5		30.0			
Benzyl chloride	+++++ 0.9768	0.7957 0.8885	0.8314 0.9902	0.6921 1.0745	0.8463 1.0292	Ave		0.9028				13.7		30.0			
1,4-Dichlorobenzene	0.8219 0.7874	0.7403 0.7096	0.7341 0.7307	0.6294 0.8124	0.6903 0.8859	Ave		0.7542				9.8		30.0			
4-Isopropyltoluene	+++++ 1.3804	1.1035 1.1652	1.1829 1.3276	1.0350 1.3891	1.2763 +++++	Ave		1.2325				10.6		30.0			
1,2,3-Trimethylbenzene	1.1301 1.2212	0.9985 1.0326	1.0839 1.1440	0.9224 1.1900	1.1508 1.1418	Ave		1.1015				8.4		30.0			
1,2-Dichlorobenzene	0.8093 0.7576	0.7011 0.6556	0.7122 0.7007	0.5760 0.7551	0.6631 0.7809	Ave		0.7112				9.7		30.0			
Butylbenzene	+++++ 1.3331	1.1396 1.1099	1.1769 1.2421	0.9844 1.2553	1.2183 +++++	Ave		1.1825				9.0		30.0			
Undecane	+++++ 0.8305	0.7108 0.6797	0.7565 0.7566	0.6273 0.6922	0.7778 0.5012	Ave		0.7036				13.7		30.0			
1,2-Dibromo-3-Chloropropane	0.4186 0.5564	0.3796 0.4894	0.4384 +++++	0.3554 +++++	0.4490 +++++	Ave		0.4410				15.3		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 1.7199	1.3253 1.3969	1.5070 1.6674	1.2340 1.5685	1.5075 +++++	Ave		1.4908				11.1		30.0			
Dodecane	+++++ 0.8159	0.6104 0.6383	0.7590 0.6272	0.5888 0.4291	0.6184 +++++	Ave		0.6359				18.2		30.0			
1,2,4-Trichlorobenzene	+++++ 0.6739	0.6036 0.5545	0.6234 0.6355	0.4876 0.5074	0.5245 +++++	Ave		0.5763				11.7		30.0			
Naphthalene	+++++ 1.5712	1.3840 1.2411	1.5280 1.3968	1.1679 1.1550	1.2131 +++++	Ave		1.3321				12.1		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1 Analy Batch No.: 15917

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2017 16:15 Calibration End Date: 11/13/2017 22:37 Calibration ID: 1337

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Hexachlorobutadiene	+++++ 0.6454	0.5112 0.5557	0.5505 0.6440	0.4534 0.5647	0.5218 +++++	Ave		0.5558				11.7		30.0			
1,2,3-Trichlorobenzene	+++++ 0.6521	0.5790 0.5122	0.6088 0.5747	0.4773 0.4042	0.4747 +++++	Ave		0.5354				15.3		30.0			
2-Methylnaphthalene	+++++ 0.8005	0.5668 0.6138	0.7733 0.4431	0.6512 +++++	0.3021 +++++	Ave		0.5930				29.8		50.0			
1-Methylnaphthalene	+++++ 0.7496	0.5426 0.5657	0.7787 0.3966	0.6537 +++++	0.2811 +++++	Ave		0.5668				32.0		50.0			
4-Bromofluorobenzene (Surr)	0.7251 0.7536	0.7270 0.7603	0.7319 0.7473	0.7585 0.7425	0.7608 0.7566	Ave		0.7464				1.9		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-17762/3	RA30IC01.D
Level 2	IC 140-17762/4	RA30IC02.D
Level 3	IC 140-17762/5	RA30IC03.D
Level 4	IC 140-17762/6	RA30IC04.D
Level 5	IC 140-17762/7	RA30IC05.D
Level 6	IC 140-17762/8	RA30IC06.D
Level 7	ICIS 140-17762/9	RA30IC07.D
Level 8	IC 140-17762/10	RA30IC08.D
Level 9	IC 140-17762/11	RA30IC09.D
Level 10	IC 140-17762/12	RA30IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Chlorodifluoromethane	+++++ 0.4996	+++++ 0.5018	0.5364 0.4761	0.5007 0.4556	0.4969 0.4366	Ave		0.4879				6.4		30.0			
Propene	+++++ 1.0148	+++++ 1.0127	+++++ 0.9251	1.0749 0.8535	1.0335 0.7750	Ave		0.9557				11.4		30.0			
Dichlorodifluoromethane	+++++ 3.8576	+++++ 3.8716	3.9445 3.4238	4.4278 3.3920	3.8443 3.2841	Ave		3.7557				10.0		30.0			
Chloromethane	+++++ 0.3356	+++++ 0.3504	+++++ 0.3161	0.4352 0.2922	0.3844 0.2804	Ave		0.3421				15.8		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	2.9869 2.5228	2.8020 2.5888	2.6799 2.4191	2.4834 2.2928	2.5057 2.1607	Ave		2.5442				9.4		30.0			
Vinyl chloride	1.2473 1.0050	1.2981 1.0133	1.0342 0.9733	1.0613 0.9642	1.0145 0.8783	Ave		1.0490				12.2		30.0			
1,3-Butadiene	+++++ 0.6759	+++++ 0.6901	0.7589 0.6575	0.7160 0.6429	0.6702 0.6007	Ave		0.6765				7.0		30.0			
Butane	+++++ 1.1770	+++++ 1.1571	1.1761 1.0993	1.1870 1.0664	1.1472 0.9821	Ave		1.1240				6.3		30.0			
Bromomethane	+++++ 0.9756	+++++ 0.9799	1.0961 0.9468	0.9664 0.9339	0.9805 0.8851	Ave		0.9705				6.2		30.0			
Chloroethane	+++++ 0.4798	+++++ 0.4684	0.5400 0.4543	0.5007 0.4508	0.4816 0.4272	Ave		0.4754				7.2		30.0			
Ethanol	+++++ 0.3138	+++++ 0.3115	+++++ 0.2974	0.3206 0.2839	0.3092 0.2628	Ave		0.2999				6.8		30.0			
Vinyl bromide	+++++ 0.9734	+++++ 0.9603	1.0223 0.9264	0.9931 0.9030	0.9628 0.8698	Ave		0.9514				5.2		30.0			
2-Methylbutane	+++++ 0.7927	0.8473 0.7870	0.8827 0.7573	0.8140 0.7354	0.8057 0.7063	Ave		0.7921				6.9		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Acrolein	+++++ 0.2131	+++++ 0.2023	+++++ 0.1714	0.2463 0.2369	0.2775 0.1986	Ave		0.2209				16.0		30.0			
Trichlorofluoromethane	3.8163 3.6210	3.8962 3.5670	3.7377 3.3875	3.7221 3.2631	3.6118 3.0510	Ave		3.5674				7.4		30.0			
Acetonitrile	+++++ 0.2710	+++++ 0.2792	+++++ 0.2690	+++++ 0.2590	0.3012 0.2516	Ave		0.2718				6.4		30.0			
Acetone	+++++ 0.4445	+++++ 0.4298	+++++ 0.3730	+++++ 0.3559	0.5743 0.3319	Ave		0.4182				21.0		30.0			
Isopropyl alcohol	+++++ 1.7615	+++++ 1.7262	+++++ 1.6035	1.7601 1.4471	1.7064 1.2490	Ave		1.6077				12.0		30.0			
Pentane	+++++ 0.2821	0.3253 0.2863	0.3062 0.2706	0.2848 0.2514	0.2797 0.2238	Ave		0.2789				10.5		30.0			
Ethyl ether	+++++ 1.0595	+++++ 1.0591	1.1464 0.9558	1.0861 0.8868	1.0639 0.8197	Ave		1.0097				11.0		30.0			
1,1-Dichloroethene	1.8230 1.4732	1.6952 1.5251	1.5415 1.4388	1.4628 1.3846	1.4710 1.3297	Ave		1.5145				9.6		30.0			
Acrylonitrile	+++++ 0.9755	1.0491 1.0149	0.9699 0.9431	0.9648 0.8986	0.9313 0.8597	Ave		0.9563				6.0		30.0			
tert-Butyl alcohol	+++++ 3.0919	+++++ 3.1666	3.2956 2.9405	3.0814 2.8297	3.0612 2.6483	Ave		3.0144				6.7		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	3.6835 3.3085	3.3240 3.3647	3.3270 3.1386	3.2027 2.9781	3.2883 2.7719	Ave		3.2387				7.5		30.0			
Methylene Chloride	+++++ 1.5226	+++++ 1.4846	+++++ 1.3365	2.3963 1.2627	1.7575 1.1890	Ave		1.5642				26.4		30.0			
3-Chloropropene	+++++ 1.2912	1.4624 1.2679	1.3517 1.1239	1.2960 1.1775	1.2499 1.0934	Ave		1.2571				9.1		30.0			
Carbon disulfide	+++++ 4.3010	4.5429 4.3495	4.2824 4.0908	4.2202 3.9413	4.1883 3.7920	Ave		4.1898				5.3		30.0			
trans-1,2-Dichloroethene	+++++ 1.5663	1.6529 1.6054	1.5536 1.5101	1.5451 1.4740	1.5012 1.4213	Ave		1.5366				4.5		30.0			
Methyl tert-butyl ether	+++++ 4.8878	4.9780 5.0046	4.7681 4.7335	4.6401 4.5480	4.7610 4.3260	Ave		4.7386				4.5		30.0			
1,1-Dichloroethane	3.2552 2.9583	3.2402 2.9974	3.0427 2.7728	2.9120 2.6386	2.9342 2.5185	Ave		2.9270				8.0		30.0			
Vinyl acetate	+++++ 3.0422	+++++ 3.0483	2.4722 2.8443	2.4587 3.0745	2.7400 2.9503	Ave		2.8288				8.9		30.0			
2-Butanone (MEK)	+++++ 0.7255	+++++ 0.7913	+++++ 0.7057	0.7096 0.7007	0.7825 0.6631	Ave		0.7255				6.4		30.0			
Hexane	+++++ 1.2050	1.3784 1.2187	1.2369 1.1204	1.1721 1.0624	1.1769 0.9868	Ave		1.1731				9.5		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
cis-1,2-Dichloroethene	1.9071 1.6125	1.8156 1.6678	1.6641 1.5780	1.6147 1.5302	1.6025 1.4817	Ave		1.6474				7.8		30.0			
Ethyl acetate	+++++ 2.7290	+++++ 2.8405	2.1840 2.6632	2.2813 2.5958	2.5408 2.4854	Ave		2.5400				8.7		30.0			
Chloroform	4.2863 3.7052	3.8694 3.7903	3.7705 3.5491	3.6794 3.4047	3.6984 3.2578	Ave		3.7011				7.5		30.0			
Tetrahydrofuran	+++++ 1.3407	+++++ 1.3730	1.3680 1.2688	1.3174 1.2195	1.3030 1.1665	Ave		1.2946				5.6		30.0			
1,1,1-Trichloroethane	4.1703 3.9689	4.0153 4.0994	3.8140 3.8790	3.6871 3.7835	3.8389 3.6271	Ave		3.8883				4.5		30.0			
1,2-Dichloroethane	0.4598 0.4390	0.4262 0.4435	0.4288 0.4170	0.3913 0.4087	0.4251 0.3915	Ave		0.4231				5.2		30.0			
Benzene	0.8742 0.7844	0.8183 0.7925	0.7957 0.7383	0.7735 0.6873	0.7655 0.6121	Ave		0.7642				9.5		30.0			
1-Butanol	+++++ 0.0491	+++++ 0.0535	+++++ 0.0554	+++++ 0.0549	0.0399 0.0507	Ave		0.0506				11.4		30.0			
Cyclohexane	+++++ 0.1282	0.1302 0.1319	0.1361 0.1198	0.1248 0.1109	0.1254 0.0971	Ave		0.1227				9.8		30.0			
Carbon tetrachloride	0.6377 0.6481	0.5867 0.6494	0.5971 0.6370	0.5827 0.6239	0.6061 0.5914	Ave		0.6160				4.2		30.0			
2,2,4-Trimethylpentane	+++++ 1.1700	+++++ 1.1823	1.1763 1.1037	1.1213 1.0350	1.1405 0.9359	Ave		1.1081				7.6		30.0			
1,2-Dichloropropane	0.2892 0.2749	0.2827 0.2781	0.2783 0.2608	0.2653 0.2439	0.2652 0.2201	Ave		0.2659				7.7		30.0			
Heptane	+++++ 0.2794	0.2806 0.2826	0.2727 0.2668	0.2557 0.2502	0.2719 0.2244	Ave		0.2649				7.1		30.0			
Trichloroethene	0.3941 0.3561	0.3498 0.3989	0.3569 0.4050	0.3383 0.3430	0.3431 0.3253	Ave		0.3611				7.8		30.0			
Dibromomethane	+++++ 0.3180	+++++ 0.3337	0.3335 0.3154	0.3130 0.3075	0.3081 0.2866	Ave		0.3145				4.8		30.0			
Bromodichloromethane	0.5552 0.5927	0.5165 0.6275	0.5155 0.6065	0.5215 0.5926	0.5443 0.5621	Ave		0.5634				7.1		30.0			
1,4-Dioxane	+++++ 0.1244	0.1026 0.1255	0.1107 0.1188	0.1100 0.1111	0.1114 0.0998	Ave		0.1127				7.8		30.0			
Methyl methacrylate	+++++ 0.2534	+++++ 0.2814	+++++ 0.2766	0.1921 0.2732	0.2185 0.2613	Ave		0.2509				13.3		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.4476	+++++ 0.4761	0.4073 0.4607	0.3703 0.4462	0.4067 0.4120	Ave		0.4284				8.2		30.0			
cis-1,3-Dichloropropene	0.4432 0.4616	0.4182 0.4890	0.4016 0.4666	0.4077 0.4542	0.4258 0.4244	Ave		0.4392				6.4		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
trans-1,3-Dichloropropene	0.5110 0.5036	0.4535 0.5257	0.4406 0.5134	0.4431 0.5163	0.4525 0.4903	Ave		0.4850				7.0		30.0			
Toluene	1.2824 1.1325	1.1432 1.1561	1.0870 1.0939	1.0545 1.0385	1.0799 0.9486	Ave		1.1017				7.9		30.0			
1,1,2-Trichloroethane	0.3289 0.3161	0.3191 0.3218	0.2970 0.3044	0.2890 0.2905	0.3016 0.2671	Ave		0.3035				6.1		30.0			
2-Hexanone	+++++ 0.2856	+++++ 0.3067	0.1978 0.3130	0.1839 0.2994	0.2390 0.2768	Ave		0.2628				19.0		30.0			
Dibromochloromethane	0.5478 0.6218	0.4611 0.6757	0.5045 0.6734	0.4783 0.6763	0.5239 0.6415	Ave		0.5804				14.9		30.0			
Octane	0.3713 0.3761	0.3521 0.3823	0.3634 0.3590	0.3351 0.3411	0.3561 0.3074	Ave		0.3544				6.2		30.0			
1,2-Dibromoethane (EDB)	0.5777 0.5703	0.4862 0.5934	0.5028 0.5775	0.5036 0.5627	0.5214 0.5228	Ave		0.5418				7.1		30.0			
Tetrachloroethene	0.4510 0.4222	0.4302 0.4299	0.4096 0.4116	0.3928 0.3938	0.4006 0.3646	Ave		0.4106				5.9		30.0			
Chlorobenzene	1.0111 0.8808	0.9072 0.8981	0.8780 0.8583	0.8277 0.8176	0.8488 0.7523	Ave		0.8680				7.8		30.0			
Ethylbenzene	1.6592 1.4956	1.4733 1.5265	1.4692 1.4423	1.3826 1.3480	1.4274 1.1942	Ave		1.4418				8.4		30.0			
m-Xylene & p-Xylene	1.2623 1.1995	1.1484 1.2020	1.1693 1.1112	1.0926 1.0102	1.1299 0.8551	Ave		1.1181				10.3		30.0			
Bromoform	0.4567 0.5340	0.3917 0.5876	0.3879 0.5961	0.3803 0.6243	0.4243 0.6099	Ave		0.4993				20.2		30.0			
Styrene	+++++ 0.7708	+++++ 0.8353	0.5730 0.8116	0.5596 0.7867	0.6410 0.7271	Ave		0.7131				15.2		30.0			
Nonane	0.6231 0.6749	0.6344 0.6650	0.6202 0.5965	0.5897 0.5334	0.6338 0.4526	Ave		0.6024				11.0		30.0			
o-Xylene	1.3802 1.2416	1.2323 1.2309	1.2402 1.1408	1.1662 1.0563	1.1911 0.9246	Ave		1.1804				10.4		30.0			
1,1,2,2-Tetrachloroethane	0.7571 0.7998	0.6769 0.7375	0.6943 0.6416	0.6940 0.7009	0.7398 0.6230	Ave		0.7065				7.6		30.0			
1,2,3-Trichloropropane	0.2821 0.2687	0.2608 0.2698	0.2586 0.2533	0.2448 0.2410	0.2532 0.2251	Ave		0.2557				6.4		30.0			
Isopropylbenzene	+++++ 1.6847	1.7627 1.6664	1.6980 1.5413	1.5734 1.4182	1.6200 1.2451	Ave		1.5789				10.2		30.0			
Propylbenzene	0.4393 0.4800	0.4121 0.4854	0.4266 0.4494	0.4019 0.4134	0.4353 0.3689	Ave		0.4312				8.2		30.0			
2-Chlorotoluene	0.4307 0.4308	0.4121 0.4227	0.4100 0.3945	0.3900 0.3647	0.4077 0.3250	Ave		0.3988				8.2		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
4-Ethyltoluene	1.6721 1.8578	1.5887 1.8488	1.6064 1.7062	1.5559 1.5414	1.6697 1.3406	Ave		1.6388				9.3		30.0			
1,3,5-Trimethylbenzene	0.6886 0.7368	0.6438 0.7377	0.6390 0.6854	0.6228 0.6329	0.6583 0.5712	Ave		0.6617				7.8		30.0			
Alpha Methyl Styrene	+++++ 0.5961	+++++ 0.6811	+++++ 0.6723	0.3867 0.6319	0.4651 0.5717	Ave		0.5721				19.1		30.0			
Decane	0.7782 0.9615	0.7577 0.9673	0.8036 0.8765	0.7851 0.7693	0.8536 0.6351	Ave		0.8188				12.2		30.0			
tert-Butylbenzene	1.6747 1.7037	1.5629 1.6867	1.5711 1.5356	1.5162 1.3829	1.5602 1.1822	Ave		1.5376				10.2		30.0			
1,2,4-Trimethylbenzene	1.4061 1.5971	1.3356 1.5702	1.4117 1.4079	1.3483 1.2376	1.4396 1.0385	Ave		1.3793				11.6		30.0			
1,3-Dichlorobenzene	0.9382 0.9839	0.8463 0.9937	0.8839 0.9167	0.8388 0.8391	0.8924 0.7369	Ave		0.8870				8.7		30.0			
sec-Butylbenzene	2.1386 2.2501	1.9617 2.2330	1.9986 2.0283	1.9397 1.7523	2.0522 1.4290	Ave		1.9784				12.2		30.0			
Benzyl chloride	0.9176 1.2280	0.8673 1.3521	0.8700 1.2619	0.8429 1.1005	1.0250 0.9090	Ave		1.0374				18.1		30.0			
1,4-Dichlorobenzene	0.9388 0.9885	0.8643 0.9957	0.8741 0.9128	0.8360 0.8274	0.8810 0.7278	Ave		0.8846				9.0		30.0			
4-Isopropyltoluene	1.7285 1.9959	1.5857 2.0202	1.7817 1.8554	1.6423 1.6625	1.7503 1.3675	Ave		1.7390				11.1		30.0			
1,2,3-Trimethylbenzene	1.5856 1.7943	1.5711 1.7803	1.5668 1.6018	1.4899 1.4272	1.6163 1.2294	Ave		1.5663				10.4		30.0			
1,2-Dichlorobenzene	0.8942 0.9621	0.8150 0.9678	0.8654 0.8979	0.8005 0.8158	0.8702 0.7264	Ave		0.8615				8.7		30.0			
Butylbenzene	1.4292 1.8444	1.3568 1.8896	1.4519 1.7531	1.4134 1.5467	1.5664 1.2564	Ave		1.5508				13.8		30.0			
Undecane	0.7892 1.0726	0.7390 1.1100	0.7934 1.0270	0.8096 0.9132	0.8805 0.7285	Ave		0.8863				15.8		30.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.5969	+++++ 0.6647	0.3685 0.6164	0.3739 0.6149	0.4386 0.5398	Ave		0.5267				22.2		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 0.9191	+++++ 0.9859	0.7212 0.9676	0.6936 0.9342	0.7408 0.8332	Ave		0.8495				13.9		30.0			
Dodecane	+++++ 0.9928	+++++ 1.1283	0.5865 1.0229	0.6183 0.9289	0.6706 0.6900	Ave		0.8298				25.4		30.0			
1,2,4-Trichlorobenzene	+++++ 0.7149	0.4150 0.8253	0.4838 0.8320	0.4553 0.8417	0.5017 0.7379	Ave		0.6453				27.7		30.0			
Naphthalene	1.0448 1.6712	0.9243 1.9078	1.1299 1.8929	1.1276 1.8463	1.2769 1.5182	Ave		1.4340				26.4		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Hexachlorobutadiene	0.7046 0.7752	0.6195 0.8332	0.6587 0.8074	0.6012 0.7762	0.6084 0.6733	Ave		0.7058				12.3		30.0			
1,2,3-Trichlorobenzene	+++++ 0.6757	+++++ 0.7953	0.4965 0.7779	0.4801 0.7989	0.4939 0.7046	Ave		0.6529				21.7		30.0			
2-Methylnaphthalene	+++++ 0.2487	+++++ 0.4641	+++++ 0.4569	+++++ 0.4755	0.1340 0.3372	Ave		0.3527				39.5		50.0			
1-Methylnaphthalene	+++++ 0.2715	+++++ 0.5022	+++++ 0.4656	0.2315 0.4794	0.1676 0.3359	Ave		0.3505				38.1		50.0			
4-Bromofluorobenzene (Surr)	0.7650 0.7800	0.7779 0.7658	0.7890 0.7351	0.7826 0.7176	0.7941 0.6764	Ave		0.7584				5.0		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Lab Sample ID: ICV 140-15917/14 Calibration Date: 11/14/2017 00:02

Instrument ID: MG Calib Start Date: 11/13/2017 16:15

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/13/2017 22:37

Lab File ID: GICVK13.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4002	0.3895		1.95	2.00	-2.7	35.0
Propene	Ave	1.197	1.174		1.96	2.00	-1.9	35.0
Dichlorodifluoromethane	Ave	3.993	4.061		2.03	2.00	1.7	35.0
Chloromethane	Ave	0.4317	0.4323		2.00	2.00	0.1	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.517	2.694		2.14	2.00	7.0	35.0
Vinyl chloride	Ave	1.570	1.603		2.04	2.00	2.1	35.0
1,3-Butadiene	Ave	1.162	1.186		2.04	2.00	2.1	35.0
Butane	Ave	2.250	2.306		2.05	2.00	2.5	35.0
Bromomethane	Ave	1.391	1.453		2.09	2.00	4.5	35.0
Chloroethane	Ave	0.7778	0.8308		2.14	2.00	6.8	35.0
Ethanol	Ave	0.6982	0.5950		8.52	10.0	-14.8	35.0
Vinyl bromide	Ave	1.358	1.556		2.29	2.00	14.5	35.0
2-Methylbutane	Ave	1.784	1.797		2.01	2.00	0.7	35.0
Trichlorofluoromethane	Ave	4.135	4.239		2.05	2.00	2.5	35.0
Acrolein	Ave	0.3329	0.3377		2.03	2.00	1.4	35.0
Acetonitrile	Ave	0.4975	0.4865		1.96	2.00	-2.2	35.0
Acetone	Ave	0.6202	0.5335		5.16	6.00	-14.0	35.0
Pentane	Ave	0.2737	0.3148		2.30	2.00	15.0	35.0
Isopropyl alcohol	Ave	1.723	1.633		5.69	6.00	-5.2	35.0
Ethyl ether	Ave	1.399	1.267		1.81	2.00	-9.4	35.0
1,1-Dichloroethene	Ave	1.408	1.524		2.16	2.00	8.2	35.0
Acrylonitrile	Ave	0.8775	0.8709		1.98	2.00	-0.8	35.0
tert-Butyl alcohol	Ave	2.280	2.356		2.07	2.00	3.3	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.017	3.223		2.14	2.00	6.8	35.0
Methylene Chloride	Ave	1.424	1.388		1.95	2.00	-2.6	35.0
3-Chloropropene	Ave	1.325	1.246		1.88	2.00	-5.9	35.0
Carbon disulfide	Ave	3.831	4.206		2.20	2.00	9.8	35.0
trans-1,2-Dichloroethene	Ave	1.424	1.532		2.15	2.00	7.6	35.0
Methyl tert-butyl ether	Ave	3.511	3.407		1.94	2.00	-3.0	35.0
1,1-Dichloroethane	Ave	2.834	2.904		2.05	2.00	2.5	35.0
Vinyl acetate	Ave	3.417	3.254		1.90	2.00	-4.8	35.0
2-Butanone (MEK)	Ave	0.6209	0.5708		1.84	2.00	-8.1	35.0
Hexane	Ave	1.184	1.245		2.10	2.00	5.2	35.0
cis-1,2-Dichloroethene	Ave	1.483	1.601		2.16	2.00	7.9	35.0
Ethyl acetate	Ave	2.710	2.380		1.76	2.00	-12.2	35.0
Chloroform	Ave	3.265	3.269		2.00	2.00	0.1	35.0
Tetrahydrofuran	Ave	1.427	1.341		1.88	2.00	-6.0	35.0
1,1,1-Trichloroethane	Ave	3.438	3.456		2.01	2.00	0.5	35.0
1,2-Dichloroethane	Ave	0.4028	0.3981		1.98	2.00	-1.2	35.0
Benzene	Ave	0.7871	0.8305		2.11	2.00	5.5	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Lab Sample ID: ICV 140-15917/14 Calibration Date: 11/14/2017 00:02

Instrument ID: MG Calib Start Date: 11/13/2017 16:15

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/13/2017 22:37

Lab File ID: GICVK13.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Cyclohexane	Ave	0.1251	0.1403		2.24	2.00	12.2	35.0
Carbon tetrachloride	Ave	0.6083	0.6766		2.22	2.00	11.2	35.0
1-Butanol	Ave	0.0867	0.0887		2.04	2.00	2.2	35.0
2,2,4-Trimethylpentane	Ave	1.292	1.388		2.15	2.00	7.4	35.0
Heptane	Ave	0.2801	0.3067		2.19	2.00	9.5	35.0
1,2-Dichloropropane	Ave	0.2921	0.3018		2.07	2.00	3.3	35.0
Trichloroethene	Ave	0.3686	0.4205		2.28	2.00	14.1	35.0
Dibromomethane	Ave	0.3335	0.3527		2.12	2.00	5.8	35.0
Bromodichloromethane	Ave	0.5724	0.6227		2.18	2.00	8.8	35.0
1,4-Dioxane	Ave	0.1022	0.1067		2.09	2.00	4.4	35.0
Methyl methacrylate	Ave	0.2832	0.2751		1.94	2.00	-2.9	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4776	0.4730		1.98	2.00	-1.0	35.0
cis-1,3-Dichloropropene	Ave	0.4483	0.4940		2.20	2.00	10.2	35.0
trans-1,3-Dichloropropene	Ave	0.4139	0.4356		2.10	2.00	5.2	35.0
Toluene	Ave	0.8891	0.8985		2.02	2.00	1.1	35.0
1,1,2-Trichloroethane	Ave	0.2665	0.2662		2.00	2.00	-0.1	35.0
2-Hexanone	Ave	0.2473	0.2492		2.01	2.00	0.7	35.0
Dibromochloromethane	Ave	0.5479	0.5920		2.16	2.00	8.0	35.0
Octane	Ave	0.3111	0.3432		2.21	2.00	10.3	35.0
1,2-Dibromoethane (EDB)	Ave	0.4779	0.5168		2.16	2.00	8.1	35.0
Tetrachloroethene	Ave	0.3430	0.3560		2.08	2.00	3.8	35.0
Chlorobenzene	Ave	0.7131	0.7452		2.09	2.00	4.5	35.0
Ethylbenzene	Ave	1.141	1.122		1.97	2.00	-1.7	35.0
m-Xylene & p-Xylene	Ave	0.8653	0.8696		4.02	4.00	0.5	35.0
Bromoform	Ave	0.5240	0.5445		2.08	2.00	3.9	35.0
Styrene	Ave	0.6042	0.6718		2.22	2.00	11.2	35.0
Nonane	Ave	0.5902	0.6101		2.07	2.00	3.4	35.0
o-Xylene	Ave	0.9204	0.8793		1.91	2.00	-4.5	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6266	0.6177		1.97	2.00	-1.4	35.0
1,2,3-Trichloropropane	Ave	0.1960	0.1919		1.96	2.00	-2.1	35.0
Isopropylbenzene	Ave	1.272	1.276		2.01	2.00	0.3	35.0
Propylbenzene	Ave	0.3295	0.3450		2.09	2.00	4.7	35.0
2-Chlorotoluene	Ave	0.3120	0.3305		2.12	2.00	5.9	35.0
4-Ethyltoluene	Ave	1.197	1.161		1.94	2.00	-3.0	35.0
1,3,5-Trimethylbenzene	Ave	0.4863	0.4840		1.99	2.00	-0.5	35.0
Alpha Methyl Styrene	Ave	0.4487	0.5063		2.26	2.00	12.8	35.0
Decane	Ave	0.6981	0.7015		2.01	2.00	0.5	35.0
tert-Butylbenzene	Ave	1.099	1.091		1.99	2.00	-0.7	35.0
1,2,4-Trimethylbenzene	Ave	1.039	1.014		1.95	2.00	-2.4	35.0
1,3-Dichlorobenzene	Ave	0.7589	0.7482		1.97	2.00	-1.4	35.0
sec-Butylbenzene	Ave	1.481	1.499		2.02	2.00	1.2	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Lab Sample ID: ICV 140-15917/14 Calibration Date: 11/14/2017 00:02

Instrument ID: MG Calib Start Date: 11/13/2017 16:15

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/13/2017 22:37

Lab File ID: GICVK13.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzyl chloride	Ave	0.9028	0.9351		2.07	2.00	3.6	35.0
1,4-Dichlorobenzene	Ave	0.7542	0.7438		1.97	2.00	-1.4	35.0
4-Isopropyltoluene	Ave	1.232	1.220		1.98	2.00	-1.0	35.0
1,2,3-Trimethylbenzene	Ave	1.102	0.9788		1.78	2.00	-11.1	35.0
1,2-Dichlorobenzene	Ave	0.7112	0.6972		1.96	2.00	-2.0	35.0
Butylbenzene	Ave	1.182	1.167		1.97	2.00	-1.3	35.0
Undecane	Ave	0.7036	0.6966		1.98	2.00	-1.0	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.4410	0.2779		1.26	2.00	-37.0*	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.491	1.085		1.45	2.00	-27.3	35.0
Dodecane	Ave	0.6359	0.6663		2.10	2.00	4.8	35.0
1,2,4-Trichlorobenzene	Ave	0.5763	0.5970		2.07	2.00	3.6	35.0
Naphthalene	Ave	1.332	1.326		1.99	2.00	-0.4	35.0
Hexachlorobutadiene	Ave	0.5558	0.5688		2.05	2.00	2.3	35.0
1,2,3-Trichlorobenzene	Ave	0.5354	0.5806		2.17	2.00	8.5	35.0
2-Methylnaphthalene	Ave	0.5930	0.3864		2.99	4.59	-34.8	50.0
1-Methylnaphthalene	Ave	0.5668	0.4031		3.27	4.60	-28.9	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7464	0.7320		3.92	4.00	-1.9	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Lab Sample ID: CCVIS 140-18437/2 Calibration Date: 02/28/2018 10:49

Instrument ID: MG Calib Start Date: 06/21/2017 17:00

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/21/2017 22:43

Lab File ID: GCCVB28.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2,3-Dimethylpentane	Ave	0.1678	0.1944			2.00	15.8	30.0
Thiophene	Ave	0.4073	0.0002			2.00	-99.9*	30.0
Methylcyclohexane	Ave	0.5656	0.4730			2.00	-16.4	30.0
2,3-Dimethylheptane	Ave	0.6663	0.0040			2.00	-99.4*	30.0
Butylcyclohexane	Ave	0.8168	0.0018			2.00	-99.8*	30.0
Indane	Ave	1.093	0.7039			2.00	-35.6*	30.0
Indene	QuaF		0.5814			2.00		30.0
2-Methylpentane	Ave	1.922				2.00		
Acetaldehyde	Ave	0.3260				10.0		

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Lab Sample ID: CCVIS 140-18437/2 Calibration Date: 02/28/2018 10:49

Instrument ID: MG Calib Start Date: 11/13/2017 16:15

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/13/2017 22:37

Lab File ID: GCCVB28.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4002	0.4924		2.46	2.00	23.0	30.0
Propene	Ave	1.197	1.692		2.83	2.00	41.4*	30.0
Dichlorodifluoromethane	Ave	3.993	4.894		2.45	2.00	22.6	30.0
Chloromethane	Ave	0.4317	0.5986		2.77	2.00	38.7*	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.517	2.648		2.10	2.00	5.2	30.0
Vinyl chloride	Ave	1.570	1.971		2.51	2.00	25.5	30.0
1,3-Butadiene	Ave	1.162	1.566		2.70	2.00	34.8*	30.0
Butane	Ave	2.250	3.093		2.75	2.00	37.4*	30.0
Bromomethane	Ave	1.391	1.605		2.31	2.00	15.4	30.0
Chloroethane	Ave	0.7778	0.9836		2.53	2.00	26.5	30.0
Ethanol	Ave	0.6982	0.5632		8.07	10.0	-19.3	30.0
Vinyl bromide	Ave	1.358	1.495		2.20	2.00	10.0	30.0
2-Methylbutane	Ave	1.784	2.263		2.54	2.00	26.9	30.0
Acrolein	Ave	0.3329	0.3212		1.93	2.00	-3.5	30.0
Trichlorofluoromethane	Ave	4.135	4.857		2.35	2.00	17.4	30.0
Acetonitrile	Ave	0.4975	0.5250		2.11	2.00	5.5	30.0
Acetone	Ave	0.6202	0.5524		5.34	6.00	-10.9	30.0
Pentane	Ave	0.2737	0.3360		2.46	2.00	22.8	30.0
Isopropyl alcohol	Ave	1.723	1.600		5.57	6.00	-7.1	30.0
Ethyl ether	Ave	1.399	1.483		2.12	2.00	6.1	30.0
1,1-Dichloroethene	Ave	1.408	1.525		2.17	2.00	8.3	30.0
Acrylonitrile	Ave	0.8775	0.8836		2.01	2.00	0.7	30.0
tert-Butyl alcohol	Ave	2.280	2.179		1.91	2.00	-4.4	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.017	3.043		2.02	2.00	0.9	30.0
Methylene Chloride	Ave	1.424	1.305		1.83	2.00	-8.4	30.0
3-Chloropropene	Ave	1.325	1.404		2.12	2.00	6.0	30.0
Carbon disulfide	Ave	3.831	4.118		2.15	2.00	7.5	30.0
trans-1,2-Dichloroethene	Ave	1.424	1.524		2.14	2.00	7.0	30.0
Methyl tert-butyl ether	Ave	3.511	3.364		1.92	2.00	-4.2	30.0
1,1-Dichloroethane	Ave	2.834	3.385		2.39	2.00	19.5	30.0
Vinyl acetate	Ave	3.417	3.552		2.08	2.00	4.0	30.0
2-Butanone (MEK)	Ave	0.6209	0.5034		1.62	2.00	-18.9	30.0
Hexane	Ave	1.184	1.493		2.52	2.00	26.0	30.0
cis-1,2-Dichloroethene	Ave	1.483	1.550		2.09	2.00	4.5	30.0
Ethyl acetate	Ave	2.710	2.588		1.91	2.00	-4.5	30.0
Chloroform	Ave	3.265	3.673		2.25	2.00	12.5	30.0
Tetrahydrofuran	Ave	1.427	1.398		1.96	2.00	-2.0	30.0
1,1,1-Trichloroethane	Ave	3.438	3.875		2.25	2.00	12.7	30.0
1,2-Dichloroethane	Ave	0.4028	0.4257		2.11	2.00	5.7	30.0
Benzene	Ave	0.7871	0.7542		1.92	2.00	-4.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Lab Sample ID: CCVIS 140-18437/2 Calibration Date: 02/28/2018 10:49

Instrument ID: MG Calib Start Date: 11/13/2017 16:15

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/13/2017 22:37

Lab File ID: GCCVB28.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Cyclohexane	Ave	0.1251	0.1379		2.20	2.00	10.2	30.0
Carbon tetrachloride	Ave	0.6083	0.5227		1.72	2.00	-14.1	30.0
1-Butanol	Ave	0.0867	0.0716		1.65	2.00	-17.4	30.0
2,2,4-Trimethylpentane	Ave	1.292	1.413		2.19	2.00	9.3	30.0
Heptane	Ave	0.2801	0.2898		2.07	2.00	3.5	30.0
1,2-Dichloropropane	Ave	0.2921	0.3123		2.14	2.00	6.9	30.0
Trichloroethene	Ave	0.3686	0.3319		1.80	2.00	-9.9	30.0
Dibromomethane	Ave	0.3335	0.3057		1.83	2.00	-8.3	30.0
Bromodichloromethane	Ave	0.5724	0.5909		2.06	2.00	3.2	30.0
1,4-Dioxane	Ave	0.1022	0.0697		1.36	2.00	-31.8*	30.0
Methyl methacrylate	Ave	0.2832	0.2376		1.68	2.00	-16.1	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4776	0.4124		1.73	2.00	-13.7	30.0
cis-1,3-Dichloropropene	Ave	0.4483	0.4739		2.11	2.00	5.7	30.0
trans-1,3-Dichloropropene	Ave	0.4139	0.4368		2.11	2.00	5.5	30.0
Toluene	Ave	0.8891	0.8005		1.80	2.00	-10.0	30.0
1,1,2-Trichloroethane	Ave	0.2665	0.2587		1.94	2.00	-2.9	30.0
2-Hexanone	Ave	0.2473	0.2129		1.72	2.00	-13.9	30.0
Dibromochloromethane	Ave	0.5479	0.5113		1.87	2.00	-6.7	30.0
Octane	Ave	0.3111	0.3140		2.02	2.00	0.9	30.0
1,2-Dibromoethane (EDB)	Ave	0.4779	0.4557		1.91	2.00	-4.6	30.0
Tetrachloroethene	Ave	0.3430	0.2963		1.73	2.00	-13.6	30.0
Chlorobenzene	Ave	0.7131	0.6215		1.74	2.00	-12.8	30.0
Ethylbenzene	Ave	1.141	0.9840		1.73	2.00	-13.7	30.0
m-Xylene & p-Xylene	Ave	0.8653	0.7479		3.46	4.00	-13.6	30.0
Bromoform	Ave	0.5240	0.4406		1.68	2.00	-15.9	30.0
Styrene	Ave	0.6042	0.5226		1.73	2.00	-13.5	30.0
Nonane	Ave	0.5902	0.6487		2.20	2.00	9.9	30.0
o-Xylene	Ave	0.9204	0.7678		1.67	2.00	-16.6	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6266	0.5323		1.70	2.00	-15.0	30.0
1,2,3-Trichloropropane	Ave	0.1960	0.1508		1.54	2.00	-23.1	30.0
Isopropylbenzene	Ave	1.272	0.998		1.57	2.00	-21.5	30.0
Propylbenzene	Ave	0.3295	0.2399		1.46	2.00	-27.2	30.0
2-Chlorotoluene	Ave	0.3120	0.2594		1.66	2.00	-16.9	30.0
4-Ethyltoluene	Ave	1.197	0.9117		1.52	2.00	-23.8	30.0
1,3,5-Trimethylbenzene	Ave	0.4863	0.3502		1.44	2.00	-28.0	30.0
Alpha Methyl Styrene	Ave	0.4487	0.3403		1.52	2.00	-24.2	30.0
Decane	Ave	0.6981	0.6715		1.92	2.00	-3.8	30.0
tert-Butylbenzene	Ave	1.099	0.7977		1.45	2.00	-27.4	30.0
1,2,4-Trimethylbenzene	Ave	1.039	0.7880		1.52	2.00	-24.2	30.0
1,3-Dichlorobenzene	Ave	0.7589	0.5469		1.44	2.00	-27.9	30.0
sec-Butylbenzene	Ave	1.481	1.133		1.53	2.00	-23.5	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Lab Sample ID: CCVIS 140-18437/2 Calibration Date: 02/28/2018 10:49

Instrument ID: MG Calib Start Date: 11/13/2017 16:15

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/13/2017 22:37

Lab File ID: GCCVB28.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzyl chloride	Ave	0.9028	0.7738		1.71	2.00	-14.3	30.0
1,4-Dichlorobenzene	Ave	0.7542	0.5434		1.44	2.00	-28.0	30.0
4-Isopropyltoluene	Ave	1.232	0.8870		1.44	2.00	-28.0	30.0
1,2,3-Trimethylbenzene	Ave	1.102	0.7785		1.41	2.00	-29.3	30.0
1,2-Dichlorobenzene	Ave	0.7112	0.4998		1.41	2.00	-29.7	30.0
Butylbenzene	Ave	1.182	0.9251		1.56	2.00	-21.8	30.0
Undecane	Ave	0.7036	0.6041		1.72	2.00	-14.1	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.4410	0.2162		0.980	2.00	-51.0*	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.491	0.7586		1.02	2.00	-49.1*	30.0
Dodecane	Ave	0.6359	0.5296		1.67	2.00	-16.7	30.0
1,2,4-Trichlorobenzene	Ave	0.5763	0.3722		1.29	2.00	-35.4*	30.0
Naphthalene	Ave	1.332	0.8752		1.31	2.00	-34.3*	30.0
Hexachlorobutadiene	Ave	0.5558	0.3504		1.26	2.00	-37.0*	30.0
1,2,3-Trichlorobenzene	Ave	0.5354	0.3408		1.27	2.00	-36.3*	30.0
2-Methylnaphthalene	Ave	0.5930	0.2096		2.21	6.25	-64.6*	50.0
1-Methylnaphthalene	Ave	0.5668	0.2099		2.31	6.25	-63.0*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7464	0.8350		4.48	4.00	11.9	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Lab Sample ID: CCVIS 140-18524/6 Calibration Date: 03/02/2018 12:58

Instrument ID: MG Calib Start Date: 06/21/2017 17:00

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/21/2017 22:43

Lab File ID: GCCVC02A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2,3-Dimethylpentane	Ave	0.1678	0.2283			2.00	36.1*	30.0
Thiophene	Ave	0.4073	0.0017			2.00	-99.6*	30.0
Methylcyclohexane	Ave	0.5656	0.5588			2.00	-1.2	30.0
2,3-Dimethylheptane	Ave	0.6663	0.0057			2.00	-99.1*	30.0
Indane	Ave	1.093	1.121			2.00	2.6	30.0
Butylcyclohexane	Ave	0.8168	0.0001			2.00	-100.0*	30.0
Indene	QuaF		0.9589			2.00		30.0
2-Methylpentane	Ave	1.922				2.00		
Acetaldehyde	Ave	0.3260				10.0		

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Lab Sample ID: CCVIS 140-18524/6 Calibration Date: 03/02/2018 12:58

Instrument ID: MG Calib Start Date: 11/13/2017 16:15

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/13/2017 22:37

Lab File ID: GCCVC02A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4002	0.4608		2.30	2.00	15.1	30.0
Propene	Ave	1.197	1.398		2.34	2.00	16.9	30.0
Dichlorodifluoromethane	Ave	3.993	4.627		2.32	2.00	15.9	30.0
Chloromethane	Ave	0.4317	0.4998		2.32	2.00	15.8	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.517	2.554		2.03	2.00	1.5	30.0
Vinyl chloride	Ave	1.570	1.689		2.15	2.00	7.6	30.0
1,3-Butadiene	Ave	1.162	1.293		2.23	2.00	11.3	30.0
Butane	Ave	2.250	2.592		2.30	2.00	15.2	30.0
Bromomethane	Ave	1.391	1.412		2.03	2.00	1.5	30.0
Chloroethane	Ave	0.7778	0.8151		2.10	2.00	4.8	30.0
Ethanol	Ave	0.6982	0.6382		9.14	10.0	-8.6	30.0
Vinyl bromide	Ave	1.358	1.370		2.02	2.00	0.8	30.0
2-Methylbutane	Ave	1.784	1.915		2.15	2.00	7.4	30.0
Trichlorofluoromethane	Ave	4.135	4.656		2.25	2.00	12.6	30.0
Acrolein	Ave	0.3329	0.3292		1.98	2.00	-1.1	30.0
Acetonitrile	Ave	0.4975	0.5461		2.20	2.00	9.8	30.0
Acetone	Ave	0.6202	0.6127		5.93	6.00	-1.2	30.0
Pentane	Ave	0.2737	0.2907		2.12	2.00	6.2	30.0
Isopropyl alcohol	Ave	1.723	1.929		6.72	6.00	11.9	30.0
Ethyl ether	Ave	1.399	1.429		2.04	2.00	2.2	30.0
1,1-Dichloroethene	Ave	1.408	1.396		1.98	2.00	-0.9	30.0
Acrylonitrile	Ave	0.8775	0.8852		2.02	2.00	0.9	30.0
tert-Butyl alcohol	Ave	2.280	2.693		2.36	2.00	18.1	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.017	2.997		1.99	2.00	-0.7	30.0
Methylene Chloride	Ave	1.424	1.267		1.78	2.00	-11.0	30.0
3-Chloropropene	Ave	1.325	1.368		2.07	2.00	3.3	30.0
Carbon disulfide	Ave	3.831	4.039		2.11	2.00	5.5	30.0
trans-1,2-Dichloroethene	Ave	1.424	1.455		2.04	2.00	2.2	30.0
Methyl tert-butyl ether	Ave	3.511	4.273		2.43	2.00	21.7	30.0
1,1-Dichloroethane	Ave	2.834	3.145		2.22	2.00	11.0	30.0
Vinyl acetate	Ave	3.417	4.029		2.36	2.00	17.9	30.0
2-Butanone (MEK)	Ave	0.6209	0.6861		2.21	2.00	10.5	30.0
Hexane	Ave	1.184	1.375		2.32	2.00	16.1	30.0
cis-1,2-Dichloroethene	Ave	1.483	1.497		2.02	2.00	0.9	30.0
Ethyl acetate	Ave	2.710	3.550		2.62	2.00	31.0*	30.0
Chloroform	Ave	3.265	3.609		2.21	2.00	10.5	30.0
Tetrahydrofuran	Ave	1.427	1.773		2.49	2.00	24.3	30.0
1,1,1-Trichloroethane	Ave	3.438	3.870		2.25	2.00	12.6	30.0
1,2-Dichloroethane	Ave	0.4028	0.4881		2.42	2.00	21.2	30.0
Benzene	Ave	0.7871	0.8426		2.14	2.00	7.1	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Lab Sample ID: CCVIS 140-18524/6 Calibration Date: 03/02/2018 12:58

Instrument ID: MG Calib Start Date: 11/13/2017 16:15

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/13/2017 22:37

Lab File ID: GCCVC02A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Cyclohexane	Ave	0.1251	0.1548		2.48	2.00	23.8	30.0
Carbon tetrachloride	Ave	0.6083	0.6408		2.11	2.00	5.3	30.0
1-Butanol	Ave	0.0867	0.1111		2.56	2.00	28.1	30.0
2,2,4-Trimethylpentane	Ave	1.292	1.654		2.56	2.00	28.0	30.0
Heptane	Ave	0.2801	0.3455		2.47	2.00	23.3	30.0
1,2-Dichloropropane	Ave	0.2921	0.3491		2.39	2.00	19.5	30.0
Trichloroethene	Ave	0.3686	0.3852		2.09	2.00	4.5	30.0
Dibromomethane	Ave	0.3335	0.3601		2.16	2.00	8.0	30.0
Bromodichloromethane	Ave	0.5724	0.6987		2.44	2.00	22.1	30.0
1,4-Dioxane	Ave	0.1022	0.1202		2.35	2.00	17.6	30.0
Methyl methacrylate	Ave	0.2832	0.4092		2.89	2.00	44.5*	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4776	0.7460		3.12	2.00	56.2*	30.0
cis-1,3-Dichloropropene	Ave	0.4483	0.5562		2.48	2.00	24.1	30.0
trans-1,3-Dichloropropene	Ave	0.4139	0.5128		2.48	2.00	23.9	30.0
Toluene	Ave	0.8891	0.9430		2.12	2.00	6.1	30.0
1,1,2-Trichloroethane	Ave	0.2665	0.2940		2.21	2.00	10.3	30.0
2-Hexanone	Ave	0.2473	0.3594		2.91	2.00	45.3*	30.0
Dibromochloromethane	Ave	0.5479	0.5999		2.19	2.00	9.5	30.0
Octane	Ave	0.3111	0.3539		2.28	2.00	13.8	30.0
1,2-Dibromoethane (EDB)	Ave	0.4779	0.5312		2.22	2.00	11.2	30.0
Tetrachloroethene	Ave	0.3430	0.3620		2.11	2.00	5.5	30.0
Chlorobenzene	Ave	0.7131	0.7371		2.07	2.00	3.4	30.0
Ethylbenzene	Ave	1.141	1.334		2.34	2.00	17.0	30.0
m-Xylene & p-Xylene	Ave	0.8653	1.057		4.89	4.00	22.2	30.0
Bromoform	Ave	0.5240	0.5768		2.20	2.00	10.1	30.0
Styrene	Ave	0.6042	0.7308		2.42	2.00	21.0	30.0
Nonane	Ave	0.5902	0.7410		2.51	2.00	25.6	30.0
o-Xylene	Ave	0.9204	1.110		2.41	2.00	20.6	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6266	0.7711		2.46	2.00	23.1	30.0
1,2,3-Trichloropropane	Ave	0.1960	0.2388		2.44	2.00	21.8	30.0
Isopropylbenzene	Ave	1.272	1.475		2.32	2.00	16.0	30.0
Propylbenzene	Ave	0.3295	0.3809		2.31	2.00	15.6	30.0
2-Chlorotoluene	Ave	0.3120	0.3473		2.23	2.00	11.3	30.0
4-Ethyltoluene	Ave	1.197	1.456		2.43	2.00	21.7	30.0
1,3,5-Trimethylbenzene	Ave	0.4863	0.5674		2.33	2.00	16.7	30.0
Alpha Methyl Styrene	Ave	0.4487	0.5494		2.45	2.00	22.4	30.0
Decane	Ave	0.6981	0.9129		2.62	2.00	30.8*	30.0
tert-Butylbenzene	Ave	1.099	1.299		2.36	2.00	18.2	30.0
1,2,4-Trimethylbenzene	Ave	1.039	1.286		2.47	2.00	23.7	30.0
1,3-Dichlorobenzene	Ave	0.7589	0.7917		2.09	2.00	4.3	30.0
sec-Butylbenzene	Ave	1.481	1.780		2.40	2.00	20.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Lab Sample ID: CCVIS 140-18524/6 Calibration Date: 03/02/2018 12:58

Instrument ID: MG Calib Start Date: 11/13/2017 16:15

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/13/2017 22:37

Lab File ID: GCCVC02A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzyl chloride	Ave	0.9028	1.269		2.81	2.00	40.6*	30.0
1,4-Dichlorobenzene	Ave	0.7542	0.7933		2.10	2.00	5.2	30.0
4-Isopropyltoluene	Ave	1.232	1.493		2.42	2.00	21.1	30.0
1,2,3-Trimethylbenzene	Ave	1.102	1.309		2.38	2.00	18.8	30.0
1,2-Dichlorobenzene	Ave	0.7112	0.7734		2.18	2.00	8.8	30.0
Butylbenzene	Ave	1.182	1.520		2.57	2.00	28.5	30.0
Undecane	Ave	0.7036	0.9917		2.82	2.00	40.9*	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.4410	0.4114		1.87	2.00	-6.7	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.491	1.387		1.86	2.00	-6.9	30.0
Dodecane	Ave	0.6359	0.9426		2.96	2.00	48.2*	30.0
1,2,4-Trichlorobenzene	Ave	0.5763	0.7066		2.45	2.00	22.6	30.0
Naphthalene	Ave	1.332	1.628		2.44	2.00	22.2	30.0
Hexachlorobutadiene	Ave	0.5558	0.6351		2.29	2.00	14.3	30.0
1,2,3-Trichlorobenzene	Ave	0.5354	0.6678		2.49	2.00	24.7	30.0
2-Methylnaphthalene	Ave	0.5930	0.3699		3.90	6.25	-37.6	50.0
1-Methylnaphthalene	Ave	0.5668	0.3616		3.99	6.25	-36.2	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7464	0.7811		4.19	4.00	4.7	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Lab Sample ID: ICV 140-17762/14 Calibration Date: 01/30/2018 21:11

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RA30ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4879	0.5051		2.56	2.47	3.5	35.0
Propene	Ave	0.9557	0.9570		2.47	2.47	0.1	35.0
Dichlorodifluoromethane	Ave	3.756	4.377		2.88	2.47	16.6	35.0
Chloromethane	Ave	0.3421	0.3220		2.32	2.47	-5.9	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.544	2.591		2.52	2.47	1.9	35.0
Vinyl chloride	Ave	1.049	1.041		2.45	2.47	-0.8	35.0
1,3-Butadiene	Ave	0.6765	0.6768		2.47	2.47	0.0	35.0
Butane	Ave	1.124	1.183		2.60	2.47	5.2	35.0
Bromomethane	Ave	0.9705	0.9841		2.50	2.47	1.4	35.0
Chloroethane	Ave	0.4754	0.4775		2.48	2.47	0.5	35.0
Ethanol	Ave	0.2999	0.2849		11.7	12.3	-5.0	35.0
Vinyl bromide	Ave	0.9514	1.041		2.70	2.47	9.4	35.0
2-Methylbutane	Ave	0.7921	0.8138		2.54	2.47	2.8	35.0
Acrolein	Ave	0.2209	0.2275		2.54	2.47	3.0	35.0
Trichlorofluoromethane	Ave	3.567	3.678		2.55	2.47	3.1	35.0
Acetonitrile	Ave	0.2718	0.2877		2.61	2.47	5.8	35.0
Acetone	Ave	0.4182	0.3903		6.91	7.41	-6.7	35.0
Isopropyl alcohol	Ave	1.608	1.805		8.32	7.41	12.3	35.0
Pentane	Ave	0.2789	0.2842		2.52	2.47	1.9	35.0
Ethyl ether	Ave	1.010	1.023		2.50	2.47	1.4	35.0
1,1-Dichloroethene	Ave	1.514	1.434		2.34	2.47	-5.3	35.0
Acrylonitrile	Ave	0.9563	0.9635		2.49	2.47	0.8	35.0
tert-Butyl alcohol	Ave	3.014	3.014		2.47	2.47	0.0	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.239	3.252		2.48	2.47	0.4	35.0
Methylene Chloride	Ave	1.564	1.381		2.18	2.47	-11.7	35.0
3-Chloropropene	Ave	1.257	1.307		2.57	2.47	4.0	35.0
Carbon disulfide	Ave	4.190	4.077		2.40	2.47	-2.7	35.0
trans-1,2-Dichloroethene	Ave	1.537	1.515		2.44	2.47	-1.4	35.0
Methyl tert-butyl ether	Ave	4.739	4.873		2.54	2.47	2.8	35.0
1,1-Dichloroethane	Ave	2.927	2.890		2.44	2.47	-1.2	35.0
Vinyl acetate	Ave	2.829	3.271		2.85	2.47	15.6	35.0
2-Butanone (MEK)	Ave	0.7255	0.7119		2.42	2.47	-1.9	35.0
Hexane	Ave	1.173	1.154		2.43	2.47	-1.7	35.0
cis-1,2-Dichloroethene	Ave	1.647	1.637		2.45	2.47	-0.6	35.0
Ethyl acetate	Ave	2.540	2.598		2.53	2.47	2.3	35.0
Chloroform	Ave	3.701	3.702		2.47	2.47	0.0	35.0
Tetrahydrofuran	Ave	1.295	1.329		2.54	2.47	2.7	35.0
1,1,1-Trichloroethane	Ave	3.888	4.070		2.58	2.47	4.7	35.0
1,2-Dichloroethane	Ave	0.4231	0.4407		2.57	2.47	4.2	35.0
1-Butanol	Ave	0.0506	0.0556		2.72	2.47	10.0	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Lab Sample ID: ICV 140-17762/14 Calibration Date: 01/30/2018 21:11

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RA30ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzene	Ave	0.7642	0.7746		2.50	2.47	1.4	35.0
Cyclohexane	Ave	0.1227	0.1250		2.51	2.47	1.8	35.0
Carbon tetrachloride	Ave	0.6160	0.6889		2.76	2.47	11.8	35.0
2,2,4-Trimethylpentane	Ave	1.108	1.146		2.55	2.47	3.4	35.0
1,2-Dichloropropane	Ave	0.2659	0.2696		2.50	2.47	1.4	35.0
Heptane	Ave	0.2649	0.2721		2.54	2.47	2.7	35.0
Trichloroethene	Ave	0.3611	0.3691		2.52	2.47	2.2	35.0
Dibromomethane	Ave	0.3145	0.3283		2.58	2.47	4.4	35.0
Bromodichloromethane	Ave	0.5634	0.6271		2.75	2.47	11.3	35.0
1,4-Dioxane	Ave	0.1127	0.1179		2.58	2.47	4.7	35.0
Methyl methacrylate	Ave	0.2509	0.2746		2.70	2.47	9.4	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4284	0.4624		2.67	2.47	7.9	35.0
cis-1,3-Dichloropropene	Ave	0.4392	0.4887		2.75	2.47	11.3	35.0
trans-1,3-Dichloropropene	Ave	0.4850	0.5351		2.72	2.47	10.3	35.0
Toluene	Ave	1.102	1.122		2.52	2.47	1.9	35.0
1,1,2-Trichloroethane	Ave	0.3035	0.3092		2.52	2.47	1.9	35.0
2-Hexanone	Ave	0.2628	0.2981		2.80	2.47	13.5	35.0
Dibromochloromethane	Ave	0.5804	0.6993		2.98	2.47	20.5	35.0
Octane	Ave	0.3544	0.3754		2.62	2.47	5.9	35.0
1,2-Dibromoethane (EDB)	Ave	0.5418	0.5896		2.69	2.47	8.8	35.0
Tetrachloroethene	Ave	0.4106	0.4276		2.57	2.47	4.1	35.0
Chlorobenzene	Ave	0.8680	0.8977		2.55	2.47	3.4	35.0
Ethylbenzene	Ave	1.442	1.497		2.56	2.47	3.8	35.0
m-Xylene & p-Xylene	Ave	1.118	1.183		5.23	4.94	5.8	35.0
Bromoform	Ave	0.4993	0.6381		3.16	2.47	27.8	35.0
Styrene	Ave	0.7131	0.8370		2.90	2.47	17.4	35.0
Nonane	Ave	0.6024	0.6373		2.61	2.47	5.8	35.0
o-Xylene	Ave	1.180	1.193		2.49	2.47	1.0	35.0
1,1,2,2-Tetrachloroethane	Ave	0.7065	0.7765		2.71	2.47	9.9	35.0
1,2,3-Trichloropropane	Ave	0.2557	0.2673		2.58	2.47	4.5	35.0
Isopropylbenzene	Ave	1.579	1.681		2.63	2.47	6.5	35.0
Propylbenzene	Ave	0.4312	0.4920		2.82	2.47	14.1	35.0
2-Chlorotoluene	Ave	0.3988	0.4292		2.66	2.47	7.6	35.0
4-Ethyltoluene	Ave	1.639	1.745		2.63	2.47	6.5	35.0
1,3,5-Trimethylbenzene	Ave	0.6617	0.7303		2.73	2.47	10.4	35.0
Alpha Methyl Styrene	Ave	0.5721	0.6952		3.00	2.47	21.5	35.0
Decane	Ave	0.8188	0.9370		2.83	2.47	14.4	35.0
tert-Butylbenzene	Ave	1.538	1.672		2.69	2.47	8.8	35.0
1,2,4-Trimethylbenzene	Ave	1.379	1.533		2.74	2.47	11.1	35.0
1,3-Dichlorobenzene	Ave	0.8870	0.9882		2.75	2.47	11.4	35.0
sec-Butylbenzene	Ave	1.978	2.196		2.74	2.47	11.0	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Lab Sample ID: ICV 140-17762/14 Calibration Date: 01/30/2018 21:11

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RA30ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzyl chloride	Ave	1.037	1.335		3.18	2.47	28.7	35.0
1,4-Dichlorobenzene	Ave	0.8846	0.9798		2.74	2.47	10.8	35.0
4-Isopropyltoluene	Ave	1.739	1.961		2.78	2.47	12.7	35.0
1,2,3-Trimethylbenzene	Ave	1.566	1.539		2.43	2.47	-1.7	35.0
1,2-Dichlorobenzene	Ave	0.8615	0.9599		2.75	2.47	11.4	35.0
Butylbenzene	Ave	1.551	1.840		2.93	2.47	18.7	35.0
Undecane	Ave	0.8863	1.046		2.91	2.47	18.0	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.5267	0.4263		2.00	2.47	-19.1	35.0
1,2,4,5-Tetramethylbenzene	Ave	0.8495	1.694		4.92	2.47	99.4*	35.0
Dodecane	Ave	0.8298	0.9946		2.96	2.47	19.9	35.0
1,2,4-Trichlorobenzene	Ave	0.6453	0.7696		2.94	2.47	19.3	35.0
Naphthalene	Ave	1.434	1.710		2.95	2.47	19.3	35.0
Hexachlorobutadiene	Ave	0.7058	0.7878		2.76	2.47	11.6	35.0
1,2,3-Trichlorobenzene	Ave	0.6529	0.7394		2.80	2.47	13.3	35.0
2-Methylnaphthalene	Ave	0.3527	0.1484		2.38	5.67	-57.9*	50.0
1-Methylnaphthalene	Ave	0.3505	0.1569		2.54	5.68	-55.3*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7584	0.7641		4.03	4.00	0.8	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Lab Sample ID: CCVIS 140-18533/2 Calibration Date: 03/05/2018 10:17

Instrument ID: MR Calib Start Date: 06/28/2017 15:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/28/2017 21:58

Lab File ID: RCCVC05.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetaldehyde	Ave	0.3474	0.1943			10.0	-44.1*	30.0
2-Methylpentane	Ave	1.822	1.852			2.00	1.6	30.0
2,3-Dimethylpentane	Ave	0.1274	0.1411			2.00	10.8	30.0
Thiophene	Ave	0.3433	0.3736			2.00	8.8	30.0
Methylcyclohexane	Ave	0.4439	0.5048			2.00	13.7	30.0
3-Methylthiophene	Ave	0.6908	0.8194			2.00	18.6	30.0
2,3-Dimethylheptane	Ave	0.5998	0.5477			2.00	-8.7	30.0
2-Ethylthiophene	Ave	0.9153	1.011			2.00	10.4	30.0
Butylcyclohexane	Ave	0.7978	1.059			2.00	32.7*	30.0
Indane	Ave	1.030	1.380			2.00	34.0*	30.0
Indene	QuaF		1.002			2.00		30.0
1,2,3,5-Tetramethylbenzene	Ave	0.9142	1.085			2.00	18.7	30.0
1,2,3,4-Tetramethylbenzene	Ave	1.236	1.426			2.00	15.3	30.0
Benzo(b)thiophene	Ave	0.9147	0.8731			2.00	-4.6	30.0
1,2-Dimethyl-4-Ethylbenzene	QuaF					2.00		
2-Methylthiophene	Ave	0.6999				2.00		

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Lab Sample ID: CCVIS 140-18533/2 Calibration Date: 03/05/2018 10:17

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RCCVC05.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4879	0.4328		1.77	2.00	-11.3	30.0
Propene	Ave	0.9557	0.6597		1.38	2.00	-31.0*	30.0
Dichlorodifluoromethane	Ave	3.756	3.367		1.79	2.00	-10.3	30.0
Chloromethane	Ave	0.3421	0.2505		1.46	2.00	-26.8	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.544	2.441		1.92	2.00	-4.1	30.0
Vinyl chloride	Ave	1.049	0.7783		1.48	2.00	-25.8	30.0
1,3-Butadiene	Ave	0.6765	0.5067		1.50	2.00	-25.1	30.0
Butane	Ave	1.124	0.8656		1.54	2.00	-23.0	30.0
Bromomethane	Ave	0.9705	0.8406		1.73	2.00	-13.4	30.0
Chloroethane	Ave	0.4754	0.3780		1.59	2.00	-20.5	30.0
Ethanol	Ave	0.2999	0.1567		5.23	10.0	-47.7*	30.0
Vinyl bromide	Ave	0.9514	0.9201		1.93	2.00	-3.3	30.0
2-Methylbutane	Ave	0.7921	0.6224		1.57	2.00	-21.4	30.0
Acrolein	Ave	0.2209	0.2295		2.08	2.00	3.9	30.0
Trichlorofluoromethane	Ave	3.567	3.470		1.95	2.00	-2.7	30.0
Acetonitrile	Ave	0.2718	0.2044		1.50	2.00	-24.8	30.0
Acetone	Ave	0.4182	0.3426		1.64	2.00	-18.1	30.0
Isopropyl alcohol	Ave	1.608	1.393		1.73	2.00	-13.3	30.0
Pentane	Ave	0.2789	0.2162		1.55	2.00	-22.5	30.0
Ethyl ether	Ave	1.010	0.6975		1.38	2.00	-30.9*	30.0
1,1-Dichloroethene	Ave	1.514	1.241		1.64	2.00	-18.1	30.0
Acrylonitrile	Ave	0.9563	0.7019		1.47	2.00	-26.6	30.0
tert-Butyl alcohol	Ave	3.014	2.272		1.51	2.00	-24.6	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.239	2.846		1.76	2.00	-12.1	30.0
Methylene Chloride	Ave	1.564	1.172		1.50	2.00	-25.1	30.0
3-Chloropropene	Ave	1.257	1.022		1.63	2.00	-18.7	30.0
Carbon disulfide	Ave	4.190	3.314		1.58	2.00	-20.9	30.0
trans-1,2-Dichloroethene	Ave	1.537	1.309		1.70	2.00	-14.8	30.0
Methyl tert-butyl ether	Ave	4.739	4.065		1.72	2.00	-14.2	30.0
1,1-Dichloroethane	Ave	2.927	2.269		1.55	2.00	-22.5	30.0
Vinyl acetate	Ave	2.829	2.438		1.72	2.00	-13.8	30.0
2-Butanone (MEK)	Ave	0.7255	0.5455		1.50	2.00	-24.8	30.0
Hexane	Ave	1.173	0.8899		1.52	2.00	-24.1	30.0
cis-1,2-Dichloroethene	Ave	1.647	1.431		1.74	2.00	-13.1	30.0
Ethyl acetate	Ave	2.540	1.875		1.48	2.00	-26.2	30.0
Chloroform	Ave	3.701	3.202		1.73	2.00	-13.5	30.0
Tetrahydrofuran	Ave	1.295	0.9232		1.43	2.00	-28.7	30.0
1,1,1-Trichloroethane	Ave	3.888	3.616		1.86	2.00	-7.0	30.0
1,2-Dichloroethane	Ave	0.4231	0.3739		1.77	2.00	-11.6	30.0
1-Butanol	Ave	0.0506	0.0362		1.43	2.00	-28.5	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Lab Sample ID: CCVIS 140-18533/2 Calibration Date: 03/05/2018 10:17

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RCCVC05.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzene	Ave	0.7642	0.6505		1.70	2.00	-14.9	30.0
Cyclohexane	Ave	0.1227	0.1030		1.68	2.00	-16.0	30.0
Carbon tetrachloride	Ave	0.6160	0.6361		2.07	2.00	3.3	30.0
2,2,4-Trimethylpentane	Ave	1.108	0.8933		1.61	2.00	-19.4	30.0
1,2-Dichloropropane	Ave	0.2659	0.2141		1.61	2.00	-19.5	30.0
Heptane	Ave	0.2649	0.2237		1.69	2.00	-15.6	30.0
Trichloroethene	Ave	0.3611	0.3485		1.93	2.00	-3.5	30.0
Dibromomethane	Ave	0.3145	0.2844		1.81	2.00	-9.6	30.0
Bromodichloromethane	Ave	0.5634	0.5410		1.92	2.00	-4.0	30.0
1,4-Dioxane	Ave	0.1127	0.0915		1.62	2.00	-18.8	30.0
Methyl methacrylate	Ave	0.2509	0.2028		1.62	2.00	-19.2	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4284	0.3315		1.55	2.00	-22.6	30.0
cis-1,3-Dichloropropene	Ave	0.4392	0.4032		1.84	2.00	-8.2	30.0
trans-1,3-Dichloropropene	Ave	0.4850	0.4696		1.94	2.00	-3.2	30.0
Toluene	Ave	1.102	1.026		1.86	2.00	-6.9	30.0
1,1,2-Trichloroethane	Ave	0.3035	0.2689		1.77	2.00	-11.4	30.0
2-Hexanone	Ave	0.2628	0.2433		1.85	2.00	-7.4	30.0
Dibromochloromethane	Ave	0.5804	0.6698		2.31	2.00	15.4	30.0
Octane	Ave	0.3544	0.3341		1.89	2.00	-5.7	30.0
1,2-Dibromoethane (EDB)	Ave	0.5418	0.5398		1.99	2.00	-0.4	30.0
Tetrachloroethene	Ave	0.4106	0.4267		2.08	2.00	3.9	30.0
Chlorobenzene	Ave	0.8680	0.8388		1.93	2.00	-3.4	30.0
Ethylbenzene	Ave	1.442	1.327		1.84	2.00	-7.9	30.0
m-Xylene & p-Xylene	Ave	1.118	1.074		3.84	4.00	-4.0	30.0
Bromoform	Ave	0.4993	0.6053		2.42	2.00	21.2	30.0
Styrene	Ave	0.7131	0.7565		2.12	2.00	6.1	30.0
Nonane	Ave	0.6024	0.5217		1.73	2.00	-13.4	30.0
o-Xylene	Ave	1.180	1.068		1.81	2.00	-9.5	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7065	0.6664		1.89	2.00	-5.7	30.0
1,2,3-Trichloropropane	Ave	0.2557	0.2459		1.92	2.00	-3.9	30.0
Isopropylbenzene	Ave	1.579	1.544		1.96	2.00	-2.2	30.0
Propylbenzene	Ave	0.4312	0.4764		2.21	2.00	10.5	30.0
2-Chlorotoluene	Ave	0.3988	0.4166		2.09	2.00	4.5	30.0
4-Ethyltoluene	Ave	1.639	1.676		2.05	2.00	2.3	30.0
1,3,5-Trimethylbenzene	Ave	0.6617	0.8352		2.52	2.00	26.2	30.0
Alpha Methyl Styrene	Ave	0.5721	0.6637		2.32	2.00	16.0	30.0
Decane	Ave	0.8188	0.7813		1.91	2.00	-4.6	30.0
tert-Butylbenzene	Ave	1.538	1.688		2.20	2.00	9.8	30.0
1,2,4-Trimethylbenzene	Ave	1.379	1.533		2.22	2.00	11.2	30.0
1,3-Dichlorobenzene	Ave	0.8870	1.038		2.34	2.00	17.0	30.0
sec-Butylbenzene	Ave	1.978	2.170		2.19	2.00	9.7	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Lab Sample ID: CCVIS 140-18533/2 Calibration Date: 03/05/2018 10:17

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RCCVC05.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzyl chloride	Ave	1.037	1.266		2.44	2.00	22.0	30.0
1,4-Dichlorobenzene	Ave	0.8846	1.039		2.35	2.00	17.5	30.0
4-Isopropyltoluene	Ave	1.739	2.081		2.39	2.00	19.7	30.0
1,2,3-Trimethylbenzene	Ave	1.566	1.264		1.61	2.00	-19.3	30.0
1,2-Dichlorobenzene	Ave	0.8615	1.001		2.32	2.00	16.1	30.0
Butylbenzene	Ave	1.551	1.778		2.29	2.00	14.7	30.0
Undecane	Ave	0.8863	0.8821		1.99	2.00	-0.5	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.5267	0.4357		1.65	2.00	-17.3	30.0
1,2,4,5-Tetramethylbenzene	Ave	0.8495	1.766		4.16	2.00	107.9*	30.0
Dodecane	Ave	0.8298	0.8102		1.95	2.00	-2.4	30.0
1,2,4-Trichlorobenzene	Ave	0.6453	0.8633		2.68	2.00	33.8*	30.0
Naphthalene	Ave	1.434	1.731		2.41	2.00	20.7	30.0
Hexachlorobutadiene	Ave	0.7058	0.8958		2.54	2.00	26.9	30.0
1,2,3-Trichlorobenzene	Ave	0.6529	0.7865		2.41	2.00	20.5	30.0
4-Bromofluorobenzene (Surr)	Ave	0.7584	0.7446		3.93	4.00	-1.8	30.0

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
SV-DUP02-C-24	140-10790-1	108
SV-126-C-24	140-10790-2	109
SV-126-C-24 DL	140-10790-2 DL	100
SV-101-B-24	140-10790-3	99
SV-100-B-24	140-10790-4	102
SV-093-A-24	140-10790-5	106
SV-174-A-24	140-10790-6	95
SV-138-A-24	140-10790-7	99
SV-116-A-24	140-10790-8	105
SV-DUP01-A-24	140-10790-9	100
SV-173-A-24	140-10790-10	108
SV-173-A-24 DL	140-10790-10 DL	95
SV-171-A-24	140-10790-11	102
SV-171-A-24 DL	140-10790-11 DL	108
SV-170-A-24	140-10790-12	96
SV-015-A-24	140-10790-13	101
SV-118-A-24	140-10790-14	103
SV-118-A-24 DL	140-10790-14 DL	101
SV-081-A-24	140-10790-15	103
SV-081-A-24 DL	140-10790-15 DL	100
SV-079-A-24	140-10790-16	99
SV-DUP02-A-24	140-10790-17	105
SV-078-A-24	140-10790-18	106
SV-136-A-24	140-10790-19	104
	MB 140-18437/5	105
	MB 140-18524/8	100
	MB 140-18533/4	99
	LCS 140-18437/1002	112
	LCS 140-18524/1006	105
	LCS 140-18533/1002	98

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Matrix: Air Level: Low Lab File ID: GCCVB28-LCS.d

Lab ID: LCS 140-18437/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.92	96	70-130	
Carbon tetrachloride	2.00	1.72	86	70-130	
Chlorodifluoromethane	2.00	2.46	123	60-140	
Chloroform	2.00	2.25	112	70-130	
cis-1,2-Dichloroethene	2.00	2.09	105	70-130	
Dichlorodifluoromethane	2.00	2.45	123	60-140	
1,1-Dichloroethane	2.00	2.39	119	70-130	
1,2-Dichloroethane	2.00	2.11	106	70-130	
1,1-Dichloroethene	2.00	2.17	108	70-130	
Ethylbenzene	2.00	1.73	86	70-130	
Methylene Chloride	2.00	1.83	92	70-130	
Methyl tert-butyl ether	2.00	1.92	96	60-140	
Naphthalene	2.00	1.31	66	60-140	
Tetrachloroethene	2.00	1.73	86	70-130	
Toluene	2.00	1.80	90	70-130	
trans-1,2-Dichloroethene	2.00	2.14	107	70-130	
1,2,4-Trichlorobenzene	2.00	1.29	65	60-140	
1,1,1-Trichloroethane	2.00	2.25	113	70-130	
1,1,2-Trichloroethane	2.00	1.94	97	70-130	
Trichloroethene	2.00	1.80	90	70-130	
1,2,3-Trimethylbenzene	2.00	1.41	71	70-130	
1,2,4-Trimethylbenzene	2.00	1.52	76	70-130	
1,3,5-Trimethylbenzene	2.00	1.44	72	70-130	
Vinyl chloride	2.00	2.51	126	70-130	
Xylenes, Total	6.00	5.13	86	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Matrix: Air Level: Low Lab File ID: GCCVC02A-LCS.d

Lab ID: LCS 140-18524/1006 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.14	107	70-130	
Carbon tetrachloride	2.00	2.11	105	70-130	
Chlorodifluoromethane	2.00	2.30	115	60-140	
Chloroform	2.00	2.21	111	70-130	
cis-1,2-Dichloroethene	2.00	2.02	101	70-130	
Dichlorodifluoromethane	2.00	2.32	116	60-140	
1,1-Dichloroethane	2.00	2.22	111	70-130	
1,2-Dichloroethane	2.00	2.42	121	70-130	
1,1-Dichloroethene	2.00	1.98	99	70-130	
Ethylbenzene	2.00	2.34	117	70-130	
Methylene Chloride	2.00	1.78	89	70-130	
Methyl tert-butyl ether	2.00	2.43	122	60-140	
Naphthalene	2.00	2.44	122	60-140	
Tetrachloroethene	2.00	2.11	106	70-130	
Toluene	2.00	2.12	106	70-130	
trans-1,2-Dichloroethene	2.00	2.04	102	70-130	
1,2,4-Trichlorobenzene	2.00	2.45	123	60-140	
1,1,1-Trichloroethane	2.00	2.25	113	70-130	
1,1,2-Trichloroethane	2.00	2.21	110	70-130	
Trichloroethene	2.00	2.09	105	70-130	
1,2,3-Trimethylbenzene	2.00	2.38	119	70-130	
1,2,4-Trimethylbenzene	2.00	2.47	124	70-130	
1,3,5-Trimethylbenzene	2.00	2.33	117	70-130	
Vinyl chloride	2.00	2.15	108	70-130	
Xylenes, Total	6.00	7.30	122	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Matrix: Air Level: Low Lab File ID: RCCVC05-LCS.d

Lab ID: LCS 140-18533/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.70	85	70-130	
Carbon tetrachloride	2.00	2.07	103	70-130	
Chlorodifluoromethane	2.00	1.77	89	60-140	
Chloroform	2.00	1.73	87	70-130	
cis-1,2-Dichloroethene	2.00	1.74	87	70-130	
Dichlorodifluoromethane	2.00	1.79	90	60-140	
1,1-Dichloroethane	2.00	1.55	78	70-130	
1,2-Dichloroethane	2.00	1.77	88	70-130	
1,1-Dichloroethene	2.00	1.64	82	70-130	
Ethylbenzene	2.00	1.84	92	70-130	
Methylene Chloride	2.00	1.50	75	70-130	
Methyl tert-butyl ether	2.00	1.72	86	60-140	
Naphthalene	2.00	2.41	121	60-140	
Tetrachloroethene	2.00	2.08	104	70-130	
Toluene	2.00	1.86	93	70-130	
trans-1,2-Dichloroethene	2.00	1.70	85	70-130	
1,2,4-Trichlorobenzene	2.00	2.68	134	60-140	
1,1,1-Trichloroethane	2.00	1.86	93	70-130	
1,1,2-Trichloroethane	2.00	1.77	89	70-130	
Trichloroethene	2.00	1.93	97	70-130	
1,2,3-Trimethylbenzene	2.00	1.61	81	70-130	
1,2,4-Trimethylbenzene	2.00	2.22	111	70-130	
1,3,5-Trimethylbenzene	2.00	2.52	126	70-130	
Vinyl chloride	2.00	1.48	74	70-130	
Xylenes, Total	6.00	5.65	94	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Sample No.: ICIS 140-15917/9 Date Analyzed: 11/13/2017 20:29

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): GK13IC07.D Heated Purge: (Y/N) N

Calibration ID: 1337

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		485567	7.62	2785396	9.76	2750264	14.71
UPPER LIMIT		679794	7.95	3899554	10.09	3850370	15.04
LOWER LIMIT		291340	7.29	1671238	9.43	1650158	14.38
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-15917/14		572242	7.61	3126736	9.75	3200010	14.70

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Sample No.: CCVIS 140-18437/2 Date Analyzed: 02/28/2018 10:49

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): GCCVB28.D Heated Purge: (Y/N) N

Calibration ID: 1337

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		297559	7.56	1873739	9.69	1808940	14.66
UPPER LIMIT		416583	7.89	2623235	10.02	2532516	14.99
LOWER LIMIT		178535	7.23	1124243	9.36	1085364	14.33
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-18437/1002		297559	7.56	1873739	9.69	1808940	14.66
MB 140-18437/5		249934	7.57	1641928	9.70	1752834	14.66
140-10790-1	SV-DUP02-C-24	281914	7.56	1807868	9.69	1728896	14.66
140-10790-2	SV-126-C-24	318638	7.56	1917810	9.70	1771638	14.66
140-10790-4	SV-100-B-24	248531	7.55	1593497	9.69	1528766	14.66
140-10790-5	SV-093-A-24	349965	7.57	2172257	9.70	2162593	14.66
140-10790-6	SV-174-A-24	345731	7.56	1963608	9.70	1897901	14.66
140-10790-7	SV-138-A-24	337021	7.55	1836692	9.69	1837859	14.66
140-10790-8	SV-116-A-24	353417	7.56	2219785	9.70	1869557	14.66
140-10790-9	SV-DUP01-A-24	327317	7.57	1847072	9.70	1793995	14.66
140-10790-10	SV-173-A-24	282940	7.56	2063450	9.72	1842113	14.67
140-10790-11	SV-171-A-24	370428	7.56	2358772	9.70	2016695	14.66
140-10790-13	SV-015-A-24	285975	7.60	1785405	9.72	1769849	14.66
140-10790-14	SV-118-A-24	321871	7.56	1640279	9.71	1785478	14.66
140-10790-15	SV-081-A-24	317440	7.54	1642158	9.69	1694230	14.66
140-10790-16	SV-079-A-24	330833	7.57	1776461	9.70	1821336	14.66
140-10790-3	SV-101-B-24	324437	7.58	1738808	9.71	1787533	14.66

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Sample No.: CCVIS 140-18524/6 Date Analyzed: 03/02/2018 12:58

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): GCCVC02A.D Heated Purge: (Y/N) N

Calibration ID: 1337

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		274706	7.59	1407359	9.72	1466524	14.67
UPPER LIMIT		384588	7.92	1970303	10.05	2053134	15.00
LOWER LIMIT		164824	7.26	844415	9.39	879914	14.34
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-18524/1006		274706	7.59	1407359	9.72	1466524	14.67
MB 140-18524/8		286113	7.56	1731092	9.70	1660807	14.66
140-10790-2 DL	SV-126-C-24 DL	294682	7.54	1526367	9.69	1420149	14.66
140-10790-10 DL	SV-173-A-24 DL	294478	7.56	1644515	9.70	1599468	14.66
140-10790-11 DL	SV-171-A-24 DL	304626	7.54	1756082	9.68	1580769	14.65
140-10790-12	SV-170-A-24	343641	7.57	1932476	9.70	1836753	14.66

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Sample No.: ICIS 140-17762/9 Date Analyzed: 01/30/2018 17:15

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RA30IC07.D Heated Purge: (Y/N) N

Calibration ID: 1371

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		397524	7.71	2418900	9.85	2104378	14.86
UPPER LIMIT		556534	8.04	3386460	10.18	2946129	15.19
LOWER LIMIT		238514	7.38	1451340	9.52	1262627	14.53
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-17762/14		374886	7.72	2292324	9.85	1999070	14.86

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Sample No.: CCVIS 140-18533/2 Date Analyzed: 03/05/2018 10:17

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RCCVC05.D Heated Purge: (Y/N) N

Calibration ID: 1371

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		287257	7.68	1734144	9.82	1451429	14.84
UPPER LIMIT		402160	8.01	2427802	10.15	2032001	15.17
LOWER LIMIT		172354	7.35	1040486	9.49	870857	14.51
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-18533/1002		287257	7.68	1734144	9.82	1451429	14.84
MB 140-18533/4		283978	7.67	1667186	9.82	1354824	14.84
140-10790-14 DL	SV-118-A-24 DL	317453	7.68	1902706	9.83	1665927	14.84
140-10790-15 DL	SV-081-A-24 DL	309786	7.67	1859938	9.82	1645150	14.84
140-10790-17	SV-DUP02-A-24	311501	7.68	1838504	9.82	1560737	14.84
140-10790-18	SV-078-A-24	310985	7.69	1837415	9.83	1530936	14.84
140-10790-19	SV-136-A-24	298782	7.70	1754989	9.83	1491108	14.84

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Instrument ID: MG Start Date: 11/13/2017 14:59

Analysis Batch Number: 15917 End Date: 11/14/2017 02:10

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-15917/1		11/13/2017 14:59	1	GBFBK13.D	RTX-5 0.32(mm)
IC 140-15917/3		11/13/2017 16:15	1	GK13IC01.D	RTX-5 0.32(mm)
IC 140-15917/4		11/13/2017 16:57	1	GK13IC02.D	RTX-5 0.32(mm)
140-9800-A-1 MDLV		11/13/2017 16:57	1		RTX-5 0.32(mm)
IC 140-15917/5		11/13/2017 17:39	1	GK13IC03.D	RTX-5 0.32(mm)
140-9800-A-2 MDLV		11/13/2017 17:39	1		RTX-5 0.32(mm)
IC 140-15917/6		11/13/2017 18:22	1	GK13IC04.D	RTX-5 0.32(mm)
140-9800-A-3 MDLV		11/13/2017 18:22	1		RTX-5 0.32(mm)
IC 140-15917/7		11/13/2017 19:05	1	GK13IC05.D	RTX-5 0.32(mm)
140-9800-A-4 MDLV		11/13/2017 19:05	1		RTX-5 0.32(mm)
IC 140-15917/8		11/13/2017 19:47	1	GK13IC06.D	RTX-5 0.32(mm)
140-9800-A-5 MDLV		11/13/2017 19:47	1		RTX-5 0.32(mm)
ICIS 140-15917/9		11/13/2017 20:29	1	GK13IC07.D	RTX-5 0.32(mm)
IC 140-15917/10		11/13/2017 21:11	1	GK13IC08.D	RTX-5 0.32(mm)
IC 140-15917/11		11/13/2017 21:54	1	GK13IC09.D	RTX-5 0.32(mm)
IC 140-15917/12		11/13/2017 22:37	1	GK13IC10.D	RTX-5 0.32(mm)
ICV 140-15917/14		11/14/2017 00:02	1	GICVK13.D	RTX-5 0.32(mm)
ZZZZZ		11/14/2017 02:10	1		RTX-5 0.32(mm)

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Instrument ID: MG Start Date: 02/28/2018 10:17

Analysis Batch Number: 18437 End Date: 03/01/2018 09:48

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-18437/1		02/28/2018 10:17	1	GBFBB28.D	RTX-5 0.32(mm)
CCVIS 140-18437/2		02/28/2018 10:49	1	GCCVB28.D	RTX-5 0.32(mm)
LCS 140-18437/1002		02/28/2018 10:49	1	GCCVB28-LCS.d	RTX-5 0.32(mm)
ZZZZZ		02/28/2018 12:31	1		RTX-5 0.32(mm)
MB 140-18437/5		02/28/2018 12:31	1	B28B200ML.D	RTX-5 0.32(mm)
140-10790-1		02/28/2018 14:32	1	GB28P101.D	RTX-5 0.32(mm)
140-10790-2		02/28/2018 15:14	1	GB28P102.D	RTX-5 0.32(mm)
140-10790-4		02/28/2018 16:40	1	GB28P104.D	RTX-5 0.32(mm)
140-10790-5		02/28/2018 17:21	1	GB28P105.D	RTX-5 0.32(mm)
140-10790-6		02/28/2018 18:02	1	GB28P106.D	RTX-5 0.32(mm)
140-10790-7		02/28/2018 18:44	1	GB28P107.D	RTX-5 0.32(mm)
140-10790-8		02/28/2018 19:26	1	GB28P108.D	RTX-5 0.32(mm)
140-10790-9		02/28/2018 20:07	1	GB28P109.D	RTX-5 0.32(mm)
140-10790-10		02/28/2018 20:49	1	GB28P110.D	RTX-5 0.32(mm)
140-10790-11		02/28/2018 21:32	1	GB28P111.D	RTX-5 0.32(mm)
140-10790-13		02/28/2018 22:56	1	GB28P113.D	RTX-5 0.32(mm)
140-10790-14		02/28/2018 23:38	1	GB28P114.D	RTX-5 0.32(mm)
140-10790-15		03/01/2018 00:20	1	GB28P115.D	RTX-5 0.32(mm)
140-10790-16		03/01/2018 01:03	1	GB28P116D.D	RTX-5 0.32(mm)
140-10790-3		03/01/2018 03:51	1	GB28P103R.D	RTX-5 0.32(mm)
ZZZZZ		03/01/2018 09:48	1		RTX-5 0.32(mm)

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Instrument ID: MG Start Date: 03/02/2018 12:25

Analysis Batch Number: 18524 End Date: 03/03/2018 02:10

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-18524/5		03/02/2018 12:25	1	GBFBC02A.D	RTX-5 0.32(mm)
CCVIS 140-18524/6		03/02/2018 12:58	1	GCCVC02A.D	RTX-5 0.32(mm)
LCS 140-18524/1006		03/02/2018 12:58	1	GCCVC02A-LCS.d	RTX-5 0.32(mm)
MB 140-18524/8		03/02/2018 15:06	1	G500BC02.D	RTX-5 0.32(mm)
140-10790-2 DL		03/02/2018 15:47	4.02	GC02P101.D	RTX-5 0.32(mm)
140-10790-10 DL		03/02/2018 16:28	3.42	GC02P102.D	RTX-5 0.32(mm)
140-10790-11 DL		03/02/2018 17:09	3.38	GC02P103.D	RTX-5 0.32(mm)
ZZZZZ		03/02/2018 17:50	1		RTX-5 0.32(mm)
140-10790-12		03/02/2018 18:32	1	GC02P104.D	RTX-5 0.32(mm)
ZZZZZ		03/02/2018 23:25	1		RTX-5 0.32(mm)
ZZZZZ		03/03/2018 00:07	1		RTX-5 0.32(mm)
ZZZZZ		03/03/2018 00:48	1		RTX-5 0.32(mm)
ZZZZZ		03/03/2018 02:10	1		RTX-5 0.32(mm)

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Instrument ID: MR Start Date: 01/30/2018 11:12

Analysis Batch Number: 17762 End Date: 01/30/2018 23:36

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-17762/1		01/30/2018 11:12	1	RBFBA30.D	RTX-5 0.32(mm)
IC 140-17762/3		01/30/2018 12:29	1	RA30IC01.D	RTX-5 0.32(mm)
IC 140-17762/4		01/30/2018 13:16	1	RA30IC02.D	RTX-5 0.32(mm)
140-10625-A-5 MDLV		01/30/2018 13:16	1		RTX-5 0.32(mm)
ZZZZZ		01/30/2018 13:16	1		RTX-5 0.32(mm)
IC 140-17762/5		01/30/2018 14:04	1	RA30IC03.D	RTX-5 0.32(mm)
140-10625-A-6 MDLV		01/30/2018 14:04	1		RTX-5 0.32(mm)
ZZZZZ		01/30/2018 14:04	1		RTX-5 0.32(mm)
IC 140-17762/6		01/30/2018 14:50	1	RA30IC04.D	RTX-5 0.32(mm)
140-10625-A-7 MDLV		01/30/2018 14:50	1		RTX-5 0.32(mm)
ZZZZZ		01/30/2018 14:50	1		RTX-5 0.32(mm)
IC 140-17762/7		01/30/2018 15:39	1	RA30IC05.D	RTX-5 0.32(mm)
140-10625-A-8 MDLV		01/30/2018 15:39	1		RTX-5 0.32(mm)
ZZZZZ		01/30/2018 15:39	1		RTX-5 0.32(mm)
IC 140-17762/8		01/30/2018 16:27	1	RA30IC06.D	RTX-5 0.32(mm)
ICIS 140-17762/9		01/30/2018 17:15	1	RA30IC07.D	RTX-5 0.32(mm)
IC 140-17762/10		01/30/2018 18:03	1	RA30IC08.D	RTX-5 0.32(mm)
IC 140-17762/11		01/30/2018 18:50	1	RA30IC09.D	RTX-5 0.32(mm)
IC 140-17762/12		01/30/2018 19:38	1	RA30IC10.D	RTX-5 0.32(mm)
ICV 140-17762/14		01/30/2018 21:11	1	RA30ICV.D	RTX-5 0.32(mm)
ZZZZZ		01/30/2018 23:36	1		RTX-5 0.32(mm)

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Instrument ID: MR Start Date: 03/05/2018 09:45

Analysis Batch Number: 18533 End Date: 03/06/2018 02:53

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-18533/1		03/05/2018 09:45	1	RBFBC05.D	RTX-5 0.32(mm)
CCVIS 140-18533/2		03/05/2018 10:17	1	RCCVC05.D	RTX-5 0.32(mm)
LCS 140-18533/1002		03/05/2018 10:17	1	RCCVC05-LCS.d	RTX-5 0.32(mm)
MB 140-18533/4		03/05/2018 12:14	1	R500BC05.D	RTX-5 0.32(mm)
ZZZZZ		03/05/2018 13:01	5926.88		RTX-5 0.32(mm)
ZZZZZ		03/05/2018 13:48	3897.7		RTX-5 0.32(mm)
ZZZZZ		03/05/2018 16:19	3918.37		RTX-5 0.32(mm)
ZZZZZ		03/05/2018 17:06	3.1		RTX-5 0.32(mm)
ZZZZZ		03/05/2018 17:52	3.29		RTX-5 0.32(mm)
140-10790-14 DL		03/05/2018 18:39	1	RC05P106.D	RTX-5 0.32(mm)
140-10790-15 DL		03/05/2018 19:27	1	RC05P107.D	RTX-5 0.32(mm)
140-10790-17		03/05/2018 20:14	1	RC05P108.D	RTX-5 0.32(mm)
140-10790-18		03/05/2018 21:02	1	RC05P109.D	RTX-5 0.32(mm)
140-10790-19		03/05/2018 21:48	1	RC05P110.D	RTX-5 0.32(mm)
ZZZZZ		03/05/2018 22:36	1		RTX-5 0.32(mm)
ZZZZZ		03/05/2018 23:28	1		RTX-5 0.32(mm)
ZZZZZ		03/06/2018 00:15	1		RTX-5 0.32(mm)
ZZZZZ		03/06/2018 01:07	1		RTX-5 0.32(mm)
ZZZZZ		03/06/2018 02:00	1		RTX-5 0.32(mm)
ZZZZZ		03/06/2018 02:53	1		RTX-5 0.32(mm)

Summa Canister Dilution Worksheet

Client: Tetra Tech, Inc.

Job No.: 140-10790-1

Lab Sample ID	Canister Volume (L)	Preadjusted Pressure ("Hg)	Preadjusted Pressure (atm)	Preadjusted Volume (L)	Adjusted Pressure (psig)	Adjusted Pressure (atm)	Adjusted Volume (L)	Initial Volume (mL)	Dilution Factor	Final Dilution Factor	Date	Analyst
140-10790-2	1	-4.9	0.84	0.84	34.7	3.36	3.36		4.02	4.02	03/01/18 13:31	Barlozhetskaya, Anna F
140-10790-10	1	-2.5	0.92	0.92	31.4	3.14	3.14		3.42	3.42	03/01/18 11:44	Barlozhetskaya, Anna F
140-10790-11	1	-2.4	0.92	0.92	31.0	3.11	3.11		3.38	3.38	03/01/18 11:43	Barlozhetskaya, Anna F

Formulae:

Preadjusted Volume (L) = (Preadjusted Pressure ("Hg) + 29.92 "Hg * Vol L) / 29.92 "Hg

Adjusted Volume (L) = (Adjusted Pressure (psig) + 14.7 psig * Vol L) / 14.7 psig

Dilution Factor = Adjusted Volume (L) / Preadjusted Volume (L)

Where:

29.92 "Hg = Standard atmospheric pressure in inches of Mercury (“Hg)

14.7 psig = Standard atmospheric pressure in pounds per square inch gauge (psig)

VOC

Initial Calibration 1/30/2018

Analyte: Trichloroethene

IS AREA	COMPOUND OF INTEREST AREA	IS AMOUNT PPB	COMPOUND AMOUNT PPB	RRF
2262577	5158	4	0.02	0.4559
2306175	8635	4	0.04	0.3744
2287139	16491	4	0.08	0.3605
2424696	33403	4	0.16	0.3444
2686976	81717	4	0.4	0.3041
2528068	233492	4	1	0.3694
2785396	498989	4	2	0.3583
3018309	1042788	4	4	0.3455
3256474	2280195	4	8	0.3501
3113925	4984487	4	16	0.4002

AVERAGE RRF 0.3667

%RSD 12.4723

Continuing Calibration 11/14/17 at 00:02

Analyte: Trichloroethene

PPB	Amount	% D
2	2.28	12.28

Sample Calc

SAMPLE IDENTIFICATION	SV-DUP02-C-24
COMPOUND	Trichloroethene
COMPOUND AREA	22169
INTERNAL STANDARD AMOUNT (ppbv)	4
DILUTION FACTOR	1
INTERNAL STANDARD AREA	1807868
AVERAGE RRF	0.3686
SAMPLE VOLUME (mL)	100
FINAL VOLUME (mL)	500

MW= 131.4

GAS CONSTANT = 24.45

on column

0.1331 ppbv

0.72 µg/m³

final result

0.67 ppbv

3.6 µg/m³

LCS %R		SPIKE AMOUNT	LCS CONCENTRATION
90.00	Trichloroethene	2	1.80

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-DUP02-C-24 | Lab Sample ID: 140-10790-1

Matrix: Air | Lab File ID: GB28P101.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 14:32

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18437 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.25	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.077	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.66		0.40	0.075
67-66-3	Chloroform	119.38	2.1		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.59		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.34	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	B	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.9		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.67		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.32	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.8		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	108		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10790-1

SDG No.:

Client Sample ID: SV-DUP02-C-24 | Lab Sample ID: 140-10790-1

Matrix: Air | Lab File ID: GB28P101.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 14:32

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18437 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.81	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.3		1.4	0.27
67-66-3	Chloroform	119.38	10		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.5	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.7	B	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	11		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	3.6		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.6	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.6		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	108		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20180226-7498.b\GB28P101.D
Lims ID: 140-10790-A-1
Client ID: SV-DUP02-C-24
Sample Type: Client
Inject. Date: 28-Feb-2018 14:32:30 ALS Bottle#: 1 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007498-007
Misc. Info.: 140-10790-a-1
Operator ID: 7126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20180226-7498.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 28-Feb-2018 15:16:17 Calib Date: 13-Nov-2017 22:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK005

First Level Reviewer: tajh Date: 28-Feb-2018 15:15:55

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.560	7.555	0.005	94	281914	4.00	
* 2 1,4-Difluorobenzene	114	9.690	9.690	0.000	97	1807868	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.656	14.662	-0.006	92	1728896	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.350	16.350	0.000	84	1398469	4.34	
6 Chlorodifluoromethane	67	3.295	3.289	0.006	56	3719	0.1318	
8 Dichlorodifluoromethane	85	3.343	3.338	0.005	99	33069	0.1175	
31 Methylene Chloride	84	5.317	5.306	0.011	99	21493	0.2141	
43 Chloroform	83	7.582	7.582	0.000	96	97539	0.4238	
47 Benzene	78	9.113	9.113	0.000	98	18000	0.0506	
49 Carbon tetrachloride	117	9.145	9.145	0.000	93	4209	0.0153	
56 Trichloroethene	130	10.445	10.445	0.000	89	22169	0.1331	
65 Toluene	91	12.624	12.624	0.000	93	225739	0.5874	
76 Ethylbenzene	91	15.029	15.029	0.000	100	33992	0.0689	
78 m-Xylene & p-Xylene	91	15.196	15.201	-0.005	99	96935	0.2592	
82 o-Xylene	91	15.730	15.730	0.000	97	35640	0.0896	
93 1,2,4-Trimethylbenzene	105	17.622	17.622	0.000	97	28754	0.0640	
S 119 Xylenes, Total	100				0		0.3488	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1 Analy Batch No.: 15917

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2017 16:15 Calibration End Date: 11/13/2017 22:37 Calibration ID: 1337

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
cis-1,2-Dichloroethene	1.7741 1.4982	1.5249 1.4314	1.4959 1.4374	1.4499 1.4124	1.3413 1.4652	Ave		1.4831				7.7		30.0			
Ethyl acetate	+++++ 2.9400	+++++ 2.4680	2.6650 2.9172	2.4499 2.8494	2.8983 2.4913	Ave		2.7099				8.0		30.0			
Chloroform	3.9103 3.3083	3.5770 3.1112	3.3275 3.0912	3.2198 3.0077	3.0511 3.0501	Ave		3.2654				8.7		30.0			
Tetrahydrofuran	+++++ 1.5162	+++++ 1.2787	1.5723 1.4773	1.3462 1.4386	1.4921 1.2939	Ave		1.4269				7.6		30.0			
1,1,1-Trichloroethane	4.1906 3.4987	3.6924 3.3036	3.4470 3.2998	3.3138 3.2176	3.1294 3.2831	Ave		3.4376				9.0		30.0			
1,2-Dichloroethane	0.5117 0.4100	0.4505 0.3742	0.4316 0.3691	0.3877 0.3586	0.3568 0.3781	Ave		0.4028				12.2		30.0			
Benzene	1.1158 0.7924	0.8587 0.7364	0.7839 0.7148	0.7379 0.6985	0.6966 0.7357	Ave		0.7871				16.0		30.0			
Cyclohexane	+++++ 0.1335	+++++ 0.1226	0.1426 0.1184	0.1305 0.1148	0.1176 0.1205	Ave		0.1251				7.6		30.0			
Carbon tetrachloride	0.7088 0.6291	0.6098 0.5944	0.5973 0.5968	0.5681 0.5952	0.5334 0.6504	Ave		0.6083				7.8		30.0			
1-Butanol	+++++ 0.0946	+++++ 0.0834	+++++ 0.0831	+++++ 0.0819	0.0793 0.0982	Ave		0.0867				8.9		30.0			
2,2,4-Trimethylpentane	+++++ 1.3672	1.5226 1.2532	1.4131 1.2121	1.2981 1.1665	1.1966 1.2023	Ave		1.2924				9.2		30.0			
Heptane	+++++ 0.2926	0.3256 0.2738	0.2998 0.2671	0.2725 0.2600	0.2552 0.2748	Ave		0.2801				7.9		30.0			
1,2-Dichloropropane	+++++ 0.3066	0.3445 0.2774	0.3207 0.2778	0.2853 0.2707	0.2745 0.2714	Ave		0.2921				8.9		30.0			
Trichloroethene	0.4652 0.3688	0.3821 0.3588	0.3635 0.3455	0.3473 0.3501	0.3041 0.4002	Ave		0.3686				11.5		30.0			
Dibromomethane	+++++ 0.3329	0.4326 0.3103	0.3748 0.3064	0.3179 0.3025	0.2950 0.3293	Ave		0.3335				13.2		30.0			
Bromodichloromethane	+++++ 0.6113	0.5991 0.5748	0.5839 0.5709	0.5278 0.5670	0.5155 0.6011	Ave		0.5724				5.7		30.0			
1,4-Dioxane	+++++ 0.1105	+++++ 0.0941	0.1052 0.1081	0.0908 0.1051	0.0972 0.1066	Ave		0.1022				7.0		30.0			
Methyl methacrylate	+++++ 0.3158	+++++ 0.2641	0.2492 0.3141	0.2384 0.3122	0.2828 0.2892	Ave		0.2832				10.7		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.5375	+++++ 0.4341	0.5084 0.4922	0.4079 0.4649	0.4854 0.4900	Ave		0.4776				8.6		30.0			
cis-1,3-Dichloropropene	0.5075 0.4702	0.4397 0.4480	0.4523 0.4416	0.4038 0.4413	0.4096 0.4695	Ave		0.4483				6.7		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1 Analy Batch No.: 15917

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2017 16:15 Calibration End Date: 11/13/2017 22:37 Calibration ID: 1337

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chloroform	CBM	Ave	8034 374012	14666 754349	27328 1608175	54044 3375902	139215 6841071	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	+++++ 171415	+++++ 310039	12913 768573	22595 1614635	68081 2902098	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	8610 395534	15139 800987	28309 1716664	55622 3611490	142790 7363783	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	5673 259566	10182 520510	19580 1114126	37293 2335228	95876 4709100	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Benzene	DFBZ	Ave	12370 501630	19406 1024154	35561 2157425	70972 4549459	187181 9164238	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	+++++ 84494	+++++ 170517	6467 357392	12548 747761	31612 1500344	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	7858 398226	13782 826704	27093 1801251	54641 3876730	143333 8101116	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	+++++ 59892	+++++ 116059	+++++ 250710	+++++ 533382	21302 1222672	+++++ 1.00	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	+++++ 865496	34411 1743031	64100 3658581	124855 7597575	321511 14975770	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Heptane	DFBZ	Ave	+++++ 185205	7359 380779	13600 806181	26207 1693244	68571 3422405	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	+++++ 194107	7786 385846	14547 838597	27437 1762859	73768 3380117	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	5158 233492	8635 498989	16491 1042788	33403 2280195	81717 4984487	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	+++++ 210713	9776 431534	17001 924791	30571 1970153	79263 4101555	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	+++++ 386993	13539 799522	26488 1723165	50764 3692749	138509 7486541	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	+++++ 69922	+++++ 130937	4772 326321	8736 684344	26106 1328311	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	+++++ 199881	+++++ 367336	11302 948044	22934 2033631	75998 3601729	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	+++++ 340244	+++++ 603705	23063 1485711	39232 3027959	130432 6102839	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
cis-1,3-Dichloropropene	DFBZ	Ave	5626 297640	9937 623039	20516 1332908	38840 2874230	110051 5847515	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	4601 277012	9461 566136	17831 1226943	34215 2732765	98547 5551856	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Toluene	CBZd 5	Ave	11052 572881	21162 1165314	39657 2568835	73875 5584757	217565 11056815	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	3214 173621	6189 351168	12122 765500	23173 1664151	64954 3308788	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC01.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 13-Nov-2017 16:15:30 ALS Bottle#: 1 Worklist Smp#: 3
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006586-003
Misc. Info.: 123609
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 15-Nov-2017 15:40:41 Calib Date: 13-Nov-2017 22:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: tajh Date: 14-Nov-2017 13:40:03

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.603	7.613	-0.010	97	419303	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.744	9.753	-0.009	96	2262577	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.700	14.703	-0.003	89	2162758	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.382	16.389	-0.007	88	1568234	4.00	3.89	
6 Chlorodifluoromethane	67	3.311	3.306	0.005	97	1323	0.0196	0.0315	
7 Propene	41	3.316	3.312	0.004	83	4123	0.0196	0.0329	
8 Dichlorodifluoromethane	85	3.354	3.354	0.000	99	10959	0.0196	0.0262	
9 Chloromethane	52	3.500	3.492	0.008	99	2664	0.0196	0.0589	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.511	3.507	0.004	94	6449	0.0196	0.0244	
11 Vinyl chloride	62	3.629	3.625	0.004	61	3977	0.0196	0.0242	
12 Butadiene	54	3.699	3.696	0.003	58	3570	0.0196	0.0293	
13 Butane	43	3.699	3.696	0.003	86	7602	0.0196	0.0322	
15 Bromomethane	94	3.942	3.937	0.005	97	3644	0.0196	0.0250	
16 Chloroethane	64	4.055	4.048	0.007	95	1948	0.0196	0.0239	
17 Ethanol	31	4.201	4.184	0.017	98	9287	0.0980	0.1269	
18 Vinyl bromide	106	4.282	4.281	0.001	96	3261	0.0196	0.0229	
19 2-Methylbutane	43	4.336	4.332	0.004	87	5146	0.0196	0.0275	
20 Trichlorofluoromethane	101	4.503	4.500	0.003	98	10774	0.0196	0.0249	
21 Acrolein	56	4.519	4.509	0.010	38	2396	0.0196	0.0687	
23 Acetone	58	4.627	4.606	0.021	97	7134	0.0588	0.1097	
24 Pentane	72	4.681	4.682	-0.001	95	786	0.0196	0.0274	
25 Isopropyl alcohol	45	4.783	4.739	0.044	98	13416	0.0588	0.0743	
26 Ethyl ether	31	4.864	4.827	0.037	94	3171	0.0196	0.0216	
27 1,1-Dichloroethene	96	5.064	5.066	-0.002	96	3596	0.0196	0.0244	
28 Acrylonitrile	53	5.161	5.158	0.003	89	2242	0.0196	0.0244	
30 1,1,2-Trichloro-1,2,2-trif	101	5.231	5.233	-0.002	92	7513	0.0196	0.0238	
29 2-Methyl-2-propanol	59	5.349	5.261	0.088	40	5488	0.0196	0.0230	
31 Methylene Chloride	84	5.349	5.353	-0.004	96	20475	0.0196	0.1371	
32 3-Chloro-1-propene	39	5.360	5.371	-0.011	97	8215	0.0196	0.0592	
33 Carbon disulfide	76	5.484	5.485	-0.001	98	10147	0.0196	0.0253	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC02.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 13-Nov-2017 16:57:30 ALS Bottle#: 1 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006586-004
Misc. Info.: 123609
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 15-Nov-2017 15:40:45 Calib Date: 13-Nov-2017 22:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: tajh Date: 14-Nov-2017 13:40:45

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.603	7.613	-0.010	97	418373	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.744	9.753	-0.009	96	2306175	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.694	14.703	-0.009	89	2243238	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.382	16.389	-0.007	88	1630824	4.00	3.90	
6 Chlorodifluoromethane	67	3.311	3.306	0.005	96	1944	0.0392	0.0464	
7 Propene	41	3.316	3.312	0.004	75	7081	0.0392	0.0566	
8 Dichlorodifluoromethane	85	3.359	3.354	0.005	99	19312	0.0392	0.0462	
9 Chloromethane	52	3.494	3.492	0.002	95	3789	0.0392	0.0839	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.510	3.507	0.003	96	10861	0.0392	0.0413	
11 Vinyl chloride	62	3.629	3.625	0.004	59	7310	0.0392	0.0445	
13 Butane	43	3.699	3.696	0.003	85	13010	0.0392	0.0553	
12 Butadiene	54	3.699	3.696	0.003	65	5739	0.0392	0.0472	
15 Bromomethane	94	3.936	3.937	-0.001	97	6662	0.0392	0.0458	
16 Chloroethane	64	4.050	4.048	0.002	91	3501	0.0392	0.0430	
17 Ethanol	31	4.190	4.184	0.006	97	17031	0.1960	0.2332	
18 Vinyl bromide	106	4.282	4.281	0.001	96	5801	0.0392	0.0408	
19 2-Methylbutane	43	4.330	4.332	-0.002	91	9582	0.0392	0.0514	
20 Trichlorofluoromethane	101	4.503	4.500	0.003	97	19120	0.0392	0.0442	
21 Acrolein	56	4.519	4.509	0.010	94	4193	0.0392	0.1204	
23 Acetone	58	4.621	4.606	0.015	97	12468	0.1176	0.1922	
24 Pentane	72	4.681	4.682	-0.001	98	1410	0.0392	0.0493	
25 Isopropyl alcohol	45	4.761	4.739	0.022	99	23569	0.1176	0.1308	
26 Ethyl ether	31	4.853	4.827	0.026	93	6455	0.0392	0.0441	
27 1,1-Dichloroethene	96	5.069	5.066	0.003	97	6219	0.0392	0.0422	
28 Acrylonitrile	53	5.155	5.158	-0.003	96	4014	0.0392	0.0437	
30 1,1,2-Trichloro-1,2,2-trif	101	5.231	5.233	-0.002	94	12916	0.0392	0.0409	
29 2-Methyl-2-propanol	59	5.311	5.261	0.050	90	9398	0.0392	0.0394	
31 Methylene Chloride	84	5.349	5.353	-0.004	97	22573	0.0392	0.1515	
32 3-Chloro-1-propene	39	5.365	5.371	-0.006	98	13440	0.0392	0.0970	
33 Carbon disulfide	76	5.484	5.485	-0.001	100	18136	0.0392	0.0453	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC03.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 13-Nov-2017 17:39:30 ALS Bottle#: 2 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006586-005
Misc. Info.: 123608
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 15-Nov-2017 15:40:48 Calib Date: 13-Nov-2017 22:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: tajh Date: 14-Nov-2017 13:42:43

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.593	7.613	-0.020	97	414085	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.739	9.753	-0.014	96	2287139	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.694	14.703	-0.009	89	2189329	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.382	16.389	-0.007	89	1602397	4.00	3.92	
6 Chlorodifluoromethane	67	3.306	3.306	0.000	97	4016	0.0793	0.0969	
7 Propene	41	3.306	3.312	-0.006	97	11776	0.0793	0.0951	
8 Dichlorodifluoromethane	85	3.349	3.354	-0.005	100	34850	0.0793	0.0843	
9 Chloromethane	52	3.484	3.492	-0.008	98	5596	0.0793	0.1252	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.500	3.507	-0.007	94	22191	0.0793	0.0852	
11 Vinyl chloride	62	3.618	3.625	-0.007	60	13674	0.0793	0.0841	
12 Butadiene	54	3.689	3.696	-0.007	63	10885	0.0793	0.0905	
13 Butane	43	3.689	3.696	-0.007	86	22612	0.0793	0.0971	
15 Bromomethane	94	3.926	3.937	-0.011	98	12336	0.0793	0.0856	
16 Chloroethane	64	4.034	4.048	-0.014	93	6970	0.0793	0.0866	
17 Ethanol	31	4.152	4.184	-0.032	97	32841	0.3967	0.4544	
18 Vinyl bromide	106	4.271	4.281	-0.010	97	11974	0.0793	0.0851	
19 2-Methylbutane	43	4.319	4.332	-0.013	90	16807	0.0793	0.0910	
20 Trichlorofluoromethane	101	4.487	4.500	-0.013	99	36192	0.0793	0.0845	
21 Acrolein	56	4.503	4.509	-0.006	26	3257	0.0793	0.0945	
23 Acetone	58	4.600	4.606	-0.006	98	28830	0.2380	0.4490	
24 Pentane	72	4.665	4.682	-0.017	96	2825	0.0793	0.0997	
25 Isopropyl alcohol	45	4.713	4.739	-0.026	93	47239	0.2380	0.2649	
26 Ethyl ether	31	4.821	4.827	-0.006	95	12262	0.0793	0.0847	
27 1,1-Dichloroethene	96	5.053	5.066	-0.013	95	11700	0.0793	0.0803	
28 Acrylonitrile	53	5.139	5.158	-0.019	94	7387	0.0793	0.0813	
30 1,1,2-Trichloro-1,2,2-trif	101	5.220	5.233	-0.013	94	24607	0.0793	0.0788	
29 2-Methyl-2-propanol	59	5.247	5.261	-0.014	97	19723	0.0793	0.0836	
31 Methylene Chloride	84	5.339	5.353	-0.014	97	26924	0.0793	0.1826	
32 3-Chloro-1-propene	39	5.360	5.371	-0.011	97	12575	0.0793	0.0917	
33 Carbon disulfide	76	5.468	5.485	-0.017	99	33289	0.0793	0.0839	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC04.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 13-Nov-2017 18:22:30 ALS Bottle#: 2 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006586-006
Misc. Info.: 123608
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 15-Nov-2017 15:40:52 Calib Date: 13-Nov-2017 22:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: tajh Date: 14-Nov-2017 13:42:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.614	7.613	0.001	96	423144	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.755	9.753	0.002	96	2424696	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.700	14.703	-0.003	88	2381228	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.382	16.389	-0.007	89	1806171	4.00	4.07	
6 Chlorodifluoromethane	67	3.311	3.306	0.005	98	6739	0.1587	0.1592	
7 Propene	41	3.316	3.312	0.004	96	23206	0.1587	0.1833	
8 Dichlorodifluoromethane	85	3.360	3.354	0.006	100	69172	0.1587	0.1638	
9 Chloromethane	52	3.494	3.492	0.002	100	8868	0.1587	0.1942	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.511	3.507	0.004	95	40067	0.1587	0.1505	
11 Vinyl chloride	62	3.629	3.625	0.004	77	25654	0.1587	0.1545	
13 Butane	43	3.699	3.696	0.003	92	41175	0.1587	0.1730	
12 Butadiene	54	3.699	3.696	0.003	88	20570	0.1587	0.1673	
15 Bromomethane	94	3.937	3.937	0.000	97	23657	0.1587	0.1607	
16 Chloroethane	64	4.050	4.048	0.002	97	13456	0.1587	0.1635	
17 Ethanol	31	4.179	4.184	-0.005	98	62153	0.7933	0.8415	
18 Vinyl bromide	106	4.282	4.281	0.001	98	22496	0.1587	0.1565	
19 2-Methylbutane	43	4.336	4.332	0.004	92	29591	0.1587	0.1568	
20 Trichlorofluoromethane	101	4.503	4.500	0.003	98	69167	0.1587	0.1581	
21 Acrolein	56	4.519	4.509	0.010	91	5898	0.1587	0.1675	
22 Acetonitrile	40	4.573	4.551	0.022	100	6983	0.1587	0.1327	
23 Acetone	58	4.621	4.606	0.015	99	50830	0.4760	0.7747	
24 Pentane	72	4.686	4.682	0.004	98	4633	0.1587	0.1600	
25 Isopropyl alcohol	45	4.735	4.739	-0.004	95	87914	0.4760	0.4824	
26 Ethyl ether	31	4.842	4.827	0.015	95	23637	0.1587	0.1598	
27 1,1-Dichloroethene	96	5.069	5.066	0.003	95	21226	0.1587	0.1425	
28 Acrylonitrile	53	5.166	5.158	0.008	97	13640	0.1587	0.1469	
30 1,1,2-Trichloro-1,2,2-trif	101	5.241	5.233	0.008	94	48964	0.1587	0.1534	
29 2-Methyl-2-propanol	59	5.285	5.261	0.024	91	37118	0.1587	0.1539	
31 Methylene Chloride	84	5.355	5.353	0.002	97	37658	0.1587	0.2500	
32 3-Chloro-1-propene	39	5.371	5.371	0.000	97	23486	0.1587	0.1676	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC05.D
Lims ID: IC L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 13-Nov-2017 19:05:30 ALS Bottle#: 3 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006586-007
Misc. Info.: 123607
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 15-Nov-2017 15:40:55 Calib Date: 13-Nov-2017 22:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: tajh Date: 14-Nov-2017 13:49:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.603	7.613	-0.010	96	456281	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.744	9.753	-0.009	96	2686976	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.700	14.703	-0.003	88	2555778	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.382	16.389	-0.007	91	1944444	4.00	4.08	
6 Chlorodifluoromethane	67	3.300	3.306	-0.006	97	17815	0.4000	0.3902	
7 Propene	41	3.311	3.312	-0.001	99	55285	0.4000	0.4050	
8 Dichlorodifluoromethane	85	3.354	3.354	0.000	100	177921	0.4000	0.3907	
9 Chloromethane	52	3.489	3.492	-0.003	99	19982	0.4000	0.4058	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.505	3.507	-0.002	95	110853	0.4000	0.3861	
11 Vinyl chloride	62	3.624	3.625	-0.001	98	67921	0.4000	0.3792	
12 Butadiene	54	3.694	3.696	-0.002	96	52626	0.4000	0.3970	
13 Butane	43	3.694	3.696	-0.002	95	106696	0.4000	0.4157	
15 Bromomethane	94	3.936	3.937	-0.001	98	62553	0.4000	0.3941	
16 Chloroethane	64	4.044	4.048	-0.004	98	34965	0.4000	0.3941	
17 Ethanol	31	4.158	4.184	-0.026	98	172678	2.00	2.17	
18 Vinyl bromide	106	4.276	4.281	-0.005	97	59464	0.4000	0.3837	
19 2-Methylbutane	43	4.330	4.332	-0.002	91	78905	0.4000	0.3878	
20 Trichlorofluoromethane	101	4.492	4.500	-0.008	99	184625	0.4000	0.3914	
21 Acrolein	56	4.497	4.509	-0.012	30	14290	0.4000	0.3763	
22 Acetonitrile	40	4.546	4.551	-0.005	99	23397	0.4000	0.4123	
23 Acetone	58	4.594	4.606	-0.012	98	112683	1.20	1.59	
24 Pentane	72	4.681	4.682	-0.001	98	12574	0.4000	0.4028	
25 Isopropyl alcohol	45	4.702	4.739	-0.037	97	250842	1.20	1.28	
26 Ethyl ether	31	4.815	4.827	-0.012	96	68486	0.4000	0.4293	
27 1,1-Dichloroethene	96	5.058	5.066	-0.008	95	58681	0.4000	0.3654	
28 Acrylonitrile	53	5.150	5.158	-0.008	93	41904	0.4000	0.4186	
30 1,1,2-Trichloro-1,2,2-trif	101	5.231	5.233	-0.002	93	128810	0.4000	0.3743	
29 2-Methyl-2-propanol	59	5.225	5.261	-0.036	67	102110	0.4000	0.3926	
31 Methylene Chloride	84	5.344	5.353	-0.009	97	70998	0.4000	0.4370	
32 3-Chloro-1-propene	39	5.365	5.371	-0.006	97	60754	0.4000	0.4021	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC06.D
Lims ID: IC L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 13-Nov-2017 19:47:30 ALS Bottle#: 4 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006586-008
Misc. Info.: 123606
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 15-Nov-2017 15:40:58 Calib Date: 13-Nov-2017 22:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: tajh Date: 14-Nov-2017 09:39:31

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.609	7.613	-0.004	96	451487	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.750	9.753	-0.003	95	2528068	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.700	14.703	-0.003	88	2529945	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.388	16.389	-0.001	94	1906447	4.00	4.04	
6 Chlorodifluoromethane	67	3.306	3.306	0.000	97	47584	1.00	1.05	
7 Propene	41	3.311	3.312	-0.001	98	146316	1.00	1.08	
8 Dichlorodifluoromethane	85	3.354	3.354	0.000	100	482581	1.00	1.07	
9 Chloromethane	52	3.494	3.492	0.002	100	54897	1.00	1.13	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.505	3.507	-0.002	99	294387	1.00	1.04	
11 Vinyl chloride	62	3.624	3.625	-0.001	99	182777	1.00	1.03	
13 Butane	43	3.694	3.696	-0.002	93	277958	1.00	1.09	
12 Butadiene	54	3.694	3.696	-0.002	95	143956	1.00	1.10	
15 Bromomethane	94	3.937	3.937	0.000	99	167329	1.00	1.07	
16 Chloroethane	64	4.044	4.048	-0.004	98	94779	1.00	1.08	
17 Ethanol	31	4.168	4.184	-0.016	96	432503	5.01	5.49	
18 Vinyl bromide	106	4.282	4.281	0.001	99	163902	1.00	1.07	
19 2-Methylbutane	43	4.330	4.332	-0.002	90	211585	1.00	1.05	
20 Trichlorofluoromethane	101	4.497	4.500	-0.003	99	495271	1.00	1.06	
21 Acrolein	56	4.503	4.509	-0.006	91	38182	1.00	1.02	
22 Acetonitrile	40	4.551	4.551	0.000	99	64966	1.00	1.16	
23 Acetone	58	4.594	4.606	-0.012	98	232757	3.01	3.32	
24 Pentane	72	4.681	4.682	-0.001	98	33503	1.00	1.08	
25 Isopropyl alcohol	45	4.713	4.739	-0.026	93	642804	3.01	3.31	
26 Ethyl ether	31	4.816	4.827	-0.011	96	171952	1.00	1.09	
27 1,1-Dichloroethene	96	5.064	5.066	-0.002	96	165163	1.00	1.04	
28 Acrylonitrile	53	5.150	5.158	-0.008	95	108483	1.00	1.10	
30 1,1,2-Trichloro-1,2,2-trif	101	5.231	5.233	-0.002	96	351206	1.00	1.03	
29 2-Methyl-2-propanol	59	5.215	5.261	-0.046	95	285790	1.00	1.11	
31 Methylene Chloride	84	5.349	5.353	-0.004	96	161108	1.00	1.00	
32 3-Chloro-1-propene	39	5.371	5.371	0.000	97	163444	1.00	1.09	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC07.D
Lims ID: ICIS L7
Client ID:
Sample Type: ICIS Calib Level: 7
Inject. Date: 13-Nov-2017 20:29:30 ALS Bottle#: 5 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006586-009
Misc. Info.: 123605
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 15-Nov-2017 15:41:02 Calib Date: 13-Nov-2017 22:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: tajh Date: 14-Nov-2017 09:42:20

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.620	7.613	0.007	95	485567	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.760	9.753	0.007	95	2785396	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.705	14.703	0.002	87	2750264	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.388	16.389	-0.001	95	2091104	4.00	4.07	
6 Chlorodifluoromethane	67	3.306	3.306	0.000	97	91604	2.00	1.89	
7 Propene	41	3.316	3.312	0.004	99	284706	2.00	1.96	
8 Dichlorodifluoromethane	85	3.354	3.354	0.000	100	948236	2.00	1.96	
9 Chloromethane	52	3.494	3.492	0.002	100	103444	2.00	1.97	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.511	3.507	0.004	94	595818	2.00	1.95	
11 Vinyl chloride	62	3.629	3.625	0.004	99	365751	2.00	1.92	
12 Butadiene	54	3.699	3.696	0.003	93	282979	2.00	2.01	
13 Butane	43	3.699	3.696	0.003	92	536349	2.00	1.96	
15 Bromomethane	94	3.942	3.937	0.005	98	339947	2.00	2.01	
16 Chloroethane	64	4.055	4.048	0.007	100	188279	2.00	1.99	
17 Ethanol	31	4.185	4.184	0.001	96	780582	9.99	9.21	
18 Vinyl bromide	106	4.287	4.281	0.006	99	329759	2.00	2.00	
19 2-Methylbutane	43	4.341	4.332	0.009	91	412500	2.00	1.91	
20 Trichlorofluoromethane	101	4.508	4.500	0.008	99	973088	2.00	1.94	
21 Acrolein	56	4.514	4.509	0.005	92	79056	2.00	1.96	
22 Acetonitrile	40	4.562	4.551	0.011	99	118573	2.00	1.96	
23 Acetone	58	4.605	4.606	-0.001	98	412013	5.99	5.47	
24 Pentane	72	4.692	4.682	0.010	98	65649	2.00	1.98	
25 Isopropyl alcohol	45	4.729	4.739	-0.010	95	1169994	5.99	5.59	
26 Ethyl ether	31	4.821	4.827	-0.006	96	323714	2.00	1.91	
27 1,1-Dichloroethene	96	5.074	5.066	0.008	96	330185	2.00	1.93	
28 Acrylonitrile	53	5.166	5.158	0.008	94	200830	2.00	1.89	
30 1,1,2-Trichloro-1,2,2-trif	101	5.242	5.233	0.009	96	709434	2.00	1.94	
29 2-Methyl-2-propanol	59	5.231	5.261	-0.030	95	522279	2.00	1.89	
31 Methylene Chloride	84	5.360	5.353	0.007	96	305525	2.00	1.77	
32 3-Chloro-1-propene	39	5.382	5.371	0.011	97	307300	2.00	1.91	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC08.D
Lims ID: IC L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 13-Nov-2017 21:11:30 ALS Bottle#: 6 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006586-010
Misc. Info.: 123604
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 15-Nov-2017 15:41:05 Calib Date: 13-Nov-2017 22:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: tajh Date: 14-Nov-2017 14:36:58

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.614	7.613	0.001	94	520239	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.755	9.753	0.002	95	3018309	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.705	14.703	0.002	87	3060811	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.393	16.389	0.004	97	2287406	4.00	4.01	
6 Chlorodifluoromethane	67	3.300	3.306	-0.006	97	188886	4.00	3.63	
7 Propene	41	3.306	3.312	-0.006	99	567180	4.00	3.64	
8 Dichlorodifluoromethane	85	3.349	3.354	-0.005	100	1930222	4.00	3.72	
9 Chloromethane	52	3.484	3.492	-0.008	100	209700	4.00	3.73	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.500	3.507	-0.007	93	1268393	4.00	3.87	
11 Vinyl chloride	62	3.618	3.625	-0.007	99	742706	4.00	3.64	
13 Butane	43	3.689	3.696	-0.007	91	1071781	4.00	3.66	
12 Butadiene	54	3.689	3.696	-0.007	92	572852	4.00	3.79	
15 Bromomethane	94	3.931	3.937	-0.006	99	697972	4.00	3.86	
16 Chloroethane	64	4.044	4.048	-0.004	100	385220	4.00	3.81	
17 Ethanol	31	4.174	4.184	-0.010	96	1771762	20.0	19.5	
18 Vinyl bromide	106	4.276	4.281	-0.005	99	678777	4.00	3.84	
19 2-Methylbutane	43	4.325	4.332	-0.007	91	823604	4.00	3.55	
20 Trichlorofluoromethane	101	4.492	4.500	-0.008	99	2014322	4.00	3.75	
21 Acrolein	56	4.492	4.509	-0.017	90	177634	4.00	4.10	
22 Acetonitrile	40	4.551	4.551	0.000	99	277041	4.00	4.28	
23 Acetone	58	4.589	4.606	-0.017	98	944699	12.0	11.7	
24 Pentane	72	4.675	4.682	-0.007	98	138163	4.00	3.88	
25 Isopropyl alcohol	45	4.719	4.739	-0.020	92	2623528	12.0	11.7	
26 Ethyl ether	31	4.805	4.827	-0.022	96	694797	4.00	3.82	
27 1,1-Dichloroethene	96	5.064	5.066	-0.002	97	688255	4.00	3.76	
28 Acrylonitrile	53	5.150	5.158	-0.008	94	464689	4.00	4.07	
30 1,1,2-Trichloro-1,2,2-trif	101	5.225	5.233	-0.008	97	1475868	4.00	3.76	
29 2-Methyl-2-propanol	59	5.209	5.261	-0.052	94	1181182	4.00	3.98	
31 Methylene Chloride	84	5.349	5.353	-0.004	96	616498	4.00	3.33	
32 3-Chloro-1-propene	39	5.366	5.371	-0.005	98	632648	4.00	3.67	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC09.D
Lims ID: IC L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 13-Nov-2017 21:54:30 ALS Bottle#: 7 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006586-011
Misc. Info.: 123603
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 15-Nov-2017 15:41:08 Calib Date: 13-Nov-2017 22:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: tajh Date: 14-Nov-2017 14:04:43

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.630	7.613	0.017	92	561201	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.766	9.753	0.013	95	3256474	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.711	14.703	0.008	86	3217884	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.398	16.389	0.009	94	2389282	4.00	3.98	
6 Chlorodifluoromethane	67	3.300	3.306	-0.006	96	380435	8.00	6.78	
7 Propene	41	3.311	3.312	-0.001	99	1128877	8.00	6.72	
8 Dichlorodifluoromethane	85	3.354	3.354	0.000	100	3924687	8.00	7.01	
9 Chloromethane	52	3.489	3.492	-0.003	99	417131	8.00	6.89	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.505	3.507	-0.002	93	2667613	8.00	7.55	
11 Vinyl chloride	62	3.624	3.625	-0.001	99	1519736	8.00	6.90	
12 Butadiene	54	3.694	3.696	-0.002	70	1152350	8.00	7.07	
13 Butane	43	3.694	3.696	-0.002	85	2120801	8.00	6.72	
15 Bromomethane	94	3.937	3.937	0.000	98	1441978	8.00	7.39	
16 Chloroethane	64	4.050	4.048	0.002	100	800409	8.00	7.34	
17 Ethanol	31	4.206	4.184	0.022	95	3525366	40.0	36.0	
18 Vinyl bromide	106	4.282	4.281	0.001	98	1417168	8.00	7.44	
19 2-Methylbutane	43	4.336	4.332	0.004	90	1668764	8.00	6.67	
20 Trichlorofluoromethane	101	4.503	4.500	0.003	99	4243257	8.00	7.31	
21 Acrolein	56	4.508	4.509	-0.001	91	361660	8.00	7.74	
22 Acetonitrile	40	4.568	4.551	0.017	99	569467	8.00	8.16	
23 Acetone	58	4.600	4.606	-0.006	98	1884211	24.0	21.7	
24 Pentane	72	4.686	4.682	0.004	99	292318	8.00	7.61	
25 Isopropyl alcohol	45	4.756	4.739	0.017	98	4648765	24.0	19.2	
26 Ethyl ether	31	4.816	4.827	-0.011	94	1488991	8.00	7.59	
27 1,1-Dichloroethene	96	5.069	5.066	0.003	97	1470068	8.00	7.44	
28 Acrylonitrile	53	5.166	5.158	0.008	95	981544	8.00	7.97	
30 1,1,2-Trichloro-1,2,2-trif	101	5.236	5.233	0.003	98	3134469	8.00	7.41	
29 2-Methyl-2-propanol	59	5.252	5.261	-0.009	94	2344702	8.00	7.33	
31 Methylene Chloride	84	5.366	5.353	0.013	95	1272652	8.00	6.37	
32 3-Chloro-1-propene	39	5.382	5.371	0.011	98	1342560	8.00	7.22	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D
Lims ID: IC L10
Client ID:
Sample Type: IC Calib Level: 10
Inject. Date: 13-Nov-2017 22:37:30 ALS Bottle#: 8 Worklist Smp#: 12
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006586-012
Misc. Info.: 123602
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 15-Nov-2017 15:41:11 Calib Date: 13-Nov-2017 22:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: tajh Date: 14-Nov-2017 14:00:44

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.641	7.613	0.028	97	560730	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.777	9.753	0.024	95	3113925	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.721	14.703	0.018	87	3144665	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.409	16.389	0.020	96	2379169	4.00	4.05	
6 Chlorodifluoromethane	67	3.306	3.306	0.000	96	776367	16.0	13.8	
7 Propene	41	3.311	3.312	-0.001	99	2198206	16.0	13.1	
8 Dichlorodifluoromethane	85	3.354	3.354	0.000	99	8013096	16.0	14.3	
9 Chloromethane	52	3.495	3.492	0.002	100	827117	16.0	13.7	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.511	3.507	0.004	92	5850706	16.0	16.6	
11 Vinyl chloride	62	3.629	3.625	0.004	99	3126086	16.0	14.2	
13 Butane	43	3.699	3.696	0.003	84	4119438	16.0	13.1	
12 Butadiene	54	3.699	3.696	0.003	71	2298877	16.0	14.1	
15 Bromomethane	94	3.942	3.937	0.005	99	3004925	16.0	15.4	
16 Chloroethane	64	4.055	4.048	0.007	99	1652929	16.0	15.2	
17 Ethanol	31	4.222	4.184	0.038	95	6392242	80.0	65.3	
18 Vinyl bromide	106	4.293	4.281	0.012	99	2988838	16.0	15.7	
19 2-Methylbutane	43	4.341	4.332	0.009	89	3438323	16.0	13.8	
20 Trichlorofluoromethane	101	4.508	4.500	0.008	99	8824574	16.0	15.2	
21 Acrolein	56	4.514	4.509	0.005	91	758574	16.0	16.3	
22 Acetonitrile	40	4.578	4.551	0.027	99	1009777	16.0	14.5	
23 Acetone	58	4.611	4.606	0.005	97	3235879	48.0	37.2	
24 Pentane	72	4.692	4.682	0.010	99	607693	16.0	15.8	
25 Isopropyl alcohol	45	4.783	4.739	0.044	95	4656390	48.0	19.3	
26 Ethyl ether	31	4.821	4.827	-0.006	94	2845941	16.0	14.5	
27 1,1-Dichloroethene	96	5.080	5.066	0.014	97	3094497	16.0	15.7	
28 Acrylonitrile	53	5.182	5.158	0.024	95	1870672	16.0	15.2	
30 1,1,2-Trichloro-1,2,2-trif	101	5.247	5.233	0.014	96	6646009	16.0	15.7	
29 2-Methyl-2-propanol	59	5.285	5.261	0.024	93	5236389	16.0	16.4	
31 Methylene Chloride	84	5.371	5.353	0.018	97	2614182	16.0	13.1	
32 3-Chloro-1-propene	39	5.387	5.371	0.016	98	2712084	16.0	14.6	

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Lab Sample ID: ICV 140-15917/14 Calibration Date: 11/14/2017 00:02

Instrument ID: MG Calib Start Date: 11/13/2017 16:15

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/13/2017 22:37

Lab File ID: GICVK13.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Cyclohexane	Ave	0.1251	0.1403		2.24	2.00	12.2	35.0
Carbon tetrachloride	Ave	0.6083	0.6766		2.22	2.00	11.2	35.0
1-Butanol	Ave	0.0867	0.0887		2.04	2.00	2.2	35.0
2,2,4-Trimethylpentane	Ave	1.292	1.388		2.15	2.00	7.4	35.0
Heptane	Ave	0.2801	0.3067		2.19	2.00	9.5	35.0
1,2-Dichloropropane	Ave	0.2921	0.3018		2.07	2.00	3.3	35.0
Trichloroethene	Ave	0.3686	0.4205		2.28	2.00	14.1	35.0
Dibromomethane	Ave	0.3335	0.3527		2.12	2.00	5.8	35.0
Bromodichloromethane	Ave	0.5724	0.6227		2.18	2.00	8.8	35.0
1,4-Dioxane	Ave	0.1022	0.1067		2.09	2.00	4.4	35.0
Methyl methacrylate	Ave	0.2832	0.2751		1.94	2.00	-2.9	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4776	0.4730		1.98	2.00	-1.0	35.0
cis-1,3-Dichloropropene	Ave	0.4483	0.4940		2.20	2.00	10.2	35.0
trans-1,3-Dichloropropene	Ave	0.4139	0.4356		2.10	2.00	5.2	35.0
Toluene	Ave	0.8891	0.8985		2.02	2.00	1.1	35.0
1,1,2-Trichloroethane	Ave	0.2665	0.2662		2.00	2.00	-0.1	35.0
2-Hexanone	Ave	0.2473	0.2492		2.01	2.00	0.7	35.0
Dibromochloromethane	Ave	0.5479	0.5920		2.16	2.00	8.0	35.0
Octane	Ave	0.3111	0.3432		2.21	2.00	10.3	35.0
1,2-Dibromoethane (EDB)	Ave	0.4779	0.5168		2.16	2.00	8.1	35.0
Tetrachloroethene	Ave	0.3430	0.3560		2.08	2.00	3.8	35.0
Chlorobenzene	Ave	0.7131	0.7452		2.09	2.00	4.5	35.0
Ethylbenzene	Ave	1.141	1.122		1.97	2.00	-1.7	35.0
m-Xylene & p-Xylene	Ave	0.8653	0.8696		4.02	4.00	0.5	35.0
Bromoform	Ave	0.5240	0.5445		2.08	2.00	3.9	35.0
Styrene	Ave	0.6042	0.6718		2.22	2.00	11.2	35.0
Nonane	Ave	0.5902	0.6101		2.07	2.00	3.4	35.0
o-Xylene	Ave	0.9204	0.8793		1.91	2.00	-4.5	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6266	0.6177		1.97	2.00	-1.4	35.0
1,2,3-Trichloropropane	Ave	0.1960	0.1919		1.96	2.00	-2.1	35.0
Isopropylbenzene	Ave	1.272	1.276		2.01	2.00	0.3	35.0
Propylbenzene	Ave	0.3295	0.3450		2.09	2.00	4.7	35.0
2-Chlorotoluene	Ave	0.3120	0.3305		2.12	2.00	5.9	35.0
4-Ethyltoluene	Ave	1.197	1.161		1.94	2.00	-3.0	35.0
1,3,5-Trimethylbenzene	Ave	0.4863	0.4840		1.99	2.00	-0.5	35.0
Alpha Methyl Styrene	Ave	0.4487	0.5063		2.26	2.00	12.8	35.0
Decane	Ave	0.6981	0.7015		2.01	2.00	0.5	35.0
tert-Butylbenzene	Ave	1.099	1.091		1.99	2.00	-0.7	35.0
1,2,4-Trimethylbenzene	Ave	1.039	1.014		1.95	2.00	-2.4	35.0
1,3-Dichlorobenzene	Ave	0.7589	0.7482		1.97	2.00	-1.4	35.0
sec-Butylbenzene	Ave	1.481	1.499		2.02	2.00	1.2	35.0

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-10790-1

SDG No.:

Matrix: Air Level: Low Lab File ID: GCCVB28-LCS.d

Lab ID: LCS 140-18437/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.92	96	70-130	
Carbon tetrachloride	2.00	1.72	86	70-130	
Chlorodifluoromethane	2.00	2.46	123	60-140	
Chloroform	2.00	2.25	112	70-130	
cis-1,2-Dichloroethene	2.00	2.09	105	70-130	
Dichlorodifluoromethane	2.00	2.45	123	60-140	
1,1-Dichloroethane	2.00	2.39	119	70-130	
1,2-Dichloroethane	2.00	2.11	106	70-130	
1,1-Dichloroethene	2.00	2.17	108	70-130	
Ethylbenzene	2.00	1.73	86	70-130	
Methylene Chloride	2.00	1.83	92	70-130	
Methyl tert-butyl ether	2.00	1.92	96	60-140	
Naphthalene	2.00	1.31	66	60-140	
Tetrachloroethene	2.00	1.73	86	70-130	
Toluene	2.00	1.80	90	70-130	
trans-1,2-Dichloroethene	2.00	2.14	107	70-130	
1,2,4-Trichlorobenzene	2.00	1.29	65	60-140	
1,1,1-Trichloroethane	2.00	2.25	113	70-130	
1,1,2-Trichloroethane	2.00	1.94	97	70-130	
Trichloroethene	2.00	1.80	90	70-130	
1,2,3-Trimethylbenzene	2.00	1.41	71	70-130	
1,2,4-Trimethylbenzene	2.00	1.52	76	70-130	
1,3,5-Trimethylbenzene	2.00	1.44	72	70-130	
Vinyl chloride	2.00	2.51	126	70-130	
Xylenes, Total	6.00	5.13	86	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

		ANALYTE		ORIGINAL	DUPLICATE	RL	RPD	RPD > 50%	ORIGINAL SAMPLE CONC >2xRL	DUPLICATE SAMPLE CONC >2xRL	DIFFERENCE >2XRL
SV-079-A-24	140-10790-1	1,1,1-TRICHLOROETHANE	OV	0.23 J	0.2 J	0.4	13.95	FALSE	FALSE	FALSE	FALSE
SV-079-A-24	140-10790-1	1,1,2-TRICHLOROETHANE	OV	0.11 U	0.11 U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
SV-079-A-24	140-10790-1	1,1-DICHLOROETHANE	OV	0.05 U	0.05 U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
SV-079-A-24	140-10790-1	1,1-DICHLOROETHENE	OV	0.07 U	0.07 U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
SV-079-A-24	140-10790-1	1,2,3-TRIMETHYLBENZENE	OV	0.32 J	1.6	0.4	133.33	TRUE	FALSE	TRUE	TRUE
SV-079-A-24	140-10790-1	1,2,4-TRICHLOROBENZENE	OV	0.2 U	0.2 U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
SV-079-A-24	140-10790-1	1,2,4-TRIMETHYLBENZENE	OV	0.24 J	0.35 J	0.4	37.29	FALSE	FALSE	FALSE	FALSE
SV-079-A-24	140-10790-1	1,2-DICHLOROETHANE	OV	0.095 U	0.095 U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
SV-079-A-24	140-10790-1	1,3,5-TRIMETHYLBENZENE	OV	0.13 U	0.4	0.4	101.89	TRUE	FALSE	FALSE	FALSE
SV-079-A-24	140-10790-1	BENZENE	OV	0.13 J	0.13 J	0.4	0.00	FALSE	FALSE	FALSE	FALSE
SV-079-A-24	140-10790-1	CARBON TETRACHLORIDE	OV	0.075 U	0.075 U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
SV-079-A-24	140-10790-1	CHLORODIFLUOROMETHANE	OV	5.7	4.8	0.4	17.14	FALSE	TRUE	TRUE	TRUE
SV-079-A-24	140-10790-1	CHLOROFORM	OV	0.082 J	0.075 U	0.4	8.92	FALSE	FALSE	FALSE	FALSE
SV-079-A-24	140-10790-1	CIS-1,2-DICHLOROETHENE	OV	0.12 U	0.12 U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
SV-079-A-24	140-10790-1	DICHLORODIFLUOROMETHANE	OV	0.58	0.41	0.4	34.34	FALSE	FALSE	FALSE	FALSE
SV-079-A-24	140-10790-1	ETHYLBENZENE	OV	0.74	0.75	0.4	1.34	FALSE	FALSE	FALSE	FALSE
SV-079-A-24	140-10790-1	METHYL TERT-BUTYL ETHER	OV	0.34 U	0.34 U	2	0.00	FALSE	FALSE	FALSE	FALSE
SV-079-A-24	140-10790-1	METHYLENE CHLORIDE	OV	0.8 J B	1.4	1	54.55	TRUE	FALSE	FALSE	FALSE
SV-079-A-24	140-10790-1	NAPHTHALENE	OV	0.2 U	0.2 U	0.2	0.00	FALSE	FALSE	FALSE	FALSE
SV-079-A-24	140-10790-1	TETRACHLOROETHENE	OV	3.7	4.5	0.4	19.51	FALSE	TRUE	TRUE	FALSE
SV-079-A-24	140-10790-1	TOLUENE	OV	0.6 U	0.61	0.6	1.65	FALSE	FALSE	FALSE	FALSE
SV-079-A-24	140-10790-1	TOTAL XYLENES	OV	3.4	3.4	0.8	0.00	FALSE	TRUE	TRUE	FALSE
SV-079-A-24	140-10790-1	TRANS-1,2-DICHLOROETHENE	OV	0.13 J	0.13 J	0.4	0.00	FALSE	FALSE	FALSE	FALSE
SV-079-A-24	140-10790-1	TRICHLOROETHENE	OV	16	18	0.2	11.76	FALSE	TRUE	TRUE	TRUE
SV-079-A-24	140-10790-1	VINYL CHLORIDE	OV	0.15 U	0.15 U	0.2	0.00	FALSE	FALSE	FALSE	FALSE
SV-116-A-24	140-10790-1	1,1,1-TRICHLOROETHANE	OV	0.061 J	0.068 J	0.4	10.85	FALSE	FALSE	FALSE	FALSE
SV-116-A-24	140-10790-1	1,1,2-TRICHLOROETHANE	OV	0.11 U	0.11 U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
SV-116-A-24	140-10790-1	1,1-DICHLOROETHANE	OV	0.05 U	0.05 U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
SV-116-A-24	140-10790-1	1,1-DICHLOROETHENE	OV	0.085 J	0.11 J	0.4	25.64	FALSE	FALSE	FALSE	FALSE
SV-116-A-24	140-10790-1	1,2,3-TRIMETHYLBENZENE	OV	0.17 U	0.17 U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
SV-116-A-24	140-10790-1	1,2,4-TRICHLOROBENZENE	OV	0.2 U	0.2 U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
SV-116-A-24	140-10790-1	1,2,4-TRIMETHYLBENZENE	OV	0.13 U	0.13 U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
SV-116-A-24	140-10790-1	1,2-DICHLOROETHANE	OV	0.095 U	0.095 U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
SV-116-A-24	140-10790-1	1,3,5-TRIMETHYLBENZENE	OV	0.13 U	0.13 U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
SV-116-A-24	140-10790-1	BENZENE	OV	0.17 J	0.19 J	0.4	11.11	FALSE	FALSE	FALSE	FALSE
SV-116-A-24	140-10790-1	CARBON TETRACHLORIDE	OV	0.089 J	0.095 J	0.4	6.52	FALSE	FALSE	FALSE	FALSE
SV-116-A-24	140-10790-1	CHLORODIFLUOROMETHANE	OV	0.38 J	0.4	0.4	5.13	FALSE	FALSE	FALSE	FALSE
SV-116-A-24	140-10790-1	CHLOROFORM	OV	0.17 J	0.18 J	0.4	5.71	FALSE	FALSE	FALSE	FALSE
SV-116-A-24	140-10790-1	CIS-1,2-DICHLOROETHENE	OV	0.12 U	0.12 U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
SV-116-A-24	140-10790-1	DICHLORODIFLUOROMETHANE	OV	0.52	0.55	0.4	5.61	FALSE	FALSE	FALSE	FALSE
SV-116-A-24	140-10790-1	ETHYLBENZENE	OV	0.14 U	0.14 U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
SV-116-A-24	140-10790-1	METHYL TERT-BUTYL ETHER	OV	0.34 U	0.34 U	2	0.00	FALSE	FALSE	FALSE	FALSE
SV-116-A-24	140-10790-1	METHYLENE CHLORIDE	OV	0.79 J B	0.89 J B	1	11.90	FALSE	FALSE	FALSE	FALSE
SV-116-A-24	140-10790-1	NAPHTHALENE	OV	0.2 U	0.26	0.2	26.09	FALSE	FALSE	FALSE	FALSE
SV-116-A-24	140-10790-1	TETRACHLOROETHENE	OV	2.3	1.8	0.4	24.39	FALSE	TRUE	TRUE	FALSE
SV-116-A-24	140-10790-1	TOLUENE	OV	0.6 U	0.6 U	0.6	0.00	FALSE	FALSE	FALSE	FALSE
SV-116-A-24	140-10790-1	TOTAL XYLENES	OV	0.12 U	0.12 U	0.8	0.00	FALSE	FALSE	FALSE	FALSE
SV-116-A-24	140-10790-1	TRANS-1,2-DICHLOROETHENE	OV	0.1 U	0.1 U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
SV-116-A-24	140-10790-1	TRICHLOROETHENE	OV	0.65	0.86	0.2	27.81	FALSE	TRUE	TRUE	FALSE
SV-116-A-24	140-10790-1	VINYL CHLORIDE	OV	0.15 U	0.15 U	0.2	0.00	FALSE	FALSE	FALSE	FALSE
SV-149-C-24	140-10791-1	1,1,1-TRICHLOROETHANE	OV	0.06 U	0.06 U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
SV-149-C-24	140-10791-1	1,1,2-TRICHLOROETHANE	OV	0.11 U	0.11 U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
SV-149-C-24	140-10791-1	1,1-DICHLOROETHANE	OV	0.05 U	0.05 U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
SV-149-C-24	140-10791-1	1,1-DICHLOROETHENE	OV	0.07 U	0.07 U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
SV-149-C-24	140-10791-1	1,2,3-TRIMETHYLBENZENE	OV	0.17 U	0.17 U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
SV-149-C-24	140-10791-1	1,2,4-TRICHLOROBENZENE	OV	0.2 U	0.2 U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
SV-149-C-24	140-10791-1	1,2,4-TRIMETHYLBENZENE	OV	0.39 J	0.32 J	0.4	19.72	FALSE	FALSE	FALSE	FALSE
SV-149-C-24	140-10791-1	1,2-DICHLOROETHANE	OV	0.095 U	0.095 U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
SV-149-C-24	140-10791-1	1,3,5-TRIMETHYLBENZENE	OV	0.13 U	0.13 U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
SV-149-C-24	140-10791-1	BENZENE	OV	0.36 J	0.25 J	0.4	36.07	FALSE	FALSE	FALSE	FALSE
SV-149-C-24	140-10791-1	CARBON TETRACHLORIDE	OV	0.11 J	0.077 J	0.4	35.29	FALSE	FALSE	FALSE	FALSE
SV-149-C-24	140-10791-1	CHLORODIFLUOROMETHANE	OV	0.61	0.66	0.4	7.87	FALSE	FALSE	FALSE	FALSE
SV-149-C-24	140-10791-1	CHLOROFORM	OV	2.2	2.1	0.4	4.65	FALSE	TRUE	TRUE	FALSE
SV-149-C-24	140-10791-1	CIS-1,2-DICHLOROETHENE	OV	0.12 U	0.12 U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
SV-149-C-24	140-10791-1	DICHLORODIFLUOROMETHANE	OV	0.58	0.59	0.4	1.71	FALSE	FALSE	FALSE	FALSE
SV-149-C-24	140-10791-1	ETHYLBENZENE	OV	0.39 J	0.34 J	0.4	13.70	FALSE	FALSE	FALSE	FALSE
SV-149-C-24	140-10791-1	METHYL TERT-BUTYL ETHER	OV	0.34 U	0.34 U	2	0.00	FALSE	FALSE	FALSE	FALSE
SV-149-C-24	140-10791-1	METHYLENE CHLORIDE	OV	1.2	1.1 B	1	8.70	FALSE	FALSE	FALSE	FALSE
SV-149-C-24	140-10791-1	NAPHTHALENE	OV	0.2 U	0.2 U	0.2	0.00	FALSE	FALSE	FALSE	FALSE
SV-149-C-24	140-10791-1	TETRACHLOROETHENE	OV	0.08 U	0.08 U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
SV-149-C-24	140-10791-1	TOLUENE	OV	3.7	2.9	0.6	24.24	FALSE	TRUE	TRUE	FALSE
SV-149-C-24	140-10791-1	TOTAL XYLENES	OV	2	1.8	0.8	10.53	FALSE	TRUE	TRUE	FALSE
SV-149-C-24	140-10791-1	TRANS-1,2-DICHLOROETHENE	OV	0.1 U	0.1 U	0.4	0.00	FALSE	FALSE	FALSE	FALSE
SV-149-C-24	140-10791-1	TRICHLOROETHENE	OV	1.1	0.67	0.2	48.59	FALSE	TRUE	TRUE	TRUE
SV-149-C-24	140-10791-1	VINYL CHLORIDE	OV	0.15 U	0.15 U	0.2	0.00	FALSE	FALSE	FALSE	FALSE

TETRA TECH

INTERNAL CORRESPONDENCE

TO: **A. APANAVAGE** **DATE:** **APRIL 9, 2018**

FROM: **LEIGH A. CIOFANI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
LOCKHEED MARTIN CORPORATION (LMC) – MIDDLE RIVER COMPLEX (MRC)
SAMPLE DELIVERY GROUP (SDG) 140-10791-1

SAMPLES: 19 / Air / VOC

IA-BCK-1-24	IA-BCK-2-24	IA-BCK-3-24
IA-BCK-4-24	SV-001-C-24	SV-004-C-24
SV-060-C-24	SV-088-C-24	SV-102-C-24
SV-113-C-24	SV-133-C-24	SV-141-C-24
SV-142-C-24	SV-149-C-24	SV-150-C-24
SV-152-C-24	SV-153-C-24	SV-155-C-24
SV-DUP01-C-24		

OVERVIEW

The sample set for LMC – MRC, SDG 140-10791-1, consists of nineteen (19) soil vapor (SV) and ambient air (BCK) environmental samples. All samples were analyzed for select volatile organic compounds (VOCs). Two (2) field duplicate pairs are associated with this SDG: SV-153-C-24 (original) / SV-DUP01-C-24 (duplicate) and SV-149-C-24 (original) / SV-DUP02-C-24 (duplicate; included in SDG 140-10790-1).

The samples were collected by Tetra Tech on February 20 and 21, 2018, and analyzed by TestAmerica. All analyses were conducted in accordance with EPA Method TO-15 analytical and reporting protocols.

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

MAJOR PROBLEMS

- None.

MINOR PROBLEMS

- The VOC continuing calibration performed on 02/28/18 at 10:44 on instrument MJ had percent differences (%Ds) that were greater than the 30% quality control limit for 1,2,4-trichlorobenzene and naphthalene. All samples were associated with this calibration. Detected and non-detected results for these analytes were qualified as estimated (J and UJ, respectively) in all samples.

- The following analyte was detected in the method blanks at the following maximum concentration:

Analyte	Maximum Concentration	> or < Reporting Limit (RL)
1,1,1-Trichloroethane	0.0243 ug/m^3 (1)	< RL

1 – Maximum concentration detected in method blank associated with preparation batch 140-18440 affecting all samples.

Detected concentrations of 1,1,1-trichloroethane in the associated samples that were less than the RL were qualified as non-detected (U) due to method blank contamination. No action was necessary for detected results that were greater than the RL.

- Detected results reported below the RL but above the method detection limit (MDL) were qualified as estimated (J).

NOTES

Twenty-five VOC target compounds were reported for the TO-15 analysis of the samples.

Non-detected results were reported to the MDL.

In sample SV-102-C-24, the following compounds exceeded the instrument calibration range: 1,1,1-trichloroethane, 1,1-dichloroethane, 1,1-dichloroethene, ethylbenzene, and trichloroethene. Sample SV-102-C-24 was reanalyzed at a dilution factor of 4.03 (20 ml aliquot), and the aforementioned analytes were reported from the dilution.

In sample SV-133-C-24, the result for trichloroethene exceeded the instrument calibration range. Sample SV-133-C-24 was reanalyzed using an aliquot of 11 ml and the result for trichloroethene was reported from the reanalysis.

EXECUTIVE SUMMARY

Laboratory Performance: Detected and non-detected results for 1,2,4-trichlorobenzene and naphthalene were qualified due to calibration noncompliance. Some 1,1,1-trichloroethane results were qualified as non-detected due to method blank contamination.

Other Factors Affecting Data Quality: Results above the MDL but below the RL were qualified as estimated.

The data for these analyses were reviewed with reference to the USEPA "National Functional Guidelines for Organic Superfund Methods Data Review" (January 2017) and USEPA Method TO-15 analytical and reporting protocols. The text of this report has been formulated to address only those areas affecting data quality.

Leigh A. Ciofani

Tetra Tech, Inc.
Leigh A. Ciofani
Environmental Scientist/Data Validator

Joseph A. Samchuck

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

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

Appendix A

Qualified Analytical Results

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted method detection limit for sample and method.
J	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

Qualifier Codes:

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

PROJ_NO: 08388	NSAMPLE	IA-BCK-1-24			IA-BCK-2-24			IA-BCK-3-24			IA-BCK-4-24		
SDG: 140-10791-1	LAB_ID	140-10791-16			140-10791-17			140-10791-18			140-10791-19		
FRACTION: OV-M3	SAMP_DATE	2/21/2018			2/21/2018			2/21/2018			2/21/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.33	U		0.38	U	A	1.9	U	A
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.54	J	P	3.2		
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.28	U		1.6	J	P
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	UJ	C	1.4	UJ	C	1.4	UJ	C	1.4	UJ	C
1,2,4-TRIMETHYLBENZENE		0.61	U		0.61	U		0.61	U		0.61	U	
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		0.39	J	P	0.44	J	P	0.53	J	P	0.52	J	P
CARBON TETRACHLORIDE		0.5	J	P	0.54	J	P	0.5	J	P	0.47	U	
CHLORODIFLUOROMETHANE		1.4			1.4			0.27	U		1.2	J	P
CHLOROFORM		0.55	J	P	0.92	J	P	0.37	U		0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		2.4			3.4			2.7			2.7		
ETHYLBENZENE		0.59	U		0.59	U		0.59	U		1.8		
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		3.5			3.8			2.8	J	P	3.2	J	P
NAPHTHALENE		1	UJ	C	1	UJ	C	1	UJ	C	1	UJ	C
TETRACHLOROETHENE		0.54	U		0.54	U		0.54	U		0.58	J	P
TOLUENE		2.3	U		2.3	U		2.3	U		15		
TOTAL XYLENES		0.52	U		0.52	U		1.9	J	P	8.9		
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.38	U		0.38	U		0.38	U		0.72	J	P
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 08388	NSAMPLE	SV-001-C-24			SV-004-C-24			SV-060-C-24			SV-088-C-24		
SDG: 140-10791-1	LAB_ID	140-10791-1			140-10791-2			140-10791-8			140-10791-13		
FRACTION: OV-M3	SAMP_DATE	2/20/2018			2/20/2018			2/20/2018			2/20/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.33	U		23			0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		9.3			0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.28	U		2.1			0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	UJ	C	1.4	UJ	C	1.4	UJ	C	1.4	UJ	C
1,2,4-TRIMETHYLBENZENE		0.61	U		0.61	U		1.6	J	P	0.68	J	P
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.85	J	P	0.64	U	
BENZENE		0.37	U		0.37	U		0.54	J	P	0.4	J	P
CARBON TETRACHLORIDE		0.47	U		0.47	U		0.48	J	P	0.51	J	P
CHLORODIFLUOROMETHANE		1.5			1.1	J	P	10			1.9		
CHLOROFORM		3			5.5			12			0.37	U	
CIS-1,2-DICHLOROETHENE		72			22			11			7.3		
DICHLORODIFLUOROMETHANE		2.6			2.7			2.8			2.6		
ETHYLBENZENE		0.59	U		0.59	U		14			0.59	U	
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		2.9	J	P	2.7	J	P	4.9			3.1	J	P
NAPHTHALENE		1	UJ	C	1	UJ	C	3.6	J	C	1.1	J	C
TETRACHLOROETHENE		1.7	J	P	8.7			12			10		
TOLUENE		2.3	U		2.3	U		2.3	U		2.3	U	
TOTAL XYLENES		0.52	U		0.52	U		120			4		
TRANS-1,2-DICHLOROETHENE		15			1	J	P	0.99	J	P	0.4	U	
TRICHLOROETHENE		200			69			400			37		
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 08388	NSAMPLE	SV-102-C-24			SV-102-C-24-DL			SV-113-C-24			SV-133-C-24		
SDG: 140-10791-1	LAB_ID	140-10791-3			140-10791-3			140-10791-14			140-10791-7		
FRACTION: OV-M3	SAMP_DATE	2/20/2018			2/20/2018			2/20/2018			2/20/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE					3800			0.33	U		0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U					0.57	U		0.57	U	
1,1-DICHLOROETHANE					5600			0.2	U		0.2	U	
1,1-DICHLOROETHENE					2400			0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		18						0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	UJ	C				1.4	UJ	C	1.4	UJ	C
1,2,4-TRIMETHYLBENZENE		22						0.61	U		0.61	U	
1,2-DICHLOROETHANE		0.38	U					0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		11						0.64	U		0.64	U	
BENZENE		5.3						0.37	U		0.37	U	
CARBON TETRACHLORIDE		3						0.47	U		0.69	J	P
CHLORODIFLUOROMETHANE		2.4						2.3			5		
CHLOROFORM		52						1.5	J	P	8.8		
CIS-1,2-DICHLOROETHENE		57						27			0.66	J	P
DICHLORODIFLUOROMETHANE		5						2.2			2.9		
ETHYLBENZENE					790			0.59	U		0.59	U	
METHYL TERT-BUTYL ETHER		1.2	U					1.2	U		1.2	U	
METHYLENE CHLORIDE		3.2	J	P				3.1	J	P	3.4	J	P
NAPHTHALENE		180	J	C				1	UJ	C	1	UJ	C
TETRACHLOROETHENE		10						0.54	U		53		
TOLUENE		51						2.3	U		2.3	U	
TOTAL XYLENES		2600						2.4	J	P	2.1	J	P
TRANS-1,2-DICHLOROETHENE		4.4						0.4	U		1.5	J	P
TRICHLOROETHENE					1500			150					
VINYL CHLORIDE		8.4						0.37	U		0.37	U	

PROJ_NO: 08388	NSAMPLE	SV-133-C-24-DL			SV-141-C-24			SV-142-C-24			SV-149-C-24		
SDG: 140-10791-1	LAB_ID	140-10791-7			140-10791-11			140-10791-12			140-10791-15		
FRACTION: OV-M3	SAMP_DATE	2/20/2018			2/20/2018			2/20/2018			2/20/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE					0.47	U	A	0.33	U		0.33	U	
1,1,2-TRICHLOROETHANE					0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE					0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE					3.1			0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE					0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE					1.4	UJ	C	1.4	UJ	C	1.4	UJ	C
1,2,4-TRIMETHYLBENZENE					0.61	U		0.61	U		1.9	J	P
1,2-DICHLOROETHANE					0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE					0.64	U		0.64	U		0.64	U	
BENZENE					1.1	J	P	0.37	U		1.1	J	P
CARBON TETRACHLORIDE					0.66	J	P	0.62	J	P	0.66	J	P
CHLORODIFLUOROMETHANE					6.2			1.8			2.2		
CHLOROFORM					0.85	J	P	2.1			11		
CIS-1,2-DICHLOROETHENE					12			0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE					2.7			2.6			2.9		
ETHYLBENZENE					0.59	U		0.59	U		1.7	J	P
METHYL TERT-BUTYL ETHER					1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE					3.4	J	P	3.3	J	P	4.1		
NAPHTHALENE					1	UJ	C	1	UJ	C	1	UJ	C
TETRACHLOROETHENE					22			0.54	U		0.54	U	
TOLUENE					2.3	U		2.3	U		14		
TOTAL XYLENES					3.7			2.8	J	P	8.7		
TRANS-1,2-DICHLOROETHENE					2.3			0.4	U		0.4	U	
TRICHLOROETHENE		2000			310			9.4			5.7		
VINYL CHLORIDE					0.37	U		0.37	U		0.37	U	

PROJ_NO: 08388	NSAMPLE	SV-150-C-24			SV-152-C-24			SV-153-C-24			SV-155-C-24		
SDG: 140-10791-1	LAB_ID	140-10791-9			140-10791-10			140-10791-5			140-10791-4		
FRACTION: OV-M3	SAMP_DATE	2/20/2018			2/20/2018			2/20/2018			2/20/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		1.2	U	A	2	U	A	0.33	U		2.3		
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.38	J	P	0.2	U		0.2	U		2.8		
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.28	U		1.2	J	P
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	UJ	C	1.4	UJ	C	1.4	UJ	C	1.4	UJ	C
1,2,4-TRIMETHYLBENZENE		1	J	P	1.3	J	P	0.74	J	P	0.85	J	P
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		1.2	J	P	0.95	J	P	0.37	U		0.37	J	P
CARBON TETRACHLORIDE		0.52	J	P	0.47	U		0.57	J	P	0.92	J	P
CHLORODIFLUOROMETHANE		51			17			3.3			5.3		
CHLOROFORM		0.51	J	P	1.3	J	P	0.37	U		0.7	J	P
CIS-1,2-DICHLOROETHENE		0.48	U		7			0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		2.9			2.6			3			2.6		
ETHYLBENZENE		1.9			1.1	J	P	0.59	U		0.94	J	P
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		4			7.1			3.1	J	P	3	J	P
NAPHTHALENE		1	UJ	C	1	UJ	C	1.6	J	C	1	UJ	C
TETRACHLOROETHENE		15			7.1			0.62	J	P	2.4	J	P
TOLUENE		5.3			4.5			2.3	U		2.3	U	
TOTAL XYLENES		8.1			6.3			3.4	J	P	5.9		
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.94	J	P	210			6.3			1.1		
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 08388	NSAMPLE	SV-DUP01-C-24		
SDG: 140-10791-1	LAB_ID	140-10791-6		
FRACTION: OV-M3	SAMP_DATE	2/20/2018		
MEDIA: AIR	QC_TYPE	FD		
	UNITS	UG/M3		
	PCT_SOLIDS			
	DUP_OF	SV-153-C-24		
PARAMETER		RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U	
1,1-DICHLOROETHANE		0.2	U	
1,1-DICHLOROETHENE		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	UJ	C
1,2,4-TRIMETHYLBENZENE		0.65	J	P
1,2-DICHLOROETHANE		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U	
BENZENE		0.37	U	
CARBON TETRACHLORIDE		0.49	J	P
CHLORODIFLUOROMETHANE		2.8		
CHLOROFORM		0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U	
DICHLORODIFLUOROMETHANE		2.7		
ETHYLBENZENE		0.59	U	
METHYL TERT-BUTYL ETHER		1.2	U	
METHYLENE CHLORIDE		3	J	P
NAPHTHALENE		1	UJ	C
TETRACHLOROETHENE		0.54	U	
TOLUENE		2.3	U	
TOTAL XYLENES		3.6		
TRANS-1,2-DICHLOROETHENE		0.4	U	
TRICHLOROETHENE		4.7		
VINYL CHLORIDE		0.37	U	

Appendix B

Results as Reported by the Laboratory

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: IA-BCK-1-24 Lab Sample ID: 140-10791-16

Matrix: Air Lab File ID: JB28P116.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 16:32

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 02:04

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.12	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.080	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.40		0.40	0.075
67-66-3	Chloroform	119.38	0.11	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.48		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: IA-BCK-1-24 | Lab Sample ID: 140-10791-16

Matrix: Air | Lab File ID: JB28P116.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:32

Sample wt/vol: 100(mL) | Date Analyzed: 03/01/2018 02:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.39	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.50	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4		1.4	0.27
67-66-3	Chloroform	119.38	0.55	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: IA-BCK-2-24 Lab Sample ID: 140-10791-17

Matrix: Air Lab File ID: JB28P201.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 16:29

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 02:51

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.085	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.40		0.40	0.075
67-66-3	Chloroform	119.38	0.19	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.68		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: IA-BCK-2-24 | Lab Sample ID: 140-10791-17

Matrix: Air | Lab File ID: JB28P201.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:29

Sample wt/vol: 100(mL) | Date Analyzed: 03/01/2018 02:51

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.44	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.54	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4		1.4	0.27
67-66-3	Chloroform	119.38	0.92	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.8		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: IA-BCK-3-24 | Lab Sample ID: 140-10791-18

Matrix: Air | Lab File ID: JB28P202.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:26

Sample wt/vol: 100(mL) | Date Analyzed: 03/01/2018 03:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.079	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	ND		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.54		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.13	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.82	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.071	J B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.44	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: IA-BCK-3-24 Lab Sample ID: 140-10791-18

Matrix: Air Lab File ID: JB28P202.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 16:26

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 03:37

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.53	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.50	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	ND		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.54	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.38	J B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.9	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: IA-BCK-4-24 Lab Sample ID: 140-10791-19

Matrix: Air Lab File ID: JB28P205.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 16:16

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 05:56

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.54		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.79		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.39	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.41		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.91	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.085	J	0.40	0.080
108-88-3	Toluene	92.14	4.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.36	J B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.13	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: IA-BCK-4-24 | Lab Sample ID: 140-10791-19

Matrix: Air | Lab File ID: JB28P205.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 16:16

Sample wt/vol: 100(mL) | Date Analyzed: 03/01/2018 05:56

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.52	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	3.2		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.6	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	1.8		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.2	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.58	J	2.7	0.54
108-88-3	Toluene	92.14	15		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.9	J B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.72	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	8.9		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-001-C-24 | Lab Sample ID: 140-10791-1

Matrix: Air | Lab File ID: JB28P101.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:06

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 13:51

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.41		0.40	0.075
67-66-3	Chloroform	119.38	0.62		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	18		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.53		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.84	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.25	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	3.9		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	37		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-001-C-24 Lab Sample ID: 140-10791-1

Matrix: Air Lab File ID: JB28P101.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 11:06

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 13:51

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	3.0		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	72		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.9	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.7	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	15		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	200		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-004-C-24 | Lab Sample ID: 140-10791-2

Matrix: Air | Lab File ID: JB28P102.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:08

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 14:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.32	J	0.40	0.075
67-66-3	Chloroform	119.38	1.1		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	5.6		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.55		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.79	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.3		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.25	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	13		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-004-C-24 | Lab Sample ID: 140-10791-2

Matrix: Air | Lab File ID: JB28P102.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:08

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 14:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.1	J	1.4	0.27
67-66-3	Chloroform	119.38	5.5		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	22		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.7	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	8.7		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	1.0	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	69		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-060-C-24 Lab Sample ID: 140-10791-8

Matrix: Air Lab File ID: JB28P108.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 11:23

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 19:12

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.076	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.9		0.40	0.075
67-66-3	Chloroform	119.38	2.4		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	2.8		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.56		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	2.3		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.52		0.40	0.070
100-41-4	Ethylbenzene	106.17	3.1		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.68		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.8		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.25	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	4.3	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	75		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.33	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.17	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	29		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-060-C-24 | Lab Sample ID: 140-10791-8

Matrix: Air | Lab File ID: JB28P108.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:23

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 19:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.54	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	10		1.4	0.27
67-66-3	Chloroform	119.38	12		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	11		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	9.3		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	2.1		1.6	0.28
100-41-4	Ethylbenzene	106.17	14		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.9		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	3.6		1.0	1.0
127-18-4	Tetrachloroethene	165.83	12		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	0.99	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	23	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	400		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.6	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.85	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	120		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-088-C-24 | Lab Sample ID: 140-10791-13

Matrix: Air | Lab File ID: JB28P113.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:30

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 23:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.081	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.54		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	1.8		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.52		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.89	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.21		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.5		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	7.0		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.91		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-088-C-24 | Lab Sample ID: 140-10791-13

Matrix: Air | Lab File ID: JB28P113.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:30

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 23:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.40	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.51	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	7.3		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.1	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.1		1.0	1.0
127-18-4	Tetrachloroethene	165.83	10		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	37		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.68	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.0		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-102-C-24 | Lab Sample ID: 140-10791-3

Matrix: Air | Lab File ID: JB28P103.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:11

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 15:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.7		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.48		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.68		0.40	0.075
67-66-3	Chloroform	119.38	11		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	14		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	1.0		0.40	0.14
75-34-3	*1,1-Dichloroethane*	*98.96*	*710*	*E*	*0.40*	*0.050*
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	*1,1-Dichloroethene*	*96.94*	*460*	*E*	*0.40*	*0.070*
100-41-4	*Ethylbenzene*	*106.17*	*100*	*E*	*0.40*	*0.14*
75-09-2	Methylene Chloride	84.93	0.93	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	34		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.5		0.40	0.080
108-88-3	Toluene	92.14	13		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	1.1		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	*1,1,1-Trichloroethane*	*133.41*	*470*	*E B*	*0.40*	*0.060*
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	*Trichloroethene*	*131.39*	*190*	*E*	*0.20*	*0.070*
526-73-8	1,2,3-Trimethylbenzene	120.19	3.7		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	4.5		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	2.3		0.40	0.13
75-01-4	Vinyl chloride	62.50	3.3		0.20	0.15
1330-20-7	Xylenes, Total	106.17	590		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-102-C-24 | Lab Sample ID: 140-10791-3

Matrix: Air | Lab File ID: JB28P103.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:11

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 15:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	5.3		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	3.0		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.4		1.4	0.27
67-66-3	Chloroform	119.38	52		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	57		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	5.0		2.0	0.67
75-34-3	*1,1-Dichloroethane*	*98.96*	*2900*	*E*	*1.6*	*0.20*
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	*1,1-Dichloroethene*	*96.94*	*1800*	*E*	*1.6*	*0.28*
100-41-4	*Ethylbenzene*	*106.17*	*440*	*E*	*1.7*	*0.59*
75-09-2	Methylene Chloride	84.93	3.2	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	180		1.0	1.0
127-18-4	Tetrachloroethene	165.83	10		2.7	0.54
108-88-3	Toluene	92.14	51		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	4.4		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	*1,1,1-Trichloroethane*	*133.41*	*2600*	*E B*	*2.2*	*0.33*
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	*Trichloroethene*	*131.39*	*1000*	*E*	*1.1*	*0.38*
526-73-8	1,2,3-Trimethylbenzene	120.19	18		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	22		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	11		2.0	0.64
75-01-4	Vinyl chloride	62.50	8.4		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2600		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-102-C-24 DL Lab Sample ID: 140-10791-3 DL

Matrix: Air Lab File ID: JB28P103DL.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 11:11

Sample wt/vol: 20(mL) Date Analyzed: 03/01/2018 04:23

Soil Aliquot Vol: Dilution Factor: 4.03

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	98.96	1400		8.1	1.0
75-35-4	1,1-Dichloroethene	96.94	610		8.1	1.4
100-41-4	Ethylbenzene	106.17	180		8.1	2.7
71-55-6	1,1,1-Trichloroethane	133.41	700	B	8.1	1.2
79-01-6	Trichloroethene	131.39	280		4.0	1.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-102-C-24 DL Lab Sample ID: 140-10791-3 DL

Matrix: Air Lab File ID: JB28P103DL.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 11:11

Sample wt/vol: 20(mL) Date Analyzed: 03/01/2018 04:23

Soil Aliquot Vol: Dilution Factor: 4.03

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	98.96	5600		33	4.1
75-35-4	1,1-Dichloroethene	96.94	2400		32	5.6
100-41-4	Ethylbenzene	106.17	790		35	12
71-55-6	1,1,1-Trichloroethane	133.41	3800	B	44	6.6
79-01-6	Trichloroethene	131.39	1500		22	7.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-113-C-24 | Lab Sample ID: 140-10791-14

Matrix: Air | Lab File ID: JB28P114.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:31

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 23:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.64		0.40	0.075
67-66-3	Chloroform	119.38	0.31	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	6.8		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.88	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	28		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.56	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-113-C-24 | Lab Sample ID: 140-10791-14

Matrix: Air | Lab File ID: JB28P114.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:31

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 23:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.3		1.4	0.27
67-66-3	Chloroform	119.38	1.5	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	27		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.1	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	150		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.4	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-133-C-24 | Lab Sample ID: 140-10791-7

Matrix: Air | Lab File ID: JB28P107.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:17

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 18:26

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.11	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.4		0.40	0.075
67-66-3	Chloroform	119.38	1.8		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.17	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.58		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.97	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	7.8		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.37	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	*Trichloroethene*	*131.39*	*320*	*E*	*0.20*	*0.070*
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.48	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-133-C-24 | Lab Sample ID: 140-10791-7

Matrix: Air | Lab File ID: JB28P107.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:17

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 18:26

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.69	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	5.0		1.4	0.27
67-66-3	Chloroform	119.38	8.8		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	0.66	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	53		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	1.5	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	*Trichloroethene*	*131.39*	*1700*	*E*	*1.1*	*0.38*
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.1	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-133-C-24 DL Lab Sample ID: 140-10791-7 DL

Matrix: Air Lab File ID: JB28P107DL.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 11:17

Sample wt/vol: 11(mL) Date Analyzed: 03/01/2018 09:50

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	131.39	370		1.8	0.64

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-133-C-24 DL Lab Sample ID: 140-10791-7 DL

Matrix: Air Lab File ID: JB28P107DL.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 11:17

Sample wt/vol: 11(mL) Date Analyzed: 03/01/2018 09:50

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	131.39	2000		9.8	3.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-141-C-24 Lab Sample ID: 140-10791-11

Matrix: Air Lab File ID: JB28P111.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 11:25

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 21:30

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.34	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.10	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.7		0.40	0.075
67-66-3	Chloroform	119.38	0.17	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	3.1		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.55		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.79		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.98	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	3.2		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.59		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.085	J B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	57		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.86		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-141-C-24 | Lab Sample ID: 140-10791-11

Matrix: Air | Lab File ID: JB28P111.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:25

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 21:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.66	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	6.2		1.4	0.27
67-66-3	Chloroform	119.38	0.85	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	12		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	3.1		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	22		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	2.3		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.47	J B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	310		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.7		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-142-C-24 | Lab Sample ID: 140-10791-12

Matrix: Air | Lab File ID: JB28P112.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:28

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 22:16

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.098	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.50		0.40	0.075
67-66-3	Chloroform	119.38	0.42		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.52		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.94	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.7		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.65	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-142-C-24 | Lab Sample ID: 140-10791-12

Matrix: Air | Lab File ID: JB28P112.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:28

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 22:16

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.62	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.8		1.4	0.27
67-66-3	Chloroform	119.38	2.1		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	9.4		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.8	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-149-C-24 | Lab Sample ID: 140-10791-15

Matrix: Air | Lab File ID: JB28P115.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:36

Sample wt/vol: 100(mL) | Date Analyzed: 03/01/2018 01:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.36	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.11	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.61		0.40	0.075
67-66-3	Chloroform	119.38	2.2		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.58		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.39	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	3.7		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.1		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.39	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-149-C-24 | Lab Sample ID: 140-10791-15

Matrix: Air | Lab File ID: JB28P115.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:36

Sample wt/vol: 100(mL) | Date Analyzed: 03/01/2018 01:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.66	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.2		1.4	0.27
67-66-3	Chloroform	119.38	11		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.7	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.1		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	14		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	5.7		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.9	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	8.7		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-150-C-24 Lab Sample ID: 140-10791-9

Matrix: Air Lab File ID: JB28P109.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 12:06

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 19:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.36	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.083	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	15		0.40	0.075
67-66-3	Chloroform	119.38	0.11	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.58		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.095	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.45		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	2.2		0.40	0.080
108-88-3	Toluene	92.14	1.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.22	J B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.17	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.21	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.9		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-150-C-24 Lab Sample ID: 140-10791-9

Matrix: Air Lab File ID: JB28P109.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 12:06

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 19:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.2	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.52	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	51		1.4	0.27
67-66-3	Chloroform	119.38	0.51	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.38	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.9		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.0		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	15		2.7	0.54
108-88-3	Toluene	92.14	5.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.2	J B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.94	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.0	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	8.1		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-152-C-24 | Lab Sample ID: 140-10791-10

Matrix: Air | Lab File ID: JB28P110.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:20

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 20:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.30	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	4.9		0.40	0.075
67-66-3	Chloroform	119.38	0.28	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	1.8		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.53		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.26	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.0		0.40	0.080
108-88-3	Toluene	92.14	1.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.36	J B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	39		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.26	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.5		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-152-C-24 | Lab Sample ID: 140-10791-10

Matrix: Air | Lab File ID: JB28P110.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:20

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 20:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.95	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	17		1.4	0.27
67-66-3	Chloroform	119.38	1.3	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	7.0		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.1	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	7.1		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	7.1		2.7	0.54
108-88-3	Toluene	92.14	4.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	2.0	J B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	210		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.3	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	6.3		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-153-C-24 Lab Sample ID: 140-10791-5

Matrix: Air Lab File ID: JB28P105.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 11:16

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 16:56

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.091	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.94		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.60		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.88	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.31		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.091	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.2		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.15	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.79	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-153-C-24 | Lab Sample ID: 140-10791-5

Matrix: Air | Lab File ID: JB28P105.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:16

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 16:56

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.57	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.3		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.1	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.6		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.62	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	6.3		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.74	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.4	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-155-C-24 | Lab Sample ID: 140-10791-4

Matrix: Air | Lab File ID: JB28P104R.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 11:15

Sample wt/vol: 100(mL) | Date Analyzed: 03/01/2018 05:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.12	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.15	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.5		0.40	0.075
67-66-3	Chloroform	119.38	0.14	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.53		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.70		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.30	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.22	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.85	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.35	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.41	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.20		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.17	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-155-C-24 Lab Sample ID: 140-10791-4

Matrix: Air Lab File ID: JB28P104R.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 11:15

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 05:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.37	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.92	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	5.3		1.4	0.27
67-66-3	Chloroform	119.38	0.70	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	2.8		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.2	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	0.94	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.0	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	2.4	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	2.3	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.1		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.85	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.9		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-DUP01-C-24 | Lab Sample ID: 140-10791-6

Matrix: Air | Lab File ID: JB28P106.D

Analysis Method: TO 15 LL | Date Collected: 02/20/2018 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 02/28/2018 17:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.078	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.78		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.55		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.87	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.87		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.13	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.82		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-DUP01-C-24 Lab Sample ID: 140-10791-6

Matrix: Air Lab File ID: JB28P106.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 00:00

Sample wt/vol: 100(mL) Date Analyzed: 02/28/2018 17:40

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.49	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.0	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	4.7		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.65	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.6		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

Appendix C

Support Documentation

Job Narrative
140-10791-1

Receipt
The samples were received on 2/23/2018 at 10:30 AM. The samples arrived in good condition and properly preserved.

Air - GC/MS VOA - Method TO-15 LL
EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

The continuing calibration verification (CCV) associated with batch 140-18440 exhibited % difference of > 30% for 1,2,4-trichlorobenzene and naphthalene; however, the results were within the LCS acceptance limits. The EPA method requires that all target analytes in the continuing calibration verification standard be within 30% difference from the initial calibration. According to the laboratory standard operating procedure, the continuing calibration is acceptable if it meets the laboratory control sample acceptance criteria.

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

Comments
No additional comments.

Definitions/Glossary

Client: Tetra Tech, Inc.
Project/Site: Middle River, MD

TestAmerica Job ID: 140-10791-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: Tetra Tech, Inc.
Project/Site: Middle River, MD

TestAmerica Job ID: 140-10791-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: Middle River, MD

TestAmerica Job ID: 140-10791-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-10791-1	SV-001-C-24	Air	02/20/18 11:06	02/23/18 10:30
140-10791-2	SV-004-C-24	Air	02/20/18 11:08	02/23/18 10:30
140-10791-3	SV-102-C-24	Air	02/20/18 11:11	02/23/18 10:30
140-10791-4	SV-155-C-24	Air	02/20/18 11:15	02/23/18 10:30
140-10791-5	SV-153-C-24	Air	02/20/18 11:16	02/23/18 10:30
140-10791-6	SV-DUP01-C-24	Air	02/20/18 00:00	02/23/18 10:30
140-10791-7	SV-133-C-24	Air	02/20/18 11:17	02/23/18 10:30
140-10791-8	SV-060-C-24	Air	02/20/18 11:23	02/23/18 10:30
140-10791-9	SV-150-C-24	Air	02/20/18 12:06	02/23/18 10:30
140-10791-10	SV-152-C-24	Air	02/20/18 11:20	02/23/18 10:30
140-10791-11	SV-141-C-24	Air	02/20/18 11:25	02/23/18 10:30
140-10791-12	SV-142-C-24	Air	02/20/18 11:28	02/23/18 10:30
140-10791-13	SV-088-C-24	Air	02/20/18 11:30	02/23/18 10:30
140-10791-14	SV-113-C-24	Air	02/20/18 11:31	02/23/18 10:30
140-10791-15	SV-149-C-24	Air	02/20/18 11:36	02/23/18 10:30
140-10791-16	IA-BCK-1-24	Air	02/21/18 16:32	02/23/18 10:30
140-10791-17	IA-BCK-2-24	Air	02/21/18 16:29	02/23/18 10:30
140-10791-18	IA-BCK-3-24	Air	02/21/18 16:26	02/23/18 10:30
140-10791-19	IA-BCK-4-24	Air	02/21/18 16:16	02/23/18 10:30

Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865.291.3000 fax 865.584.4315

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Tony Apanavage	Site Contact: Tony Apanavage	Date: 2/20/2018	COC No:
Tera Tech	Tel/Fax: (301)528-3021	Lab Contact: John McFadden	Carrier: Fedex	6 of 9 COCs
20251 Century Blvd. Ste 200				Job No. BALTIMORE
Germantown, Maryland 20874				
Phone: (301)528-5552				SDG No. 180325
Project Name: 112IC08388				
Site: Middle River, MD				
P O #				Sampler: MULLIS/PRYOR

Analysis Turnaround Time

Calendar (C) or Work Days (W) _____

TAT if different from Below ___Standard_____

- ☐ 2 weeks
- ☐ 1 week
- ☐ 2 days
- ☐ 1 day

140-10791 Chain of Custody

Sample Identification	Sample Date	Time Start	Time Stop	Canister Volume in Field "Hg (Start)	Canister Volume in Field "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	Sample Specific Notes:
SV-001-C-24	2/20/2018	0933	1106	-30	0	09654	11829	X	
SV-004-C-24	2/20/2018	0937	1108	-32	0	10301	11518	X	
SV-102-C-24	2/20/2018	0940	1111	-30	0	11732	9577	X	Received @ ambient
SV-155-C-24	2/20/2018	0944	1115	-30	0	10646	10339	X	2 boxes, fedex so
SV-153-C-24	2/20/2018	0948	1116	-30	0	09952	11822	X	tek#7715 CAOS 9903
SV-DUP01-C-24	2/20/2018	0000	0000	-30	0	11648	11826	X	" " 2412
SV-133-C-24	2/20/2018	0951	1117	-30	0	10623	10334	X	No custody seal
SV-060-C-24	2/20/2018	1004	1123	-30	0	11305	10604	X	KW 2/23/18
SV-150-C-24	2/20/2018	1001	1206	-30	-3	01054	09788	X	
SV-152-C-24	2/20/2018	0959	1120	-31	0	10586	10492	X	
SV-141-C-24	2/20/2018	1007	1125	-27	0	11527	10344	X	
SV-142-C-24	2/20/2018	1011	1128	-30	0	11759	9823	X	1T
SV-088-C-24	2/20/2018	1014	1130	-30	0	10021	11558	X	19 cams
SV-113-C-24	2/20/2018	1016	1131	-30	0	11733	10345	X	19 flows
SV-149-C-24	2/20/2018	1024	1136	-30	0	10464	11824	X	

Special Instructions/QC Requirements & Comments: **Contracted Analyte List**

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Walt [signature]	TA Inc	2/22/18/1150	[signature]		2/22/18/1150
[signature]		2/22/18	[signature]	TA-Knx	2/23/18 1030

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

Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865.291.3000 fax 865.584.4315

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Tony Apanavage	Site Contact: Tony Apanavage	Date: 2/21/2018	COC No:
Tera Tech	Tel/Fax: (301)528-3021	Lab Contact: John McFadden	Carrier: Fedex	5 of 9 COCs
20251 Century Blvd. Ste 200	**Analysis Turnaround Time**			Job No. 180325
Germantown, Maryland 20874	Calendar (C) or Work Days (W) _____			
Phone: (301)528-5552	TAT if different from Below ___Standard_____			SDG No.
	☐ 2 weeks			
Project Name: 112IC08388	☐ 1 week			
Site: Middle River, MD	☐ 2 days			Sampler: MULLIS/PRYOR
P O #	☐ 1 day			

Sample Identification	Sample Date	Time Start	Time Stop	Canister Volume in Field "Hg (Start)	Canister Volume in Field "Hg (Stop)	Flow Controller ID	Canister ID	TO-15								Sample Specific Notes:
IA-BCK-1-24	2/21/2018	0807	1632	-30	-3	11475	11718	X								
IA-BCK-2-24	2/21/2018	0802	1629	-30	0	7005	09663	X								
IA-BCK-3-24	2/21/2018	0758	1626	-30	0	09866	09886	X								
IA-BCK-4-24	2/21/2018	0750	1616	-30	0	11588	11753	X								

Special Instructions/QC Requirements & Comments: **Contracted Analyte List**

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Walt Pryor	TT INC	2/22/18 1150	[illegible]		2/22/18 1150
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[illegible]		2/22/18	[illegible]	TA-Knox	2/23/18 1030
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Loc: 140

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST **Log In Number: 10791**

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	/			☐ **Containers, Broken**
2. Were ambient air containers received intact?			/	☑ Checked in lab
3. The coolers/containers custody seal if present, is it intact?			/	☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			/	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	/			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	/			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	/			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	/			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	/			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?	/			☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	/			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	/			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	/			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	/			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	/			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			/	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			/	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			/	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			/	☐ If no, lab will adjust
20. For rad samples was sample activity info. Provided?			/	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:	
Lot Number:	
Exp Date:	
Analyst:	
Date:	
Time:	

Project #: 14002945 PM Instructions: _____

Sample Receiving Associate: _____ Date: 2/27/18

QA026R30.doc, 080916

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 2/27/2018

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
AFB	140-10791-a-1	11829	10631	B	1	+0.5	1705	
AFB	140-10791-a-2	11518	10549	B	1	+0.5	1706	
AFB	140-10791-a-3	09577	10549	B	1	0	1707	
AFB	140-10791-a-4	10339	10600	B	1	0	1708	
AFB	140-10791-a-5	11822	10631	B	1	0	1709	
AFB	140-10791-a-6	11826	10631	B	1	0	1710	
AFB	140-10791-a-7	10334	10549	B	1	0	1711	
AFB	140-10791-a-8	10604	10554	B	1	0	1712	
AFB	140-10791-a-9	09788	10549	B	1	-3.3	1713	
AFB	140-10791-a-10	10492	10477	B	1	0	1714	
AFB	140-10791-a-11	10344	10549	B	1	0	1715	
AFB	140-10791-a-12	09823	10600	B	1	0	1716	
AFB	140-10791-a-13	11558	10549	B	1	0	1717	
AFB	140-10791-a-14	10345	10600	B	1	0	1718	
AFB	140-10791-a-15	11824	10631	B	1	-1.0	1719	
AFB	140-10791-a-16	11718	10579	B	1	-1.4	1720	
AFB	140-10791-a-17	09663	10579	B	1	-1.3	1721	
AFB	140-10791-a-18	09886	10524	B	1	-1.4	1722	
AFB	140-10791-a-19	11753	10577	B	1	-1.0	1723	

FIELD DUPLICATE PRECISION

ORIGINAL ID	DUP ID	FRACTION	ANALYTE	ORIGINAL	DUPLICATE	RL	RPD	RPD > 50%	ORIGINAL SAMPLE CONC >RL	DUPLICATE SAMPLE CONC >RL	DIFFERENCE >2XRL
SV-153-C-24	SV-DUP01-C-24	OV-M3	1,2,4-TRIMETHYLBENZENE	0.74 J	0.65 J	2	12.95	FALSE	FALSE	FALSE	FALSE
SV-153-C-24	SV-DUP01-C-24	OV-M3	CARBON TETRACHLORIDE	0.57 J	0.49 J	2.5	15.09	FALSE	FALSE	FALSE	FALSE
SV-153-C-24	SV-DUP01-C-24	OV-M3	CHLORODIFLUOROMETHANE	3.3	2.8	1.4	16.39	FALSE	TRUE	TRUE	FALSE
SV-153-C-24	SV-DUP01-C-24	OV-M3	DICHLORODIFLUOROMETHANE	3	2.7	2	10.53	FALSE	TRUE	TRUE	FALSE
SV-153-C-24	SV-DUP01-C-24	OV-M3	METHYLENE CHLORIDE	3.1 J	3 J	3.5	3.28	FALSE	FALSE	FALSE	FALSE
SV-153-C-24	SV-DUP01-C-24	OV-M3	NAPHTHALENE	1.6 J	1 UJ	1	46.15	FALSE	TRUE	FALSE	FALSE
SV-153-C-24	SV-DUP01-C-24	OV-M3	TETRACHLOROETHENE	0.62 J	0.54 U	2.7	13.79	FALSE	FALSE	FALSE	FALSE
SV-153-C-24	SV-DUP01-C-24	OV-M3	TOTAL XYLENES	3.4 J	3.6	3.5	5.71	FALSE	FALSE	TRUE	FALSE
SV-153-C-24	SV-DUP01-C-24	OV-M3	TRICHLOROETHENE	6.3	4.7	1.1	29.09	FALSE	TRUE	TRUE	FALSE

FIELD DUPLICATE PRECISION

ORIGINAL ID	DUP ID	ANALYTE	FRACTION	ORIGINAL	DUPLICATE	RL	RPD	RPD > 50%	ORIGINAL SAMPLE CONC >2xRL	DUPLICATE SAMPLE CONC >2xRL	DIFFERENCE >2XRL
SV-149-C-24	SV-DUP02-C-24	1,2,4-TRIMETHYLBENZENE	OV	0.39 J	0.32 J	0.4	19.72	FALSE	FALSE	FALSE	FALSE
SV-149-C-24	SV-DUP02-C-24	BENZENE	OV	0.36 J	0.25 J	0.4	36.07	FALSE	FALSE	FALSE	FALSE
SV-149-C-24	SV-DUP02-C-24	CARBON TETRACHLORIDE	OV	0.11 J	0.077 J	0.4	35.29	FALSE	FALSE	FALSE	FALSE
SV-149-C-24	SV-DUP02-C-24	CHLORODIFLUOROMETHANE	OV	0.61	0.66	0.4	7.87	FALSE	FALSE	FALSE	FALSE
SV-149-C-24	SV-DUP02-C-24	CHLOROFORM	OV	2.2	2.1	0.4	4.65	FALSE	TRUE	TRUE	FALSE
SV-149-C-24	SV-DUP02-C-24	DICHLORODIFLUOROMETHANE	OV	0.58	0.59	0.4	1.71	FALSE	FALSE	FALSE	FALSE
SV-149-C-24	SV-DUP02-C-24	ETHYLBENZENE	OV	0.39 J	0.34 J	0.4	13.70	FALSE	FALSE	FALSE	FALSE
SV-149-C-24	SV-DUP02-C-24	METHYLENE CHLORIDE	OV	1.2	1.1 U	1	8.70	FALSE	FALSE	FALSE	FALSE
SV-149-C-24	SV-DUP02-C-24	TOLUENE	OV	3.7	2.9	0.6	24.24	FALSE	TRUE	TRUE	FALSE
SV-149-C-24	SV-DUP02-C-24	TOTAL XYLENES	OV	2	1.8	0.8	10.53	FALSE	TRUE	TRUE	FALSE
SV-149-C-24	SV-DUP02-C-24	TRICHLOROETHENE	OV	1.1	0.67	0.2	48.59	FALSE	TRUE	TRUE	TRUE

Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Lab File ID: JBFBB15.D BFB Injection Date: 02/15/2018

Instrument ID: MJ BFB Injection Time: 14:16

Analysis Batch No.: 18185

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.2	
75	30.0 - 60.0 % of mass 95	52.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	104.0	
175	5.0 - 9.0 % of mass 174	7.7	(7.4) 1
176	95.0 - 101.0 % of mass 174	102.5	(98.5) 1
177	5.0 - 9.0 % of mass 176	6.9	(6.8) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-18185/3	JB15ICL01.D	02/15/2018	15:35
	IC 140-18185/4	JB15ICL02.D	02/15/2018	16:21
	IC 140-18185/5	JB15ICL03.D	02/15/2018	17:07
	IC 140-18185/6	JB15ICL04.D	02/15/2018	17:52
	IC 140-18185/7	JB15ICL05.D	02/15/2018	18:37
	IC 140-18185/8	JB15ICL06.D	02/15/2018	19:22
	ICIS 140-18185/9	JB15ICISL07.D	02/15/2018	20:08
	IC 140-18185/10	JB15ICL08.D	02/15/2018	20:53
	IC 140-18185/11	JB15ICL09.D	02/15/2018	21:39
	IC 140-18185/12	JB15ICL10.D	02/15/2018	22:24
	ICV 140-18185/15	JLCSB16.D	02/16/2018	00:43

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-18185/3	JB15ICL01.D
Level 2	IC 140-18185/4	JB15ICL02.D
Level 3	IC 140-18185/5	JB15ICL03.D
Level 4	IC 140-18185/6	JB15ICL04.D
Level 5	IC 140-18185/7	JB15ICL05.D
Level 6	IC 140-18185/8	JB15ICL06.D
Level 7	ICIS 140-18185/9	JB15ICISL07.D
Level 8	IC 140-18185/10	JB15ICL08.D
Level 9	IC 140-18185/11	JB15ICL09.D
Level 10	IC 140-18185/12	JB15ICL10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Chlorodifluoromethane	+++++ 0.3914	+++++ 0.3824	0.6302 0.3743	0.4722 0.3630	0.4279 0.3774	Ave		0.4274				20.9		30.0			
Propene	+++++ 1.1645	+++++ 1.1300	1.3108 1.1715	1.1837 1.0943	1.1738 1.0836	Ave		1.1640				6.0		30.0			
Dichlorodifluoromethane	3.3176 3.5951	3.3925 3.7021	3.7269 3.7985	3.5660 3.4882	3.7705 3.5233	Ave		3.5881				4.5		30.0			
Chloromethane	+++++ 0.4205	+++++ 0.4168	+++++ 0.4071	0.4724 0.3864	0.4596 0.3768	Ave		0.4199				8.4		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	2.1309 2.3962	2.1623 2.4267	2.4453 2.3778	2.3770 2.3294	2.5632 2.3092	Ave		2.3518				5.5		30.0			
Vinyl chloride	0.9082 1.3858	1.0603 1.4136	1.4400 1.3859	1.3679 1.3144	1.4774 1.3153	Ave		1.3069				13.8		30.0			
1,3-Butadiene	+++++ 1.0489	+++++ 1.0425	1.1500 1.0266	1.1067 0.9909	1.1086 0.9783	Ave		1.0566				5.7		30.0			
Butane	+++++ 1.9486	+++++ 2.0128	2.2836 1.9906	1.9974 1.8616	2.0933 1.8465	Ave		2.0043				6.9		30.0			
Bromomethane	1.1032 1.3116	1.2081 1.3214	1.4474 1.3073	1.3410 1.2837	1.3831 1.3116	Ave		1.3018				7.2		30.0			
Chloroethane	+++++ 0.6702	0.6755 0.6774	0.6991 0.6771	0.6748 0.6561	0.7002 0.6756	Ave		0.6785				2.0		30.0			
Ethanol	+++++ 0.4776	+++++ 0.4727	+++++ 0.5295	0.5377 0.4327	0.5682 0.3737	Ave		0.4846				13.8		30.0			
Vinyl bromide	+++++ 1.2267	1.1089 1.2671	1.2671 1.2513	1.2154 1.2222	1.3143 1.2605	Ave		1.2371				4.6		30.0			
2-Methylbutane	+++++ 1.4324	+++++ 1.5281	+++++ 1.4517	1.4899 1.3965	1.6262 1.4156	Ave		1.4772				5.4		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Trichlorofluoromethane	2.9333 3.5426	3.1213 3.6245	3.6584 3.4955	3.5125 3.4973	3.7881 3.5333	Ave		3.4707				7.3		30.0			
Acrolein	+++++ 0.2927	+++++ 0.3494	+++++ 0.3794	+++++ 0.3089	0.4013 0.3486	Ave		0.3467				11.8		30.0			
Acetonitrile	+++++ 0.3732	+++++ 0.4191	+++++ 0.4863	+++++ 0.3852	0.5550 0.4137	Ave		0.4388				15.8		30.0			
Acetone	+++++ 0.4105	+++++ 0.4203	+++++ 0.5020	+++++ 0.3863	0.6154 0.3976	Ave		0.4553				19.4		30.0			
Pentane	+++++ 0.2094	+++++ 0.2152	+++++ 0.2054	+++++ 0.1988	0.2313 0.2099	Ave		0.2117				5.2		30.0			
Isopropyl alcohol	+++++ 1.2520	1.4496 1.1363	1.4621 1.3026	1.3887 1.0811	1.6818 0.9956	Ave		1.3055				16.5		30.0			
Ethyl ether	+++++ 0.9270	1.1907 1.0369	1.3172 1.1920	1.2567 0.9354	1.2816 1.0045	Ave		1.1269				13.5		30.0			
1,1-Dichloroethene	1.1918 1.2779	1.3811 1.3189	1.4766 1.2749	1.3150 1.2757	1.4083 1.3170	Ave		1.3237				6.1		30.0			
Acrylonitrile	+++++ 0.6984	+++++ 0.7526	+++++ 0.8545	0.8339 0.7379	0.8884 0.7744	Ave		0.7914				8.7		30.0			
tert-Butyl alcohol	+++++ 1.7947	+++++ 1.5369	1.6759 1.5367	1.5338 1.5546	2.0606 1.3999	Lin1	0.0565	1.4729							0.9950		0.9900
1,1,2-Trichloro-1,2,2-trifluoroethane	2.4821 2.7500	2.5577 2.7957	2.8742 2.7881	2.8047 2.6832	3.0112 2.6922	Ave		2.7439				5.5		30.0			
Methylene Chloride	+++++ 1.3146	+++++ 1.2387	+++++ 1.2211	2.2172 1.1503	1.7294 1.1578	Ave		1.4327				27.8		30.0			
3-Chloropropene	+++++ 1.1751	+++++ 1.1217	1.5866 1.2165	1.1607 1.1097	1.3605 1.1320	Lin1	0.0344	1.1332							0.9990		0.9900
Carbon disulfide	3.6911 3.7376	3.6386 3.8828	4.3506 3.7568	3.8971 3.6868	4.0058 3.7550	Ave		3.8402				5.5		30.0			
trans-1,2-Dichloroethene	+++++ 1.3019	1.3022 1.3179	1.3875 1.3207	1.3062 1.2755	1.4288 1.2825	Ave		1.3248				3.8		30.0			
2-Methylpentane	+++++ 2.9504	+++++ 3.0134	3.6180 2.9503	3.0369 2.7948	3.3234 2.7231	Ave		3.0513				9.5		30.0			
Methyl tert-butyl ether	+++++ 2.6811	2.6492 2.7626	3.0177 3.3524	3.1101 2.6889	3.4113 2.7957	Ave		2.9410				10.0		30.0			
1,1-Dichloroethane	2.4253 2.3381	2.5251 2.4388	2.6340 2.5420	2.5025 2.3639	2.7085 2.4053	Ave		2.4883				4.7		30.0			
Vinyl acetate	+++++ 2.5034	2.3777 2.7208	2.8222 3.2054	3.1139 2.6767	3.2974 2.8203	Ave		2.8375				11.0		30.0			
2-Butanone (MEK)	+++++ 0.4527	+++++ 0.4569	+++++ 0.5711	0.6323 0.4484	0.5874 0.4303	Ave		0.5113				16.1		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Hexane	+++++ 1.0408	+++++ 1.0483	+++++ 1.0588	1.1864 0.9999	1.2001 0.9988	Ave		1.0762				7.7		30.0			
cis-1,2-Dichloroethene	1.2882 1.2837	1.3496 1.3287	1.4225 1.3828	1.3669 1.3054	1.4552 1.3322	Ave		1.3515				4.2		30.0			
Ethyl acetate	+++++ 1.9979	+++++ 2.0327	+++++ 2.5317	2.6021 1.9919	2.7194 1.9525	Ave		2.2612				15.0		30.0			
Chloroform	+++++ 2.6905	+++++ 2.7674	3.1390 2.8838	2.9415 2.6905	3.0730 2.7342	Ave		2.8650				6.1		30.0			
Tetrahydrofuran	+++++ 1.0858	+++++ 1.1302	+++++ 1.2587	1.4360 1.0849	1.4535 1.0393	Ave		1.2126				14.3		30.0			
1,1,1-Trichloroethane	3.0053 2.7843	3.1296 2.9030	3.1969 2.9798	2.9529 2.8232	3.1866 2.8621	Ave		2.9824				5.0		30.0			
1,2-Dichloroethane	+++++ 0.3099	0.3093 0.3230	0.3327 0.3283	0.3151 0.3169	0.3609 0.3240	Ave		0.3245				4.9		30.0			
1-Butanol	+++++ 0.0748	+++++ 0.0634	+++++ 0.0717	+++++ 0.0609	0.0891 0.0550	Ave		0.0692				17.6		30.0			
Cyclohexane	+++++ 0.1134	+++++ 0.1152	0.1400 0.1105	0.1166 0.1078	0.1296 0.1039	Ave		0.1171				10.2		30.0			
Benzene	0.7960 0.6620	0.7900 0.6816	0.7649 0.6859	0.7115 0.6328	0.7640 0.6104	Ave		0.7099				9.3		30.0			
Carbon tetrachloride	0.4528 0.5284	0.5183 0.5468	0.5701 0.5481	0.5301 0.5316	0.5993 0.5366	Ave		0.5362				7.0		30.0			
2,3-Dimethylpentane	+++++ 0.1594	+++++ 0.1627	0.1839 0.1605	0.1751 0.1535	0.1840 0.1543	Ave		0.1667				7.5		30.0			
Thiophene	+++++ 0.3782	+++++ 0.4012	0.4215 0.4038	0.4017 0.3833	0.4462 0.3888	Ave		0.4031				5.5		30.0			
2,2,4-Trimethylpentane	+++++ 1.1058	+++++ 1.1220	1.2776 1.1099	1.1667 1.0517	1.2608 1.0127	Ave		1.1384				8.2		30.0			
Heptane	+++++ 0.2385	0.2555 0.2445	0.2659 0.2457	0.2523 0.2345	0.2773 0.2337	Ave		0.2498				5.9		30.0			
1,2-Dichloropropane	+++++ 0.2524	0.2684 0.2619	0.2900 0.2714	0.2611 0.2555	0.2873 0.2552	Ave		0.2670				5.1		30.0			
Trichloroethene	0.2965 0.3009	0.3106 0.3121	0.3255 0.3179	0.3165 0.3027	0.3477 0.2985	Ave		0.3129				4.9		30.0			
Dibromomethane	+++++ 0.2764	+++++ 0.2876	0.3340 0.2946	0.3052 0.2795	0.3252 0.2826	Ave		0.2981				7.2		30.0			
Bromodichloromethane	0.5065 0.4927	0.5615 0.5146	0.5252 0.5303	0.5048 0.5057	0.5661 0.5130	Ave		0.5220				4.7		30.0			
1,4-Dioxane	+++++ 0.0706	+++++ 0.0671	0.0700 0.0796	0.0698 0.0663	0.0813 0.0522	Ave		0.0696				12.8		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Methyl methacrylate	+++++ 0.2164	+++++ 0.2235	+++++ 0.2774	0.2561 0.2218	0.2876 0.2182	Ave		0.2430				12.5		30.0			
Methylcyclohexane	+++++ 0.4224	0.4795 0.4325	0.4877 0.4304	0.4477 0.4128	0.4868 0.4109	Ave		0.4456				7.0		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.3445	+++++ 0.3355	+++++ 0.4250	0.3988 0.3275	0.4126 0.3227	Ave		0.3667				11.9		30.0			
cis-1,3-Dichloropropene	+++++ 0.3914	0.4061 0.4130	0.4178 0.4318	0.3835 0.4090	0.4391 0.4126	Ave		0.4116				4.2		30.0			
trans-1,3-Dichloropropene	+++++ 0.3607	+++++ 0.3847	0.3761 0.4050	0.3899 0.3791	0.4095 0.3942	Ave		0.3874				4.1		30.0			
Toluene	+++++ 0.7961	0.8419 0.8288	0.8832 0.8490	0.9008 0.7827	0.9170 0.7967	Ave		0.8440				5.7		30.0			
1,1,2-Trichloroethane	0.2354 0.2448	0.2644 0.2549	0.2761 0.2638	0.2683 0.2436	0.2817 0.2452	Ave		0.2578				6.0		30.0			
2-Hexanone	+++++ 0.1960	0.1869 0.1890	0.2038 0.2229	0.1923 0.1857	0.2288 0.1842	Ave		0.1989				8.3		30.0			
Octane	0.3110 0.2841	0.3203 0.2857	0.3034 0.2821	0.2981 0.2678	0.3183 0.2602	Ave		0.2931				7.0		30.0			
C8 Range	+++++ 2.5336	+++++ 2.5549	+++++ 2.5396	+++++ 2.3690	+++++ 2.2706	Ave		2.4535				5.2		30.0			
Dibromochloromethane	0.4903 0.5637	0.5332 0.5979	0.5661 0.6011	0.5582 0.5775	0.6214 0.5781	Ave		0.5688				6.5		30.0			
1,2-Dibromoethane (EDB)	+++++ 0.4644	0.4366 0.4899	0.4944 0.4990	0.4837 0.4698	0.4883 0.4781	Ave		0.4783				4.0		30.0			
Tetrachloroethene	0.3238 0.3222	0.3463 0.3309	0.3757 0.3268	0.3374 0.3095	0.3691 0.3060	Ave		0.3348				6.9		30.0			
Chlorobenzene	+++++ 0.6718	0.6252 0.6856	0.7219 0.6939	0.7097 0.6453	0.7381 0.6303	Ave		0.6802				5.9		30.0			
Ethylbenzene	+++++ 0.9620	1.0030 1.0075	1.1261 1.0732	1.1581 0.9538	1.1728 0.9583	Ave		1.0461				8.4		30.0			
m-Xylene & p-Xylene	+++++ 0.7262	0.7641 0.7684	0.8422 0.8196	0.8471 0.7096	0.8800 0.6923	Ave		0.7833				8.5		30.0			
Nonane	0.5521 0.5484	0.6164 0.5569	0.6378 0.5700	0.6019 0.5066	0.6319 0.4868	Ave		0.5709				8.9		30.0			
Styrene	+++++ 0.5765	0.5431 0.5820	0.6122 0.6668	0.6311 0.5801	0.6964 0.5728	Ave		0.6068				8.2		30.0			
Bromoform	+++++ 0.5867	+++++ 0.6248	0.5936 0.6399	0.5635 0.6306	0.6263 0.6151	Ave		0.6101				4.3		30.0			
o-Xylene	+++++ 0.7733	0.7991 0.8031	0.8592 0.8583	0.9152 0.7508	0.9597 0.7600	Ave		0.8310				8.7		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
1,1,2,2-Tetrachloroethane	+++++ 0.5489	0.5954 0.5728	0.6464 0.6308	0.6617 0.5281	0.6902 0.5309	Ave		0.6006				9.9		30.0			
1,2,3-Trichloropropane	+++++ 0.1450	0.1401 0.1517	0.1675 0.1689	0.1690 0.1428	0.1847 0.1469	Ave		0.1574				9.9		30.0			
Isopropylbenzene	+++++ 1.0062	1.1721 1.0564	1.2564 1.1558	1.2627 0.9849	1.3064 0.9795	Ave		1.1311				11.3		30.0			
Propylbenzene	+++++ 0.2785	+++++ 0.2940	0.3217 0.3306	0.3339 0.2824	0.3604 0.2873	Ave		0.3111				9.5		30.0			
2-Chlorotoluene	+++++ 0.2845	0.3004 0.2935	0.3184 0.3113	0.3206 0.2768	0.3335 0.2770	Ave		0.3018				6.8		30.0			
4-Ethyltoluene	+++++ 0.9690	1.0770 1.0296	1.1733 1.1652	1.2170 0.9653	1.2646 0.9651	Ave		1.0918				10.7		30.0			
1,3,5-Trimethylbenzene	+++++ 0.4147	0.4164 0.4287	0.4881 0.4881	0.5237 0.4080	0.5328 0.4098	Ave		0.4567				11.2		30.0			
Alpha Methyl Styrene	+++++ 0.4206	+++++ 0.4612	0.4949 0.5158	0.4932 0.4428	0.5352 0.4435	Ave		0.4759				8.4		30.0			
Decane	+++++ 0.6329	+++++ 0.6476	0.7986 0.6804	0.7665 0.5676	0.7901 0.5208	Ave		0.6756				15.3		30.0			
tert-Butylbenzene	+++++ 0.8685	0.9703 0.9110	1.0503 1.0233	1.1080 0.8376	1.1558 0.8071	Ave		0.9702				12.7		30.0			
1,2,4-Trimethylbenzene	+++++ 0.8204	0.9073 0.8641	1.0002 0.9699	1.0394 0.7937	1.0800 0.7679	Ave		0.9159				12.3		30.0			
sec-Butylbenzene	+++++ 1.2143	1.3303 1.2626	1.4419 1.4036	1.5356 1.1414	1.6225 1.0753	Ave		1.3364				13.6		30.0			
1,3-Dichlorobenzene	+++++ 0.6323	0.6920 0.6595	0.7624 0.7096	0.7188 0.6252	0.7664 0.6091	Ave		0.6861				8.5		30.0			
Benzyl chloride	+++++ 0.6434	0.7051 0.7157	0.7654 0.8307	0.7703 0.7084	0.8426 0.6740	Ave		0.7395				9.2		30.0			
1,4-Dichlorobenzene	+++++ 0.6196	0.6863 0.6495	0.7654 0.7094	0.7149 0.6292	0.7611 0.6085	Ave		0.6827				8.7		30.0			
4-Isopropyltoluene	+++++ 0.9923	1.0268 1.0264	1.2201 1.1604	1.2751 0.9383	1.3083 0.8709	Ave		1.0910				14.2		30.0			
1,2,3-Trimethylbenzene	+++++ 0.8106	0.8636 0.8448	0.9649 0.9493	1.0285 0.7815	1.0696 0.7557	Ave		0.8965				12.4		30.0			
Indane	+++++ 0.7777	0.8372 0.8138	0.9270 0.8958	0.9702 0.7435	1.0235 0.7090	Ave		0.8553				12.4		30.0			
1,2-Dichlorobenzene	+++++ 0.5951	0.6675 0.6122	0.7291 0.6684	0.7064 0.5743	0.7450 0.5433	Ave		0.6490				11.0		30.0			
Butylbenzene	+++++ 0.9588	1.0780 1.0007	1.1993 1.1225	1.2326 0.8919	1.2865 0.8121	Ave		1.0647				15.1		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Indene	+++++ 0.6491	0.7026 0.6953	0.7542 0.7760	0.7840 0.6436	0.8528 0.6117	Ave		0.7188				10.9		30.0			
Undecane	+++++ 0.6507	0.7536 0.6296	0.8097 0.7102	0.7686 0.6023	0.8572 0.5272	Ave		0.7010				15.2		30.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.2942	0.2917 0.3108	0.3325 0.3521	0.2976 0.3058	0.3780 0.2886	Ave		0.3168				9.8		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 0.8460	0.8453 0.8624	1.0089 1.0435	1.0149 0.8292	1.1345 0.7595	Ave		0.9272				13.5		30.0			
Dodecane	+++++ 0.5144	+++++ 0.4231	+++++ 0.4312	+++++ 0.4177	0.7424 0.3282	Qua	0.0236	0.4810	-0.009585						0.9980		0.9900
1,2,4-Trichlorobenzene	+++++ 0.4369	0.4982 0.4649	0.5689 0.5411	0.3978 0.4735	0.6084 0.4323	Ave		0.4913				14.1		30.0			
Naphthalene	0.6835 0.7107	0.8474 0.7161	0.9734 0.8343	0.6430 0.6899	1.0586 0.6128	Ave		0.7770				19.0		30.0			
Hexachlorobutadiene	+++++ 0.4556	0.5215 0.4700	0.5915 0.5048	0.5287 0.4315	0.6440 0.4119	Ave		0.5066				14.9		30.0			
1,2,3-Trichlorobenzene	+++++ 0.3082	+++++ 0.2848	0.4147 0.3143	0.2102 0.2816	0.4443 0.2430	Ave		0.3126				25.6		30.0			
2-Methylnaphthalene	+++++ 0.0604	+++++ 0.0525	+++++ 0.0514	0.0394 0.0638	0.1016 +++++	Ave		0.0616				34.7		50.0			
1-Methylnaphthalene	+++++ 0.0567	+++++ 0.0469	0.0813 0.0453	0.0381 0.0555	0.1033 +++++	Ave		0.0610				38.0		50.0			
4-Bromofluorobenzene (Surr)	0.7353 0.7158	0.7351 0.7064	0.7390 0.7313	0.7145 0.7223	0.7395 0.6923	Ave		0.7231				2.2		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-18185/3	JB15ICL01.D
Level 2	IC 140-18185/4	JB15ICL02.D
Level 3	IC 140-18185/5	JB15ICL03.D
Level 4	IC 140-18185/6	JB15ICL04.D
Level 5	IC 140-18185/7	JB15ICL05.D
Level 6	IC 140-18185/8	JB15ICL06.D
Level 7	ICIS 140-18185/9	JB15ICISL07.D
Level 8	IC 140-18185/10	JB15ICL08.D
Level 9	IC 140-18185/11	JB15ICL09.D
Level 10	IC 140-18185/12	JB15ICL10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorodifluoromethane	CBM	Ave	+++++ 27753	+++++ 54851	3577 101106	5657 214696	12058 440085	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	+++++ 82581	+++++ 162079	7440 316474	14182 647152	33073 1263500	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	4610 254947	9371 531010	21153 1026119	42724 2062839	106241 4108290	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	+++++ 29822	+++++ 59780	+++++ 109960	5660 228533	12950 439355	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	2961 169926	5973 348077	13879 642320	28478 1377554	72222 2692563	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	1262 98274	2929 202765	8173 374370	16389 777336	41629 1533687	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	+++++ 74384	+++++ 149529	6527 277320	13259 586005	31237 1140773	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	+++++ 138185	+++++ 288707	12961 537741	23931 1100932	58983 2153025	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	1533 93013	3337 189535	8215 353158	16066 759169	38970 1529331	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	+++++ 47525	1866 97167	3968 182916	8085 387996	19730 787780	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	+++++ 169364	+++++ 339004	+++++ 715122	32209 1279493	80056 2178805	+++++ 5.00	+++++ 10.0	+++++ 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	+++++ 86990	3063 181747	7192 338017	14562 722769	37034 1469727	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	+++++ 101583	+++++ 219189	+++++ 392146	17850 825846	45820 1650561	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0
Trichlorofluoromethane	CBM	Ave	4076 251225	8622 519886	20764 944269	42082 2068202	106737 4119857	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Acrolein	CBM	Ave	+++++ 20755	+++++ 50113	+++++ 102480	+++++ 182696	11307 406528	+++++ 1.00	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0
Acetonitrile	CBM	Ave	+++++ 26469	+++++ 60118	+++++ 131375	+++++ 227816	15639 482336	+++++ 1.00	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0
Acetone	CBM	Ave	+++++ 87339	+++++ 180855	+++++ 406789	+++++ 685323	52018 1390929	+++++ 3.00	+++++ 6.00	+++++ 12.0	+++++ 24.0	1.20 48.0
Pentane	CBM	Ave	+++++ 14849	+++++ 30864	+++++ 55484	+++++ 117550	6517 244732	+++++ 1.00	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0
Isopropyl alcohol	CBM	Ave	+++++ 266351	12013 488972	24895 1055630	49915 1918054	142160 3482589	+++++ 3.00	0.120 6.00	0.240 12.0	0.480 24.0	1.20 48.0
Ethyl ether	CBM	Ave	+++++ 65736	3289 148732	7476 321989	15056 553177	36110 1171220	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethene	CBM	Ave	1656 90621	3815 189184	8381 344392	15755 754423	39680 1535615	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	+++++ 49529	+++++ 107948	+++++ 230835	9991 436353	25032 902964	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0
tert-Butyl alcohol	CBM	Lin1	+++++ 127270	+++++ 220441	9512 415127	18376 919383	58060 1632262	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloro-1,2,2-trifluoroetha ne	CBM	Ave	3449 195021	7065 401001	16313 753175	33602 1586774	84847 3139209	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylene Chloride	CBM	Ave	+++++ 93225	+++++ 177679	+++++ 329860	26564 680277	48728 1349970	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0
3-Chloropropene	CBM	Lin1	+++++ 83333	+++++ 160899	9005 328625	13906 656238	38333 1319889	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon disulfide	CBM	Ave	5129 265055	10051 556931	24693 1014855	46690 2180282	112870 4378353	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	+++++ 92328	3597 189036	7875 356777	15649 754307	40259 1495456	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylpentane	CBM	Ave	+++++ 209227	+++++ 432234	20535 796987	36385 1652759	93643 3175157	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	+++++ 190134	7318 396264	17128 905606	37261 1590174	96118 3259814	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethane	CBM	Ave	3370 165806	6975 349810	14950 686686	29982 1397954	76318 2804661	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	+++++ 177532	6568 390265	16018 865889	37307 1582936	92910 3288528	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Butanone (MEK)	CBM	Ave	+++++ 32107	+++++ 65541	+++++ 154279	7576 265192	16551 501778	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0
Hexane	CBM	Ave	+++++ 73808	+++++ 150365	+++++ 286027	14214 591318	33815 1164610	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0
cis-1,2-Dichloroethene	CBM	Ave	1790 91036	3728 190591	8074 373543	16376 771979	41004 1553316	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Ethyl acetate	CBM	Ave	+++++ 141681	+++++ 291559	+++++ 683903	31175 1177995	76623 2276697	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	+++++ 190800	+++++ 396942	17816 779025	35241 1591098	86586 3188140	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	+++++ 76999	+++++ 162110	+++++ 340009	17204 641564	40956 1211876	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	4176 197454	8645 416395	18145 804959	35378 1669563	89788 3337256	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	+++++ 123151	4723 259212	10626 509786	21442 1050690	56229 2135949	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	+++++ 29744	+++++ 50901	+++++ 111381	+++++ 202000	13885 362827	+++++ 1.00	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	+++++ 45080	+++++ 92419	4472 171655	7932 357423	20197 685290	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	6241 263091	12063 547051	24429 1065062	48414 2097890	119041 4024394	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	3550 209982	7915 438828	18207 851003	36066 1762311	93367 3537791	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	+++++ 63347	+++++ 130603	5875 249155	11913 508864	28672 1017496	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	+++++ 150312	+++++ 321955	13462 626957	27334 1270708	69518 2563344	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	+++++ 439459	+++++ 900463	40803 1723360	79383 3486427	196445 6676767	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	+++++ 94765	3902 196222	8492 381559	17167 777358	43205 1540847	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	+++++ 100302	4098 210169	9261 421493	17767 847107	44766 1682910	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	2325 119589	4743 250475	10397 493629	21535 1003544	54179 1968061	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	+++++ 109851	+++++ 230836	10667 457388	20766 926694	50669 1863214	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	3971 195803	8574 413015	16774 823450	34347 1676336	88194 3382471	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	+++++ 28069	+++++ 53844	2237 123538	4748 219872	12668 344425	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	+++++ 85989	+++++ 179409	+++++ 430723	17426 735125	44804 1438539	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	Ave	+++++ 167878	7322 347070	15575 668329	30462 1368540	75845 2709025	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	+++++ 136923	+++++ 269233	+++++ 659992	27138 1085608	64288 2127971	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	+++++ 155553	6201 331437	13343 670433	26097 1355923	68409 2720193	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd5	Ave	+++++ 128407	+++++ 278618	10875 591191	23711 1173124	58578 2433426	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Toluene	CBZd5	Ave	+++++ 283412	11936 600208	25542 1239377	54782 2422147	131181 4918045	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd5	Ave	1695 87152	3749 184581	7985 385134	16317 753906	40303 1513985	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Hexanone	CBZd5	Ave	+++++ 69784	2650 136876	5895 325452	11694 574790	32729 1137183	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Octane	CBZd5	Ave	2239 101126	4541 206925	8774 411769	18132 828864	45527 1606217	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
C8 Range	CBZd5	Ave	+++++ 901978	+++++ 1850127	+++++ 3707341	+++++ 7331415	+++++ 14016806	+++++ 1.00	+++++ 2.00	+++++ 4.00	+++++ 8.00	+++++ 16.0
Dibromochloromethane	CBZd5	Ave	3530 200692	7559 432967	16372 877444	33946 1787283	88886 3568712	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromoethane (EDB)	CBZd5	Ave	+++++ 165343	6189 354754	14297 728486	29416 1453979	69856 2951686	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrachloroethene	CBZd5	Ave	2331 114687	4909 239650	10866 477136	20519 957712	52795 1889134	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chlorobenzene	CBZd5	Ave	+++++ 239164	8864 496514	20875 1012976	43161 1997116	105585 3891277	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethylbenzene	CBZd5	Ave	+++++ 342484	14220 729559	32565 1566611	70429 2951613	167768 5915991	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd5	Ave	+++++ 517067	21664 1112844	48711 2392826	103040 4391902	251768 8546976	+++++ 2.00	0.0800 4.00	0.160 8.00	0.320 16.0	0.800 32.0
Nonane	CBZd5	Ave	3975 195236	8738 403252	18443 832138	36604 1567651	90392 3005085	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Styrene	CBZd5	Ave	+++++ 205243	7700 421470	17705 973459	38384 1795211	99622 3536130	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromoform	CBZd5	Ave	+++++ 208872	+++++ 452443	17167 934107	34267 1951424	89592 3797430	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
o-Xylene	CBZd5	Ave	+++++ 275312	11329 581607	24847 1252990	55661 2323383	137277 4691784	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd5	Ave	+++++ 195397	8441 414828	18692 920868	40240 1634322	98733 3277617	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd5	Ave	+++++ 51609	1986 109836	4845 246555	10278 441919	26427 906990	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Isopropylbenzene	CBZd5	Ave	+++++ 358205	16616 764991	36334 1687204	76795 3047982	186877 6046514	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propylbenzene	CBZd5	Ave	+++++ 99164	+++++ 212901	9302 482571	20306 873966	51549 1773765	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Chlorotoluene	CBZd 5	Ave	+++++ 101293	4258 212574	9208 454373	19495 856661	47705 1710230	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	+++++ 344967	15269 745587	33930 1700936	74014 2987293	180899 5957624	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	+++++ 147646	5903 310461	14114 712579	31849 1262527	76220 2530049	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	+++++ 149742	+++++ 334017	14312 752971	29994 1370381	76565 2737983	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	+++++ 225316	+++++ 468958	23094 993210	46614 1756545	113027 3214750	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	+++++ 309204	13756 659713	30373 1493882	67386 2592000	165330 4982279	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	+++++ 292070	12863 625778	28923 1415936	63212 2456158	154495 4740203	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	+++++ 432308	18860 914293	41696 2048964	93389 3532437	232101 6638117	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	+++++ 225116	9811 477551	22046 1035883	43715 1934769	109636 3759992	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	+++++ 229036	9996 518315	22135 1212674	46845 2192216	120536 4160862	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	+++++ 220578	9729 470366	22135 1035664	43480 1947184	108874 3756592	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	+++++ 353244	14557 743248	35283 1693897	77548 2903808	187151 5376440	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	+++++ 288587	12243 611735	27902 1385849	62548 2418553	153010 4664935	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indane	CBZd 5	Ave	+++++ 276849	11869 589287	26808 1307644	59006 2301054	146404 4376817	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	+++++ 211868	9463 443319	21084 975697	42959 1777289	106565 3354013	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	+++++ 341321	15282 724644	34682 1638649	74962 2760230	184036 5013238	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	+++++ 231067	9960 503526	21811 1132821	47682 1991794	121997 3775959	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	+++++ 231645	10683 455946	23414 1036819	46744 1863928	122622 3254285	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	+++++ 104745	4136 225034	9615 514013	18099 946492	54065 1781427	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 301194	11984 624537	29177 1523328	61721 2566257	162287 4688609	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Qua	+++++ 183122	+++++ 306380	+++++ 629519	+++++ 1292753	106198 2025925	+++++ 1.00	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
1,2,4-Trichlorobenzene	CBZd5	Ave	+++++ 155531	7063 336684	16452 789833	24193 1465426	87032 2668565	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd5	Ave	4921 253015	12014 518551	28149 1217927	39105 2135019	151426 3783262	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexachlorobutadiene	CBZd5	Ave	+++++ 162206	7393 340335	17105 736883	32154 1335307	92129 2542924	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd5	Ave	+++++ 109718	+++++ 206227	11991 458814	12782 871367	63553 1500391	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd5	Ave	+++++ 67237	+++++ 118911	+++++ 234598	7493 617406	45438 +++++	+++++ 3.13	+++++ 6.25	+++++ 12.5	0.500 25.0	1.25 +++++
1-Methylnaphthalene	CBZd5	Ave	+++++ 63122	+++++ 106135	7343 206757	7235 536661	46180 +++++	+++++ 3.13	+++++ 6.25	0.250 12.5	0.500 25.0	1.25 +++++
4-Bromofluorobenzene (Surr)	CBZd5	Ave	1058714 1019252	1042081 1023083	1068525 1067616	1086367 1117665	1057828 1068475	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Qua = Quadratic ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-18185/3	JB15ICL01.D
Level 2	IC 140-18185/4	JB15ICL02.D
Level 3	IC 140-18185/5	JB15ICL03.D
Level 4	IC 140-18185/6	JB15ICL04.D
Level 5	IC 140-18185/7	JB15ICL05.D
Level 6	IC 140-18185/8	JB15ICL06.D
Level 7	ICIS 140-18185/9	JB15ICISL07.D
Level 8	IC 140-18185/10	JB15ICL08.D
Level 9	IC 140-18185/11	JB15ICL09.D
Level 10	IC 140-18185/12	JB15ICL10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	+++++	47.5						50			
Propene	+++++	+++++	12.6						50			
Dichlorodifluoromethane	-7.5						50					
Chloromethane	+++++	+++++	+++++	12.5						50		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	-9.4						50					
Vinyl chloride	-30.5						50					
1,3-Butadiene	+++++	+++++	8.8						50			
Butane	+++++	+++++	13.9						50			
Bromomethane	-15.3						50					
Chloroethane	+++++	-0.4						50				
Ethanol	+++++	+++++	+++++	11.0						50		
Vinyl bromide	+++++	-10.4						50				
2-Methylbutane	+++++	+++++	+++++	0.9						50		
Trichlorofluoromethane	-15.5						50					

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Acrolein	+++++	+++++	+++++	+++++	15.7						50	
Acetonitrile	+++++	+++++	+++++	+++++	26.5						50	
Acetone	+++++	+++++	+++++	+++++	35.1						80	
Pentane	+++++	+++++	+++++	+++++	9.3						50	
Isopropyl alcohol	+++++	11.0						50				
Ethyl ether	+++++	5.7						50				
1,1-Dichloroethene	-10.0						50					
Acrylonitrile	+++++	+++++	+++++	5.4						50		
tert-Butyl alcohol	+++++	+++++	-34.2						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	-9.5						50					
Methylene Chloride	+++++	+++++	+++++	54.8						80		
3-Chloropropene	+++++	+++++	2.1						50			
Carbon disulfide	-3.9						50					
trans-1,2-Dichloroethene	+++++	-1.7						50				
2-Methylpentane	+++++	+++++	18.6						50			
Methyl tert-butyl ether	+++++	-9.9						50				
1,1-Dichloroethane	-2.5						50					
Vinyl acetate	+++++	-16.2						50				
2-Butanone (MEK)	+++++	+++++	+++++	23.7						50		
Hexane	+++++	+++++	+++++	10.2						50		
cis-1,2-Dichloroethene	-4.7						50					

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Ethyl acetate	+++++	+++++	+++++	15.1						50		
Chloroform	+++++	+++++	9.6						50			
Tetrahydrofuran	+++++	+++++	+++++	18.4						50		
1,1,1-Trichloroethane	0.8						50					
1,2-Dichloroethane	+++++	-4.7						50				
1-Butanol	+++++	+++++	+++++	+++++	28.8						50	
Cyclohexane	+++++	+++++	19.5						50			
Benzene	12.1						50					
Carbon tetrachloride	-15.6						50					
2,3-Dimethylpentane	+++++	+++++	10.4						50			
Thiophene	+++++	+++++	4.6						50			
2,2,4-Trimethylpentane	+++++	+++++	12.2						50			
Heptane	+++++	2.3						50				
1,2-Dichloropropane	+++++	0.5						50				
Trichloroethene	-5.2						50					
Dibromomethane	+++++	+++++	12.0						50			
Bromodichloromethane	-3.0						50					
1,4-Dioxane	+++++	+++++	0.6						50			
Methyl methacrylate	+++++	+++++	+++++	5.4						50		
Methylcyclohexane	+++++	7.6						50				
4-Methyl-2-pentanone (MIBK)	+++++	+++++	+++++	8.8						50		

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
cis-1,3-Dichloropropene	+++++	-1.3						50				
trans-1,3-Dichloropropene	+++++	+++++	-2.9						50			
Toluene	+++++	-0.2						50				
1,1,2-Trichloroethane	-8.7						50					
2-Hexanone	+++++	-6.0						50				
Octane	6.1						50					
Dibromochloromethane	-13.8						50					
1,2-Dibromoethane (EDB)	+++++	-8.7						50				
Tetrachloroethene	-3.3						50					
Chlorobenzene	+++++	-8.1						50				
Ethylbenzene	+++++	-4.1						50				
m-Xylene & p-Xylene	+++++	-2.5						50				
Nonane	-3.3						50					
Styrene	+++++	-10.5						50				
Bromoform	+++++	+++++	-2.7						50			
o-Xylene	+++++	-3.8						50				
1,1,2,2-Tetrachloroethane	+++++	-0.9						50				
1,2,3-Trichloropropane	+++++	-11.0						50				
Isopropylbenzene	+++++	3.6						50				
Propylbenzene	+++++	+++++	3.4						50			
2-Chlorotoluene	+++++	-0.5						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
4-Ethyltoluene	+++++	-1.4						50				
1,3,5-Trimethylbenzene	+++++	-8.8						50				
Alpha Methyl Styrene	+++++	+++++	4.0						50			
Decane	+++++	+++++	18.2						50			
tert-Butylbenzene	+++++	0.0						50				
1,2,4-Trimethylbenzene	+++++	-0.9						50				
sec-Butylbenzene	+++++	-0.5						50				
1,3-Dichlorobenzene	+++++	0.9						50				
Benzyl chloride	+++++	-4.7						50				
1,4-Dichlorobenzene	+++++	0.5						50				
4-Isopropyltoluene	+++++	-5.9						50				
1,2,3-Trimethylbenzene	+++++	-3.7						50				
Indane	+++++	-2.1						50				
1,2-Dichlorobenzene	+++++	2.8						50				
Butylbenzene	+++++	1.2						50				
Indene	+++++	-2.3						50				
Undecane	+++++	7.5						50				
1,2-Dibromo-3-Chloropropane	+++++	-7.9						50				
1,2,4,5-Tetramethylbenzene	+++++	-8.8						50				
Dodecane	+++++	+++++	+++++	+++++	43.7						50	
1,2,4-Trichlorobenzene	+++++	1.4						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Naphthalene	-12.0						80					
Hexachlorobutadiene	+++++	2.9						50				
1,2,3-Trichlorobenzene	+++++	+++++	32.6						50			
2-Methylnaphthalene	+++++	+++++	+++++	-35.9 +++++						80		
1-Methylnaphthalene	+++++	+++++	33.2	+++++					80			

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Lab Sample ID: ICV 140-18185/15 Calibration Date: 02/16/2018 00:43

Instrument ID: MJ Calib Start Date: 05/28/2017 18:27

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 05/29/2017 00:31

Lab File ID: JLCSB16.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methylthiophene	Ave	0.6836	0.7003			2.00	2.5	35.0
3-Methylthiophene	Ave	0.6771	0.6848			2.00	1.1	35.0
2-Ethylthiophene	Ave	0.8046	0.7673			2.00	-4.6	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.7737	0.0050			2.00	-99.4*	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.5914	0.4575			2.00	-22.6	35.0
1,2,3,4-Tetramethylbenzene	Ave	0.7242	0.5864			2.00	-19.0	35.0
Benzo(b)thiophene	Ave	0.3024	0.3654			2.00	20.8	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Lab Sample ID: ICV 140-18185/15 Calibration Date: 02/16/2018 00:43

Instrument ID: MJ Calib Start Date: 02/15/2018 15:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/15/2018 22:24

Lab File ID: JLCSB16.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4274	0.3673		1.72	2.00	-14.0	35.0
Propene	Ave	1.164	1.047		1.80	2.00	-10.0	35.0
Dichlorodifluoromethane	Ave	3.588	3.379		1.88	2.00	-5.8	35.0
Chloromethane	Ave	0.4199	0.3899		1.86	2.00	-7.2	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.352	2.322		1.97	2.00	-1.3	35.0
Acetaldehyde	Ave	0.4660	0.3900		8.37	10.0	-16.3	35.0
Vinyl chloride	Ave	1.307	1.364		2.09	2.00	4.4	35.0
1,3-Butadiene	Ave	1.057	1.011		1.91	2.00	-4.3	35.0
Butane	Ave	2.004	1.887		1.88	2.00	-5.8	35.0
Bromomethane	Ave	1.302	1.246		1.91	2.00	-4.3	35.0
Chloroethane	Ave	0.6785	0.6904		2.04	2.00	1.8	35.0
Ethanol	Ave	0.4846	0.3232		6.67	10.0	-33.3	35.0
Vinyl bromide	Ave	1.237	1.303		2.11	2.00	5.3	35.0
2-Methylbutane	Ave	1.477	1.457		1.97	2.00	-1.4	35.0
Trichlorofluoromethane	Ave	3.471	3.460		1.99	2.00	-0.3	35.0
Acrolein	Ave	0.3467	0.3376		1.95	2.00	-2.6	35.0
Acetonitrile	Ave	0.4388	0.3737		1.70	2.00	-14.8	35.0
Acetone	Ave	0.4553	0.4159		1.83	2.00	-8.7	35.0
Pentane	Ave	0.2117	0.2191		2.07	2.00	3.5	35.0
Isopropyl alcohol	Ave	1.306	1.085		1.66	2.00	-16.9	35.0
Ethyl ether	Ave	1.127	1.037		1.84	2.00	-7.9	35.0
1,1-Dichloroethene	Ave	1.324	1.306		1.97	2.00	-1.3	35.0
Acrylonitrile	Ave	0.7914	0.7360		1.86	2.00	-7.0	35.0
tert-Butyl alcohol	Lin1		1.077		1.42	2.00	-28.8	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.744	2.816		2.05	2.00	2.6	35.0
Methylene Chloride	Ave	1.433	1.253		1.75	2.00	-12.5	35.0
3-Chloropropene	Lin1		1.119		1.95	2.00	-2.7	35.0
Carbon disulfide	Ave	3.840	3.595		1.87	2.00	-6.4	35.0
trans-1,2-Dichloroethene	Ave	1.325	1.316		1.99	2.00	-0.6	35.0
2-Methylpentane	Ave	3.051	2.763		1.81	2.00	-9.5	35.0
Methyl tert-butyl ether	Ave	2.941	2.699		1.84	2.00	-8.2	35.0
1,1-Dichloroethane	Ave	2.488	2.460		1.98	2.00	-1.1	35.0
Vinyl acetate	Ave	2.838	2.607		1.84	2.00	-8.1	35.0
2-Butanone (MEK)	Ave	0.5113	0.4378		1.71	2.00	-14.4	35.0
Hexane	Ave	1.076	1.027		1.91	2.00	-4.6	35.0
Isopropyl ether	Ave	3.523	3.240		1.84	2.00	-8.0	35.0
cis-1,2-Dichloroethene	Ave	1.352	1.345		1.99	2.00	-0.5	35.0
Ethyl acetate	Ave	2.261	1.855		1.64	2.00	-18.0	35.0
Chloroform	Ave	2.865	2.728		1.90	2.00	-4.8	35.0
Tert-butyl ethyl ether	Ave	3.280	2.837		1.73	2.00	-13.5	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Lab Sample ID: ICV 140-18185/15 Calibration Date: 02/16/2018 00:43

Instrument ID: MJ Calib Start Date: 02/15/2018 15:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/15/2018 22:24

Lab File ID: JLCSB16.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.213	1.000		1.65	2.00	-17.5	35.0
1,1,1-Trichloroethane	Ave	2.982	2.842		1.91	2.00	-4.7	35.0
1,2-Dichloroethane	Ave	0.3245	0.3175		1.96	2.00	-2.1	35.0
1-Butanol	Ave	0.0692	0.0594		1.72	2.00	-14.1	35.0
Cyclohexane	Ave	0.1171	0.1118		1.91	2.00	-4.6	35.0
Benzene	Ave	0.7099	0.6709		1.89	2.00	-5.5	35.0
Carbon tetrachloride	Ave	0.5362	0.5458		2.04	2.00	1.8	35.0
2,3-Dimethylpentane	Ave	0.1667	0.1544		1.85	2.00	-7.4	35.0
Thiophene	Ave	0.4031	0.3833		1.90	2.00	-4.9	35.0
Tert-amyl methyl ether	Ave	0.5960	0.5347		1.79	2.00	-10.3	35.0
2,2,4-Trimethylpentane	Ave	1.138	1.105		1.94	2.00	-2.9	35.0
Heptane	Ave	0.2498	0.2365		1.89	2.00	-5.3	35.0
1,2-Dichloropropane	Ave	0.2670	0.2588		1.94	2.00	-3.1	35.0
Trichloroethene	Ave	0.3129	0.3157		2.02	2.00	0.9	35.0
Dibromomethane	Ave	0.2981	0.2856		1.92	2.00	-4.2	35.0
Bromodichloromethane	Ave	0.5220	0.5030		1.93	2.00	-3.6	35.0
1,4-Dioxane	Ave	0.0696	0.0572		1.64	2.00	-17.8	35.0
Methyl methacrylate	Ave	0.2430	0.2099		1.73	2.00	-13.6	35.0
Methylcyclohexane	Ave	0.4456	0.5145		2.31	2.00	15.4	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3667	0.2883		1.57	2.00	-21.4	35.0
cis-1,3-Dichloropropene	Ave	0.4116	0.4100		1.99	2.00	-0.4	35.0
trans-1,3-Dichloropropene	Ave	0.3874	0.3847		1.99	2.00	-0.7	35.0
Toluene	Ave	0.8440	0.8056		1.91	2.00	-4.6	35.0
1,1,2-Trichloroethane	Ave	0.2578	0.2472		1.92	2.00	-4.1	35.0
2-Hexanone	Ave	0.1989	0.1592		1.60	2.00	-20.0	35.0
Octane	Ave	0.2931	0.2827		1.93	2.00	-3.5	35.0
Dibromochloromethane	Ave	0.5688	0.5911		2.08	2.00	3.9	35.0
1,2-Dibromoethane (EDB)	Ave	0.4783	0.4843		2.03	2.00	1.3	35.0
Tetrachloroethene	Ave	0.3348	0.3309		1.98	2.00	-1.2	35.0
2,3-Dimethylheptane	Ave	0.8602	0.7593		1.77	2.00	-11.7	35.0
Chlorobenzene	Ave	0.6802	0.6929		2.04	2.00	1.9	35.0
Ethylbenzene	Ave	1.046	0.9800		1.87	2.00	-6.3	35.0
m-Xylene & p-Xylene	Ave	0.7833	0.7469		3.81	4.00	-4.6	35.0
Nonane	Ave	0.5709	0.5566		1.95	2.00	-2.5	35.0
Bromoform	Ave	0.6101	0.6227		2.04	2.00	2.1	35.0
Styrene	Ave	0.6068	0.6064		2.00	2.00	-0.0	35.0
o-Xylene	Ave	0.8310	0.7631		1.84	2.00	-8.2	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6006	0.5425		1.81	2.00	-9.7	35.0
1,2,3-Trichloropropane	Ave	0.1574	0.1442		1.83	2.00	-8.4	35.0
Isopropylbenzene	Ave	1.131	1.043		1.84	2.00	-7.8	35.0
Propylbenzene	Ave	0.3111	0.2910		1.87	2.00	-6.5	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Lab Sample ID: ICV 140-18185/15 Calibration Date: 02/16/2018 00:43

Instrument ID: MJ Calib Start Date: 02/15/2018 15:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/15/2018 22:24

Lab File ID: JLCSB16.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chlorotoluene	Ave	0.3018	0.2962		1.96	2.00	-1.9	35.0
4-Ethyltoluene	Ave	1.092	0.9558		1.75	2.00	-12.5	35.0
1,3,5-Trimethylbenzene	Ave	0.4567	0.4752		2.08	2.00	4.0	35.0
Alpha Methyl Styrene	Ave	0.4759	0.4446		1.87	2.00	-6.6	35.0
Decane	Ave	0.6756	0.6432		1.90	2.00	-4.8	35.0
tert-Butylbenzene	Ave	0.9702	0.8847		1.82	2.00	-8.8	35.0
1,2,4-Trimethylbenzene	Ave	0.9159	0.8384		1.83	2.00	-8.5	35.0
sec-Butylbenzene	Ave	1.336	1.226		1.83	2.00	-8.3	35.0
1,3-Dichlorobenzene	Ave	0.6861	0.6615		1.93	2.00	-3.6	35.0
Benzyl chloride	Ave	0.7395	0.6769		1.83	2.00	-8.5	35.0
1,4-Dichlorobenzene	Ave	0.6827	0.6602		1.93	2.00	-3.3	35.0
4-Isopropyltoluene	Ave	1.091	0.9840		1.80	2.00	-9.8	35.0
1,2,3-Trimethylbenzene	Ave	0.8965	0.6038		1.35	2.00	-32.6	35.0
Butylcyclohexane	Ave	0.8276	0.7496		1.81	2.00	-9.4	35.0
Indane	Ave	0.8553	0.7716		1.80	2.00	-9.8	35.0
1,2-Dichlorobenzene	Ave	0.6490	0.6155		1.90	2.00	-5.2	35.0
Butylbenzene	Ave	1.065	0.9651		1.81	2.00	-9.4	35.0
Indene	Ave	0.7188	0.5725		1.59	2.00	-20.4	35.0
Undecane	Ave	0.7010	0.6305		1.80	2.00	-10.1	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.3168	0.2436		1.54	2.00	-23.1	35.0
1,2,4,5-Tetramethylbenzene	Ave	0.9272	0.7656		1.65	2.00	-17.4	35.0
Dodecane	Qua		0.4818		2.04	2.00	1.8	35.0
1,2,4-Trichlorobenzene	Ave	0.4913	0.4952		2.02	2.00	0.8	35.0
Naphthalene	Ave	0.7770	0.7325		1.89	2.00	-5.7	35.0
Hexachlorobutadiene	Ave	0.5066	0.4538		1.79	2.00	-10.4	35.0
1,2,3-Trichlorobenzene	Ave	0.3126	0.3306		2.12	2.00	5.8	35.0
2-Methylnaphthalene	Ave	0.0616	0.1211		12.6	6.40	96.8*	50.0
1-Methylnaphthalene	Ave	0.0610	0.1423		14.1	6.05	133.3*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7231	0.7159		3.96	4.00	-1.0	35.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Lab File ID: JBFBB28.D BFB Injection Date: 02/28/2018

Instrument ID: MJ BFB Injection Time: 10:17

Analysis Batch No.: 18440

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	19.3
75	30.0 - 60.0 % of mass 95	52.3
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.9
173	Less than 2.0 % of mass 174	0.0 (0.0) 1
174	50.0 - 120.00 % of mass 95	106.2
175	5.0 - 9.0 % of mass 174	7.6 (7.2) 1
176	95.0 - 101.0 % of mass 174	102.2 (96.2) 1
177	5.0 - 9.0 % of mass 176	6.6 (6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-18440/2	JCCVB28.D	02/28/2018	10:44
	LCS 140-18440/1002	JCCVB28-LCS.d	02/28/2018	10:44
	MB 140-18440/4	J500BB28.D	02/28/2018	13:06
SV-001-C-24	140-10791-1	JB28P101.D	02/28/2018	13:51
SV-004-C-24	140-10791-2	JB28P102.D	02/28/2018	14:38
SV-102-C-24	140-10791-3	JB28P103.D	02/28/2018	15:24
SV-153-C-24	140-10791-5	JB28P105.D	02/28/2018	16:56
SV-DUP01-C-24	140-10791-6	JB28P106.D	02/28/2018	17:40
SV-133-C-24	140-10791-7	JB28P107.D	02/28/2018	18:26
SV-060-C-24	140-10791-8	JB28P108.D	02/28/2018	19:12
SV-150-C-24	140-10791-9	JB28P109.D	02/28/2018	19:57
SV-152-C-24	140-10791-10	JB28P110.D	02/28/2018	20:43
SV-141-C-24	140-10791-11	JB28P111.D	02/28/2018	21:30
SV-142-C-24	140-10791-12	JB28P112.D	02/28/2018	22:16
SV-088-C-24	140-10791-13	JB28P113.D	02/28/2018	23:02
SV-113-C-24	140-10791-14	JB28P114.D	02/28/2018	23:47
SV-149-C-24	140-10791-15	JB28P115.D	03/01/2018	01:19
IA-BCK-1-24	140-10791-16	JB28P116.D	03/01/2018	02:04
IA-BCK-2-24	140-10791-17	JB28P201.D	03/01/2018	02:51
IA-BCK-3-24	140-10791-18	JB28P202.D	03/01/2018	03:37
SV-102-C-24 DL	140-10791-3 DL	JB28P103DL.D	03/01/2018	04:23
SV-155-C-24	140-10791-4	JB28P104R.D	03/01/2018	05:10
IA-BCK-4-24	140-10791-19	JB28P205.D	03/01/2018	05:56
SV-133-C-24 DL	140-10791-7 DL	JB28P107DL.D	03/01/2018	09:50

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Lab Sample ID: CCVIS 140-18440/2 Calibration Date: 02/28/2018 10:44

Instrument ID: MJ Calib Start Date: 02/15/2018 15:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/15/2018 22:24

Lab File ID: JCCVB28.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4274	0.4167		1.95	2.00	-2.5	30.0
Propene	Ave	1.164	1.241		2.13	2.00	6.6	30.0
Dichlorodifluoromethane	Ave	3.588	4.111		2.29	2.00	14.6	30.0
Chloromethane	Ave	0.4199	0.4581		2.18	2.00	9.1	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.352	2.649		2.25	2.00	12.7	30.0
Acetaldehyde	Ave	0.4660	0.4497		9.65	10.0	-3.5	30.0
Vinyl chloride	Ave	1.307	1.542		2.36	2.00	18.0	30.0
1,3-Butadiene	Ave	1.057	1.136		2.15	2.00	7.5	30.0
Butane	Ave	2.004	2.214		2.21	2.00	10.5	30.0
Bromomethane	Ave	1.302	1.434		2.20	2.00	10.1	30.0
Chloroethane	Ave	0.6785	0.7307		2.15	2.00	7.7	30.0
Ethanol	Ave	0.4846	0.5072		10.5	10.0	4.7	30.0
Vinyl bromide	Ave	1.237	1.364		2.21	2.00	10.3	30.0
2-Methylbutane	Ave	1.477	1.645		2.23	2.00	11.3	30.0
Trichlorofluoromethane	Ave	3.471	3.978		2.29	2.00	14.6	30.0
Acrolein	Ave	0.3467	0.2859		1.65	2.00	-17.6	30.0
Acetonitrile	Ave	0.4388	0.3957		1.80	2.00	-9.8	30.0
Acetone	Ave	0.4553	0.4237		5.58	6.00	-7.0	30.0
Pentane	Ave	0.2117	0.2274		2.15	2.00	7.4	30.0
Isopropyl alcohol	Ave	1.306	1.258		5.78	6.00	-3.7	30.0
Ethyl ether	Ave	1.127	1.017		1.80	2.00	-9.8	30.0
1,1-Dichloroethene	Ave	1.324	1.400		2.11	2.00	5.7	30.0
Acrylonitrile	Ave	0.7914	0.6910		1.75	2.00	-12.7	30.0
tert-Butyl alcohol	Lin1		1.587		2.12	2.00	5.8	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.744	2.973		2.17	2.00	8.3	30.0
Methylene Chloride	Ave	1.433	1.316		1.84	2.00	-8.1	30.0
3-Chloropropene	Lin1		1.191		2.07	2.00	3.6	30.0
Carbon disulfide	Ave	3.840	4.104		2.14	2.00	6.9	30.0
trans-1,2-Dichloroethene	Ave	1.325	1.380		2.08	2.00	4.2	30.0
2-Methylpentane	Ave	3.051	3.139		2.06	2.00	2.9	30.0
Methyl tert-butyl ether	Ave	2.941	2.668		1.81	2.00	-9.3	30.0
1,1-Dichloroethane	Ave	2.488	2.418		1.94	2.00	-2.8	30.0
Vinyl acetate	Ave	2.838	2.527		1.78	2.00	-10.9	30.0
2-Butanone (MEK)	Ave	0.5113	0.4323		1.69	2.00	-15.4	30.0
Hexane	Ave	1.076	1.042		1.94	2.00	-3.1	30.0
Isopropyl ether	Ave	3.523	3.056		1.73	2.00	-13.3	30.0
cis-1,2-Dichloroethene	Ave	1.352	1.295		1.92	2.00	-4.2	30.0
Ethyl acetate	Ave	2.261	1.950		1.72	2.00	-13.8	30.0
Chloroform	Ave	2.865	2.729		1.91	2.00	-4.7	30.0
Tert-butyl ethyl ether	Ave	3.280	2.921		1.78	2.00	-10.9	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Lab Sample ID: CCVIS 140-18440/2 Calibration Date: 02/28/2018 10:44

Instrument ID: MJ Calib Start Date: 02/15/2018 15:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/15/2018 22:24

Lab File ID: JCCVB28.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.213	1.044		1.72	2.00	-13.9	30.0
1,1,1-Trichloroethane	Ave	2.982	2.908		1.95	2.00	-2.5	30.0
1,2-Dichloroethane	Ave	0.3245	0.3100		1.91	2.00	-4.5	30.0
Benzene	Ave	0.7099	0.6224		1.75	2.00	-12.3	30.0
Cyclohexane	Ave	0.1171	0.1131		1.93	2.00	-3.5	30.0
Carbon tetrachloride	Ave	0.5362	0.5509		2.05	2.00	2.7	30.0
1-Butanol	Ave	0.0692	0.0800		2.31	2.00	15.7	30.0
2,3-Dimethylpentane	Ave	0.1667	0.1515		1.82	2.00	-9.1	30.0
Thiophene	Ave	0.4031	0.3787		1.88	2.00	-6.1	30.0
Tert-amyl methyl ether	Ave	0.5960	0.5471		1.84	2.00	-8.2	30.0
2,2,4-Trimethylpentane	Ave	1.138	1.052		1.85	2.00	-7.6	30.0
Heptane	Ave	0.2498	0.2227		1.78	2.00	-10.8	30.0
1,2-Dichloropropane	Ave	0.2670	0.2402		1.80	2.00	-10.0	30.0
Trichloroethene	Ave	0.3129	0.2932		1.87	2.00	-6.3	30.0
Dibromomethane	Ave	0.2981	0.2675		1.79	2.00	-10.3	30.0
Bromodichloromethane	Ave	0.5220	0.4881		1.87	2.00	-6.5	30.0
1,4-Dioxane	Ave	0.0696	0.0626		1.80	2.00	-10.1	30.0
Methyl methacrylate	Ave	0.2430	0.2012		1.66	2.00	-17.2	30.0
Methylcyclohexane	Ave	0.4456	0.4027		1.81	2.00	-9.6	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3667	0.2865		1.56	2.00	-21.9	30.0
cis-1,3-Dichloropropene	Ave	0.4116	0.3822		1.86	2.00	-7.1	30.0
trans-1,3-Dichloropropene	Ave	0.3874	0.3434		1.77	2.00	-11.4	30.0
Toluene	Ave	0.8440	0.7453		1.77	2.00	-11.7	30.0
1,1,2-Trichloroethane	Ave	0.2578	0.2248		1.74	2.00	-12.8	30.0
2-Hexanone	Ave	0.1989	0.1527		1.54	2.00	-23.2	30.0
Octane	Ave	0.2931	0.2601		1.77	2.00	-11.3	30.0
Dibromochloromethane	Ave	0.5688	0.5513		1.94	2.00	-3.1	30.0
1,2-Dibromoethane (EDB)	Ave	0.4783	0.4353		1.82	2.00	-9.0	30.0
Tetrachloroethene	Ave	0.3348	0.3045		1.82	2.00	-9.1	30.0
2,3-Dimethylheptane	Ave	0.8602	0.7754		1.80	2.00	-9.9	30.0
Chlorobenzene	Ave	0.6802	0.6203		1.82	2.00	-8.8	30.0
Ethylbenzene	Ave	1.046	0.8731		1.67	2.00	-16.5	30.0
m-Xylene & p-Xylene	Ave	0.7833	0.6678		3.41	4.00	-14.7	30.0
Nonane	Ave	0.5709	0.4921		1.72	2.00	-13.8	30.0
Bromoform	Ave	0.6101	0.5664		1.86	2.00	-7.2	30.0
Styrene	Ave	0.6068	0.5191		1.71	2.00	-14.5	30.0
o-Xylene	Ave	0.8310	0.7037		1.69	2.00	-15.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6006	0.4926		1.64	2.00	-18.0	30.0
1,2,3-Trichloropropane	Ave	0.1574	0.1329		1.69	2.00	-15.6	30.0
Isopropylbenzene	Ave	1.131	0.9299		1.64	2.00	-17.8	30.0
Propylbenzene	Ave	0.3111	0.2573		1.65	2.00	-17.3	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Lab Sample ID: CCVIS 140-18440/2 Calibration Date: 02/28/2018 10:44

Instrument ID: MJ Calib Start Date: 02/15/2018 15:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/15/2018 22:24

Lab File ID: JCCVB28.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chlorotoluene	Ave	0.3018	0.2532		1.68	2.00	-16.1	30.0
4-Ethyltoluene	Ave	1.092	0.8890		1.63	2.00	-18.6	30.0
1,3,5-Trimethylbenzene	Ave	0.4567	0.3702		1.62	2.00	-18.9	30.0
Alpha Methyl Styrene	Ave	0.4759	0.3745		1.57	2.00	-21.3	30.0
Decane	Ave	0.6756	0.5597		1.66	2.00	-17.1	30.0
tert-Butylbenzene	Ave	0.9702	0.7893		1.63	2.00	-18.6	30.0
1,2,4-Trimethylbenzene	Ave	0.9159	0.7410		1.62	2.00	-19.1	30.0
sec-Butylbenzene	Ave	1.336	1.089		1.63	2.00	-18.5	30.0
1,3-Dichlorobenzene	Ave	0.6861	0.5585		1.63	2.00	-18.6	30.0
Benzyl chloride	Ave	0.7395	0.6023		1.63	2.00	-18.6	30.0
1,4-Dichlorobenzene	Ave	0.6827	0.5495		1.61	2.00	-19.5	30.0
4-Isopropyltoluene	Ave	1.091	0.8830		1.62	2.00	-19.1	30.0
1,2,3-Trimethylbenzene	Ave	0.8965	0.7234		1.61	2.00	-19.3	30.0
Butylcyclohexane	Ave	0.8276	0.6944		1.68	2.00	-16.1	30.0
Indane	Ave	0.8553	0.6891		1.61	2.00	-19.4	30.0
1,2-Dichlorobenzene	Ave	0.6490	0.5209		1.61	2.00	-19.7	30.0
Butylbenzene	Ave	1.065	0.8447		1.59	2.00	-20.7	30.0
Indene	Ave	0.7188	0.5579		1.55	2.00	-22.4	30.0
Undecane	Ave	0.7010	0.5149		1.47	2.00	-26.5	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.3168	0.2527		1.60	2.00	-20.2	30.0
1,2,4,5-Tetramethylbenzene	Ave	0.9272	0.7430		1.60	2.00	-19.9	30.0
Dodecane	Qua		0.2499		1.01	2.00	-49.5*	30.0
1,2,4-Trichlorobenzene	Ave	0.4913	0.3303		1.34	2.00	-32.8*	30.0
Naphthalene	Ave	0.7770	0.4751		1.22	2.00	-38.9*	30.0
Hexachlorobutadiene	Ave	0.5066	0.3939		1.56	2.00	-22.2	30.0
1,2,3-Trichlorobenzene	Ave	0.3126	0.1740		1.11	2.00	-44.4*	30.0
2-Methylnaphthalene	Ave	0.0616	0.0227		2.30	6.25	-63.2*	50.0
1-Methylnaphthalene	Ave	0.0610	0.0210		2.15	6.25	-65.5*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7231	0.7056		3.90	4.00	-2.4	30.0

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Lab File ID: J500BB28.D Lab Sample ID: MB 140-18440/4

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MJ Date Analyzed: 02/28/2018 13:06

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-18440/1002	JCCVB28-LCS.d	02/28/2018 10:44
SV-001-C-24	140-10791-1	JB28P101.D	02/28/2018 13:51
SV-004-C-24	140-10791-2	JB28P102.D	02/28/2018 14:38
SV-102-C-24	140-10791-3	JB28P103.D	02/28/2018 15:24
SV-153-C-24	140-10791-5	JB28P105.D	02/28/2018 16:56
SV-DUP01-C-24	140-10791-6	JB28P106.D	02/28/2018 17:40
SV-133-C-24	140-10791-7	JB28P107.D	02/28/2018 18:26
SV-060-C-24	140-10791-8	JB28P108.D	02/28/2018 19:12
SV-150-C-24	140-10791-9	JB28P109.D	02/28/2018 19:57
SV-152-C-24	140-10791-10	JB28P110.D	02/28/2018 20:43
SV-141-C-24	140-10791-11	JB28P111.D	02/28/2018 21:30
SV-142-C-24	140-10791-12	JB28P112.D	02/28/2018 22:16
SV-088-C-24	140-10791-13	JB28P113.D	02/28/2018 23:02
SV-113-C-24	140-10791-14	JB28P114.D	02/28/2018 23:47
SV-149-C-24	140-10791-15	JB28P115.D	03/01/2018 01:19
IA-BCK-1-24	140-10791-16	JB28P116.D	03/01/2018 02:04
IA-BCK-2-24	140-10791-17	JB28P201.D	03/01/2018 02:51
IA-BCK-3-24	140-10791-18	JB28P202.D	03/01/2018 03:37
SV-102-C-24 DL	140-10791-3 DL	JB28P103DL.D	03/01/2018 04:23
SV-155-C-24	140-10791-4	JB28P104R.D	03/01/2018 05:10
IA-BCK-4-24	140-10791-19	JB28P205.D	03/01/2018 05:56
SV-133-C-24 DL	140-10791-7 DL	JB28P107DL.D	03/01/2018 09:50

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-18440/4

Matrix: Air Lab File ID: J500BB28.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 02/28/2018 13:06

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	0.0243	J	0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10791-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-18440/4

Matrix: Air | Lab File ID: J500BB28.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 02/28/2018 13:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18440 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	0.133	J	0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Matrix: Air Level: Low Lab File ID: JCCVB28-LCS.d

Lab ID: LCS 140-18440/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.75	88	70-130	
Carbon tetrachloride	2.00	2.05	103	70-130	
Chlorodifluoromethane	2.00	1.95	98	60-140	
Chloroform	2.00	1.91	95	70-130	
cis-1,2-Dichloroethene	2.00	1.92	96	70-130	
Dichlorodifluoromethane	2.00	2.29	115	60-140	
1,1-Dichloroethane	2.00	1.94	97	70-130	
1,2-Dichloroethane	2.00	1.91	96	70-130	
1,1-Dichloroethene	2.00	2.11	106	70-130	
Ethylbenzene	2.00	1.67	83	70-130	
Methylene Chloride	2.00	1.84	92	70-130	
Methyl tert-butyl ether	2.00	1.81	91	60-140	
Naphthalene	2.00	1.22	61	60-140	
Tetrachloroethene	2.00	1.82	91	70-130	
Toluene	2.00	1.77	88	70-130	
trans-1,2-Dichloroethene	2.00	2.08	104	70-130	
1,2,4-Trichlorobenzene	2.00	1.34	67	60-140	
1,1,1-Trichloroethane	2.00	1.95	98	70-130	
1,1,2-Trichloroethane	2.00	1.74	87	70-130	
Trichloroethene	2.00	1.87	94	70-130	
1,2,3-Trimethylbenzene	2.00	1.61	81	70-130	
1,2,4-Trimethylbenzene	2.00	1.62	81	70-130	
1,3,5-Trimethylbenzene	2.00	1.62	81	70-130	
Vinyl chloride	2.00	2.36	118	70-130	
Xylenes, Total	6.00	5.10	85	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
SV-001-C-24	140-10791-1	100
SV-004-C-24	140-10791-2	101
SV-102-C-24	140-10791-3	99
SV-102-C-24 DL	140-10791-3 DL	101
SV-155-C-24	140-10791-4	98
SV-153-C-24	140-10791-5	102
SV-DUP01-C-24	140-10791-6	100
SV-133-C-24	140-10791-7	100
SV-133-C-24 DL	140-10791-7 DL	101
SV-060-C-24	140-10791-8	99
SV-150-C-24	140-10791-9	99
SV-152-C-24	140-10791-10	98
SV-141-C-24	140-10791-11	99
SV-142-C-24	140-10791-12	100
SV-088-C-24	140-10791-13	100
SV-113-C-24	140-10791-14	99
SV-149-C-24	140-10791-15	102
IA-BCK-1-24	140-10791-16	100
IA-BCK-2-24	140-10791-17	100
IA-BCK-3-24	140-10791-18	101
IA-BCK-4-24	140-10791-19	101
	MB 140-18440/4	99
	LCS 140-18440/1002	98

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Sample No.: ICIS 140-18185/9 Date Analyzed: 02/15/2018 20:08

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): JB15ICISL07.D Heated Purge: (Y/N) N

Calibration ID: 1394

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		286873	9.69	1605094	11.79	1448317	16.39
UPPER LIMIT		401622	10.02	2247132	12.12	2027644	16.72
LOWER LIMIT		172124	9.36	963056	11.46	868990	16.06
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-18185/15		287782	9.69	1626462	11.79	1472970	16.39

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Sample No.: CCVIS 140-18440/2 Date Analyzed: 02/28/2018 10:44

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): JCCVB28.D Heated Purge: (Y/N) N

Calibration ID: 1394

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		238046	9.69	1347490	11.79	1223696	16.39
UPPER LIMIT		333264	10.02	1886486	12.12	1713174	16.72
LOWER LIMIT		142828	9.36	808494	11.46	734218	16.06
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-18440/1002		238046	9.69	1347490	11.79	1223696	16.39
MB 140-18440/4		234577	9.68	1331986	11.78	1145067	16.39
140-10791-1	SV-001-C-24	224571	9.68	1266422	11.79	1175504	16.39
140-10791-2	SV-004-C-24	224408	9.69	1288456	11.79	1170445	16.39
140-10791-3	SV-102-C-24	197404	9.70	1130881	11.80	1148091	16.39
140-10791-5	SV-153-C-24	203761	9.69	1160730	11.78	1093355	16.38
140-10791-6	SV-DUP01-C-24	225951	9.69	1219063	11.78	1059885	16.38
140-10791-7	SV-133-C-24	209571	9.68	1174855	11.78	1114597	16.38
140-10791-8	SV-060-C-24	208497	9.69	1225646	11.79	1128718	16.39
140-10791-9	SV-150-C-24	209451	9.70	1175144	11.80	1076239	16.38
140-10791-10	SV-152-C-24	229230	9.71	1298529	11.80	1155912	16.39
140-10791-11	SV-141-C-24	220156	9.68	1243650	11.79	1125795	16.39
140-10791-12	SV-142-C-24	223382	9.68	1280647	11.78	1153210	16.38
140-10791-13	SV-088-C-24	226994	9.68	1293129	11.78	1168650	16.38
140-10791-14	SV-113-C-24	223198	9.69	1297812	11.78	1161896	16.38
140-10791-15	SV-149-C-24	203714	9.69	1156871	11.79	1066959	16.39
140-10791-16	IA-BCK-1-24	218468	9.68	1249514	11.78	1100103	16.38
140-10791-17	IA-BCK-2-24	177239	9.68	1085771	11.78	1058799	16.39
140-10791-18	IA-BCK-3-24	218862	9.69	1256349	11.79	1112994	16.39
140-10791-3 DL	SV-102-C-24 DL	194732	9.69	1027450	11.79	983800	16.39
140-10791-4	SV-155-C-24	231694	9.69	1309795	11.78	1175285	16.38
140-10791-19	IA-BCK-4-24	222178	9.69	1264385	11.78	1116962	16.38
140-10791-7 DL	SV-133-C-24 DL	225532	9.67	1291945	11.78	1109120	16.38

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

Summa Canister Dilution Worksheet

Client: Tetra Tech, Inc.

Job No.: 140-10791-1

Lab Sample ID	Canister Volume (L)	Preadjusted Pressure ("Hg)	Preadjusted Pressure (atm)	Preadjusted Volume (L)	Adjusted Pressure (psig)	Adjusted Pressure (atm)	Adjusted Volume (L)	Initial Volume (mL)	Dilution Factor	Final Dilution Factor	Date	Analyst
140-10791-3	1	-5.3	0.82	0.82	34.0	3.31	3.31		4.03	4.03	02/28/18 18:16	Barlozhetskaya, Anna F

Formulae:

Preadjusted Volume (L) = (Preadjusted Pressure ("Hg) + 29.92 "Hg * Vol L) / 29.92 "Hg

Adjusted Volume (L) = (Adjusted Pressure (psig) + 14.7 psig * Vol L) / 14.7 psig

Dilution Factor = Adjusted Volume (L) / Preadjusted Volume (L)

Where:

29.92 "Hg = Standard atmospheric pressure in inches of Mercury (“Hg)

14.7 psig = Standard atmospheric pressure in pounds per square inch gauge (psig)

LMC - MRC

SAMPLE CALCULATION

SAMPLE IDENTIFICATION	SV-102-C-24		
COMPOUND	TRICHLOROETHENE	MW=	131.39
		GAS CONSTANT =	24.45
COMPOUND AREA	225455		
INTERNAL STANDARD AMOUNT (ppbv)	4		
DILUTION FACTOR	4.03		
INTERNAL STANDARD AREA	1027450		
AVERAGE RRF	0.3129		
SAMPLE VOLUME (mL)	20		
FINAL VOLUME (mL)	500		

	on column		final result	
	2.8051	ppbv	282.62	ppbv
	15.07	µg/m³	1518.7	µg/m³

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Client Sample ID: SV-102-C-24 DL Lab Sample ID: 140-10791-3 DL

Matrix: Air Lab File ID: JB28P103DL.D

Analysis Method: TO 15 LL Date Collected: 02/20/2018 11:11

Sample wt/vol: 20(mL) Date Analyzed: 03/01/2018 04:23

Soil Aliquot Vol: Dilution Factor: 4.03

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18440 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	98.96	1400		8.1	1.0
75-35-4	1,1-Dichloroethene	96.94	610		8.1	1.4
100-41-4	Ethylbenzene	106.17	180		8.1	2.7
71-55-6	1,1,1-Trichloroethane	133.41	700	B	8.1	1.2
79-01-6	Trichloroethene	131.39	280	✓	4.0	1.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1
SDG No.:
Client Sample ID: SV-102-C-24 DL Lab Sample ID: 140-10791-3 DL
Matrix: Air Lab File ID: JB28P103DL.D
Analysis Method: TO 15 LL Date Collected: 02/20/2018 11:11
Sample wt/vol: 20(mL) Date Analyzed: 03/01/2018 04:23
Soil Aliquot Vol: Dilution Factor: 4.03
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18440 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	98.96	5600		33	4.1
75-35-4	1,1-Dichloroethene	96.94	2400		32	5.6
100-41-4	Ethylbenzene	106.17	790		35	12
71-55-6	1,1,1-Trichloroethane	133.41	3800	B	44	6.6
79-01-6	Trichloroethene	131.39	1500		22	7.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180226-7501.b\JB28P103DL.D
Lims ID: 140-10791-A-3
Client ID: SV-102-C-24
Sample Type: Client
Inject. Date: 01-Mar-2018 04:23:30 ALS Bottle#: 3 Worklist Smp#: 25
Purge Vol: 500.000 mL Dil. Factor: 4.0300
Sample Info: 140-0007501-025
Misc. Info.: 140-10791-a-3@4.03
Operator ID: 007126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20180226-7501.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 01-Mar-2018 10:57:27 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: tajh Date: 01-Mar-2018 10:56:45

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.689	9.690	-0.001	91	194732	4.00	
* 2 1,4-Difluorobenzene	114	11.787	11.788	-0.001	95	1027450	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.387	16.387	0.000	88	983800	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.990	17.983	0.000	97	716068	4.03	
12 Vinyl chloride	62	4.686	4.676	0.004	94	2080	0.0327	
27 1,1-Dichloroethene	96	6.693	6.685	-0.001	96	388177	6.02	
32 Methylene Chloride	84	7.059	7.051	0.000	95	9515	0.1364	
37 1,1-Dichloroethane	63	8.339	8.329	-0.001	100	1663454	13.7	
42 cis-1,2-Dichloroethene	96	9.350	9.334	0.004	93	10837	0.1647	
44 Chloroform	83	9.689	9.683	-0.006	78	18183	0.1304	
47 1,1,1-Trichloroethane	97	10.717	10.704	0.000	96	1004588	6.92	
50 Benzene	78	11.292	11.276	0.004	88	4314	0.0237	
59 Trichloroethene	130	12.476	12.464	-0.001	96	225455	2.81 ✓	
68 Toluene	91	14.456	14.450	0.000	94	36823	0.1774	
76 Tetrachloroethene	129	15.564	15.563	-0.006	89	1621	0.0197	
79 Ethylbenzene	91	16.710	16.703	0.000	99	462789	1.80	
81 m-Xylene & p-Xylene	91	16.860	16.859	-0.006	100	2015097	10.5	
85 o-Xylene	91	17.387	17.381	-0.001	99	766325	3.75	
92 1,3,5-Trimethylbenzene	120	18.668	18.661	0.000	93	5006	0.0446	
96 1,2,4-Trimethylbenzene	105	19.087	19.080	-0.001	97	20337	0.0903	
102 1,2,3-Trimethylbenzene	105	19.545	19.537	0.000	98	15563	0.0706	
116 Naphthalene	128	21.637	21.629	-0.001	99	136004	0.7117	
S 124 Xylenes, Total	100				0		14.2	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Hexane	+++++ 1.0408	+++++ 1.0483	+++++ 1.0588	1.1864 0.9999	1.2001 0.9988	Ave		1.0762				7.7		30.0			
cis-1,2-Dichloroethene	1.2882 1.2837	1.3496 1.3287	1.4225 1.3828	1.3669 1.3054	1.4552 1.3322	Ave		1.3515				4.2		30.0			
Ethyl acetate	+++++ 1.9979	+++++ 2.0327	+++++ 2.5317	2.6021 1.9919	2.7194 1.9525	Ave		2.2612				15.0		30.0			
Chloroform	+++++ 2.6905	+++++ 2.7674	3.1390 2.8838	2.9415 2.6905	3.0730 2.7342	Ave		2.8650				6.1		30.0			
Tetrahydrofuran	+++++ 1.0858	+++++ 1.1302	+++++ 1.2587	1.4360 1.0849	1.4535 1.0393	Ave		1.2126				14.3		30.0			
1,1,1-Trichloroethane	3.0053 2.7843	3.1296 2.9030	3.1969 2.9798	2.9529 2.8232	3.1866 2.8621	Ave		2.9824				5.0		30.0			
1,2-Dichloroethane	+++++ 0.3099	0.3093 0.3230	0.3327 0.3283	0.3151 0.3169	0.3609 0.3240	Ave		0.3245				4.9		30.0			
1-Butanol	+++++ 0.0748	+++++ 0.0634	+++++ 0.0717	+++++ 0.0609	0.0891 0.0550	Ave		0.0692				17.6		30.0			
Cyclohexane	+++++ 0.1134	+++++ 0.1152	0.1400 0.1105	0.1166 0.1078	0.1296 0.1039	Ave		0.1171				10.2		30.0			
Benzene	0.7960 0.6620	0.7900 0.6816	0.7649 0.6859	0.7115 0.6328	0.7640 0.6104	Ave		0.7099				9.3		30.0			
Carbon tetrachloride	0.4528 0.5284	0.5183 0.5468	0.5701 0.5481	0.5301 0.5316	0.5993 0.5366	Ave		0.5362				7.0		30.0			
2,3-Dimethylpentane	+++++ 0.1594	+++++ 0.1627	0.1839 0.1605	0.1751 0.1535	0.1840 0.1543	Ave		0.1667				7.5		30.0			
Thiophene	+++++ 0.3782	+++++ 0.4012	0.4215 0.4038	0.4017 0.3833	0.4462 0.3888	Ave		0.4031				5.5		30.0			
2,2,4-Trimethylpentane	+++++ 1.1058	+++++ 1.1220	1.2776 1.1099	1.1667 1.0517	1.2608 1.0127	Ave		1.1384				8.2		30.0			
Heptane	+++++ 0.2385	0.2555 0.2445	0.2659 0.2457	0.2523 0.2345	0.2773 0.2337	Ave		0.2498				5.9		30.0			
1,2-Dichloropropane	+++++ 0.2524	0.2684 0.2619	0.2900 0.2714	0.2611 0.2555	0.2873 0.2552	Ave		0.2670				5.1		30.0			
Trichloroethene	0.2965 0.3009	0.3106 0.3121	0.3255 0.3179	0.3165 0.3027	0.3477 0.2985	Ave		0.3129				4.9		30.0			
Dibromomethane	+++++ 0.2764	+++++ 0.2876	0.3340 0.2946	0.3052 0.2795	0.3252 0.2826	Ave		0.2981				7.2		30.0			
Bromodichloromethane	0.5065 0.4927	0.5615 0.5146	0.5252 0.5303	0.5048 0.5057	0.5661 0.5130	Ave		0.5220				4.7		30.0			
1,4-Dioxane	+++++ 0.0706	+++++ 0.0671	0.0700 0.0796	0.0698 0.0663	0.0813 0.0522	Ave		0.0696				12.8		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1 Analy Batch No.: 18185

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Hexane	+++++ 1.0408	+++++ 1.0483	+++++ 1.0588	1.1864 0.9999	1.2001 0.9988	Ave		1.0762				7.7		30.0			
cis-1,2-Dichloroethene	1.2882 1.2837	1.3496 1.3287	1.4225 1.3828	1.3669 1.3054	1.4552 1.3322	Ave		1.3515				4.2		30.0			
Ethyl acetate	+++++ 1.9979	+++++ 2.0327	+++++ 2.5317	2.6021 1.9919	2.7194 1.9525	Ave		2.2612				15.0		30.0			
Chloroform	+++++ 2.6905	+++++ 2.7674	3.1390 2.8838	2.9415 2.6905	3.0730 2.7342	Ave		2.8650				6.1		30.0			
Tetrahydrofuran	+++++ 1.0858	+++++ 1.1302	+++++ 1.2587	1.4360 1.0849	1.4535 1.0393	Ave		1.2126				14.3		30.0			
1,1,1-Trichloroethane	3.0053 2.7843	3.1296 2.9030	3.1969 2.9798	2.9529 2.8232	3.1866 2.8621	Ave		2.9824				5.0		30.0			
1,2-Dichloroethane	+++++ 0.3099	0.3093 0.3230	0.3327 0.3283	0.3151 0.3169	0.3609 0.3240	Ave		0.3245				4.9		30.0			
1-Butanol	+++++ 0.0748	+++++ 0.0634	+++++ 0.0717	+++++ 0.0609	0.0891 0.0550	Ave		0.0692				17.6		30.0			
Cyclohexane	+++++ 0.1134	+++++ 0.1152	0.1400 0.1105	0.1166 0.1078	0.1296 0.1039	Ave		0.1171				10.2		30.0			
Benzene	0.7960 0.6620	0.7900 0.6816	0.7649 0.6859	0.7115 0.6328	0.7640 0.6104	Ave		0.7099				9.3		30.0			
Carbon tetrachloride	0.4528 0.5284	0.5183 0.5468	0.5701 0.5481	0.5301 0.5316	0.5993 0.5366	Ave		0.5362				7.0		30.0			
2,3-Dimethylpentane	+++++ 0.1594	+++++ 0.1627	0.1839 0.1605	0.1751 0.1535	0.1840 0.1543	Ave		0.1667				7.5		30.0			
Thiophene	+++++ 0.3782	+++++ 0.4012	0.4215 0.4038	0.4017 0.3833	0.4462 0.3888	Ave		0.4031				5.5		30.0			
2,2,4-Trimethylpentane	+++++ 1.1058	+++++ 1.1220	1.2776 1.1099	1.1667 1.0517	1.2608 1.0127	Ave		1.1384				8.2		30.0			
Heptane	+++++ 0.2385	0.2555 0.2445	0.2659 0.2457	0.2523 0.2345	0.2773 0.2337	Ave		0.2498				5.9		30.0			
1,2-Dichloropropane	+++++ 0.2524	0.2684 0.2619	0.2900 0.2714	0.2611 0.2555	0.2873 0.2552	Ave		0.2670				5.1		30.0			
Trichloroethene	0.2965 0.3009	0.3106 0.3121	0.3255 0.3179	0.3165 0.3027	0.3477 0.2985	Ave		0.3129				4.9		30.0	✓		
Dibromomethane	+++++ 0.2764	+++++ 0.2876	0.3340 0.2946	0.3052 0.2795	0.3252 0.2826	Ave		0.2981				7.2		30.0			
Bromodichloromethane	0.5065 0.4927	0.5615 0.5146	0.5252 0.5303	0.5048 0.5057	0.5661 0.5130	Ave		0.5220				4.7		30.0			
1,4-Dioxane	+++++ 0.0706	+++++ 0.0671	0.0700 0.0796	0.0698 0.0663	0.0813 0.0522	Ave		0.0696				12.8		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL01.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 15-Feb-2018 15:35:30 ALS Bottle#: 8 Worklist Smp#: 3
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007391-003
Misc. Info.: 140829
Operator ID: 403648 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 19-Feb-2018 10:02:34 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: tajh Date: 15-Feb-2018 16:23:01

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
*	1 Chlorobromomethane (IS)	128	9.683	9.689	-0.006	92	277908	4.00	4.00	
*	2 1,4-Difluorobenzene	114	11.786	11.790	-0.004	95	1568041	4.00	4.00	
*	3 Chlorobenzene-d5 (IS)	117	16.386	16.389	-0.003	88	1439930	4.00	4.00	
$	4 4-Bromofluorobenzene (Surr	95	17.989	17.992	-0.003	94	1058714	4.00	4.07	
	7 Propene	41	4.223	4.216	0.007	84	2145	0.0200	0.0265	
	8 Dichlorodifluoromethane	85	4.277	4.274	0.003	95	4610	0.0200	0.0185	
	9 Chloromethane	52	4.492	4.482	0.010	86	1267	0.0200	0.0434	
	10 1,2-Dichloro-1,1,2,2-tetra	135	4.497	4.489	0.008	89	2961	0.0200	0.0181	
	11 Acetaldehyde	44	4.669	4.662	0.007	96	7382	0.1000	0.2280	
	12 Vinyl chloride	62	4.680	4.679	0.001	90	1262	0.0200	0.0139	
	13 Butadiene	54	4.772	4.777	-0.005	74	1578	0.0200	0.0215	
	14 Butane	43	4.782	4.777	0.005	84	2812	0.0200	0.0202	
	15 Bromomethane	94	5.148	5.146	0.002	79	1533	0.0200	0.0169	
	17 Ethanol	31	5.460	5.435	0.025	90	3931	0.1000	0.1168	
	18 Vinyl bromide	106	5.638	5.641	-0.003	93	1273	0.0200	0.0148	
	19 2-Methylbutane	43	5.702	5.693	0.009	88	2249	0.0200	0.0219	
	20 Trichlorofluoromethane	101	5.934	5.933	0.001	93	4076	0.0200	0.0169	
	22 Acetone	58	6.106	6.081	0.025	92	3088	0.0600	0.0976	
	25 Isopropyl alcohol	45	6.246	6.201	0.045	97	5659	0.0600	0.0624	
	27 1,1-Dichloroethene	96	6.692	6.692	0.000	87	1656	0.0200	0.0180	
	29 1,1,2-Trichloro-1,2,2-trif	101	6.880	6.875	0.005	92	3449	0.0200	0.0181	
	32 Methylene Chloride	84	7.058	7.061	-0.003	96	13198	0.0200	0.1326	
	31 3-Chloro-1-propene	39	7.079	7.077	0.002	30	2455	0.0200	0.000854	
	33 Carbon disulfide	76	7.241	7.239	0.002	94	5129	0.0200	0.0192	
	34 trans-1,2-Dichloroethene	96	7.897	7.903	-0.006	74	1569	0.0200	0.0170	
	35 2-Methylpentane	43	7.924	7.917	0.007	91	5859	0.0200	0.0276	
	37 1,1-Dichloroethane	63	8.344	8.343	0.001	93	3370	0.0200	0.0195	
	42 cis-1,2-Dichloroethene	96	9.339	9.347	-0.008	88	1790	0.0200	0.0191	
	47 1,1,1-Trichloroethane	97	10.727	10.721	0.006	90	4176	0.0200	0.0202	
	50 Benzene	78	11.286	11.291	-0.005	95	6241	0.0200	0.0224	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
52 Carbon tetrachloride	117	11.313	11.310	0.003	69	3550	0.0200	0.0169	
55 2,3-Dimethylpentane	71	11.383	11.384	-0.001	86	1368	0.0200	0.0209	
56 Isooctane	57	11.991	11.995	-0.004	96	10818	0.0200	0.0242	
57 n-Heptane	71	12.335	12.342	-0.007	89	2340	0.0200	0.0239	
58 1,2-Dichloropropane	63	12.453	12.451	0.002	60	1669	0.0200	0.0159	
59 Trichloroethene	130	12.475	12.480	-0.005	92	2325	0.0200	0.0190	
60 Dibromomethane	93	12.566	12.569	-0.003	93	3446	0.0200	0.0295	
61 Dichlorobromomethane	83	12.701	12.704	-0.003	90	3971	0.0200	0.0194	
64 Methylcyclohexane	83	13.223	13.222	0.001	92	4080	0.0200	0.0234	
65 4-Methyl-2-pentanone (MIBK	43	13.653	13.618	0.035	71	3273	0.0200	0.0228	
66 cis-1,3-Dichloropropene	75	13.658	13.659	-0.001	87	2659	0.0200	0.0165	
67 trans-1,3-Dichloropropene	75	14.325	14.329	-0.004	87	1950	0.0200	0.0140	
68 Toluene	91	14.449	14.458	-0.009	91	5238	0.0200	0.0172	
69 1,1,2-Trichloroethane	83	14.530	14.532	-0.002	85	1695	0.0200	0.0183	
73 n-Octane	85	15.095	15.100	-0.005	92	2239	0.0200	0.0212	
74 Chlorodibromomethane	129	15.224	15.227	-0.003	91	3530	0.0200	0.0172	
75 Ethylene Dibromide	107	15.514	15.514	0.000	95	2826	0.0200	0.0164	
76 Tetrachloroethene	129	15.579	15.575	0.004	93	2331	0.0200	0.0193	
79 Ethylbenzene	91	16.709	16.711	-0.002	94	5029	0.0200	0.0134	
81 m-Xylene & p-Xylene	91	16.865	16.869	-0.004	0	7004	0.0400	0.0248	
82 n-Nonane	57	17.252	17.252	0.000	92	3975	0.0200	0.0193	
83 Styrene	104	17.322	17.331	-0.009	92	2608	0.0200	0.0119	
84 Bromoform	173	17.327	17.333	-0.006	88	2789	0.0200	0.0127	
85 o-Xylene	91	17.386	17.391	-0.005	92	4017	0.0200	0.0134	
86 1,1,2,2-Tetrachloroethane	83	17.709	17.708	0.001	88	3090	0.0200	0.0143	
88 Isopropylbenzene	105	17.957	17.956	0.001	91	4974	0.0200	0.0122	
89 N-Propylbenzene	120	18.462	18.462	0.000	97	928	0.0200	0.008287	
90 2-Chlorotoluene	126	18.516	18.516	0.000	89	1194	0.0200	0.0110	
91 4-Ethyltoluene	105	18.602	18.602	0.000	94	4683	0.0200	0.0119	
92 1,3,5-Trimethylbenzene	120	18.672	18.672	0.000	89	1711	0.0200	0.0104	
93 Alpha Methyl Styrene	118	18.887	18.891	-0.004	80	1396	0.0200	0.008148	
94 n-Decane	57	18.920	18.923	-0.003	90	4548	0.0200	0.0187	
95 tert-Butylbenzene	119	19.081	19.079	0.002	74	4130	0.0200	0.0118	
96 1,2,4-Trimethylbenzene	105	19.092	19.091	0.001	89	3740	0.0200	0.0113	
97 sec-Butylbenzene	105	19.334	19.337	-0.003	96	5793	0.0200	0.0120	
98 1,3-Dichlorobenzene	146	19.361	19.363	-0.002	96	3672	0.0200	0.0149	
99 Benzyl chloride	91	19.431	19.431	0.000	94	3421	0.0200	0.0129	
100 1,4-Dichlorobenzene	146	19.441	19.445	-0.004	90	3423	0.0200	0.0139	
101 4-Isopropyltoluene	119	19.490	19.489	0.001	95	4393	0.0200	0.0112	
102 1,2,3-Trimethylbenzene	105	19.549	19.549	0.000	93	3903	0.0200	0.0121	
103 Butylcyclohexane	83	19.592	19.591	0.001	93	5501	0.0200	0.0185	
104 2,3-Dihydroindene	117	19.791	19.792	-0.001	88	3782	0.0200	0.0123	
105 1,2-Dichlorobenzene	146	19.796	19.795	0.001	90	3132	0.0200	0.0134	
106 n-Butylbenzene	91	19.904	19.907	-0.003	94	4751	0.0200	0.0124	
107 Indene	116	19.915	19.918	-0.003	67	2949	0.0200	0.0114	
108 Undecane	57	20.189	20.186	0.003	93	3741	0.0200	0.0148	
110 1,2-Dibromo-3-Chloropropan	157	20.377	20.381	-0.004	86	1272	0.0200	0.0112	
111 1,2,4,5-Tetramethylbenzene	119	20.657	20.658	-0.001	93	4311	0.0200	0.0129	
115 1,2,4-Trichlorobenzene	180	21.507	21.509	-0.002	90	2738	0.0200	0.0155	
116 Naphthalene	128	21.642	21.642	0.000	97	4921	0.0200	0.0176	
118 Hexachlorobutadiene	225	21.798	21.798	0.000	91	2537	0.0200	0.0139	
119 1,2,3-Trichlorobenzene	180	21.857	21.858	-0.001	91	2006	0.0200	0.0178	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
120 2-Methylnaphthalene	142	22.384	22.385	-0.001	93	1417	0.0625	0.0639	
121 1-Methylnaphthalene	142	22.513	22.509	0.004	94	1821	0.0625	0.0829	
A 123 C8 Range	1	15.110	(15.083-15.137)		0	25246	0.0200	0.0286	
S 124 Xylenes, Total	100				0		0.0600	0.0383	
S 125 1,2-Dichloroethene, Total	1				0		0.0400	0.0361	

Reagents:

40L1-3DQP_00001	Amount Added: 50.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL02.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 15-Feb-2018 16:21:30 ALS Bottle#: 8 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007391-004
Misc. Info.: 140829
Operator ID: 403648 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 19-Feb-2018 10:02:52 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa Date: 15-Feb-2018 17:45:40

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
*	1 Chlorobromomethane (IS)	128	9.684	9.689	-0.005	92	276230	4.00	4.00	
*	2 1,4-Difluorobenzene	114	11.782	11.790	-0.008	95	1526968	4.00	4.00	
*	3 Chlorobenzene-d5 (IS)	117	16.387	16.389	-0.002	88	1417679	4.00	4.00	
$	4 4-Bromofluorobenzene (Surr	95	17.990	17.992	-0.002	95	1042081	4.00	4.07	
	7 Propene	41	4.219	4.216	0.003	97	4882	0.0400	0.0607	
	8 Dichlorodifluoromethane	85	4.278	4.274	0.004	98	9371	0.0400	0.0378	
	9 Chloromethane	52	4.477	4.482	-0.005	63	1819	0.0400	0.0627	
	10 1,2-Dichloro-1,1,2,2-tetra	135	4.488	4.489	-0.001	91	5973	0.0400	0.0368	
	11 Acetaldehyde	44	4.670	4.662	0.008	97	11943	0.2000	0.3712	
	12 Vinyl chloride	62	4.676	4.679	-0.003	93	2929	0.0400	0.0325	
	13 Butadiene	54	4.783	4.777	0.006	70	3002	0.0400	0.0411	
	14 Butane	43	4.778	4.777	0.001	87	4911	0.0400	0.0355	
	15 Bromomethane	94	5.144	5.146	-0.002	96	3337	0.0400	0.0371	
	16 Chloroethane	64	5.300	5.304	-0.004	84	1866	0.0400	0.0398	
	17 Ethanol	31	5.429	5.435	-0.006	96	8318	0.2000	0.2486	
	18 Vinyl bromide	106	5.639	5.641	-0.002	88	3063	0.0400	0.0359	
	19 2-Methylbutane	43	5.693	5.693	0.000	89	4581	0.0400	0.0449	
	20 Trichlorofluoromethane	101	5.935	5.933	0.002	98	8622	0.0400	0.0360	
	22 Acetone	58	6.101	6.081	0.020	96	6634	0.1200	0.2110	
	24 Pentane	72	6.177	6.171	0.006	58	496	0.0400	0.0339	
	25 Isopropyl alcohol	45	6.209	6.201	0.008	91	12013	0.1200	0.1332	
	26 Ethyl ether	31	6.376	6.362	0.014	91	3289	0.0400	0.0423	
	27 1,1-Dichloroethene	96	6.693	6.692	0.001	95	3815	0.0400	0.0417	
	28 Acrylonitrile	53	6.811	6.809	0.002	68	2262	0.0400	0.0414	
	30 2-Methyl-2-propanol	59	6.908	6.865	0.043	57	4857	0.0400	0.009395	
	29 1,1,2-Trichloro-1,2,2-trif	101	6.876	6.875	0.001	95	7065	0.0400	0.0373	
	32 Methylene Chloride	84	7.059	7.061	-0.002	95	14418	0.0400	0.1457	
	31 3-Chloro-1-propene	39	7.070	7.077	-0.007	40	6552	0.0400	0.0534	
	33 Carbon disulfide	76	7.236	7.239	-0.003	96	10051	0.0400	0.0379	
	34 trans-1,2-Dichloroethene	96	7.903	7.903	0.000	94	3597	0.0400	0.0393	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
35 2-Methylpentane	43	7.914	7.917	-0.003	89	10342	0.0400	0.0491	
36 Methyl tert-butyl ether	73	8.086	8.053	0.033	94	7318	0.0400	0.0360	
37 1,1-Dichloroethane	63	8.334	8.343	-0.009	96	6975	0.0400	0.0406	
38 Vinyl acetate	43	8.436	8.442	-0.006	99	6568	0.0400	0.0335	
40 2-Butanone (MEK)	72	8.936	8.919	0.017	87	1491	0.0400	0.0422	
39 Hexane	56	8.926	8.922	0.004	82	4165	0.0400	0.0560	
41 Isopropyl ether	45	9.114	9.091	0.023	95	9423	0.0400	0.0387	
42 cis-1,2-Dichloroethene	96	9.345	9.347	-0.002	92	3728	0.0400	0.0399	
43 Ethyl acetate	43	9.539	9.529	0.010	95	7488	0.0400	0.0480	
44 Chloroform	83	9.689	9.697	-0.008	28	9078	0.0400	0.0459	
45 Tert-butyl ethyl ether	59	9.808	9.782	0.026	94	8001	0.0400	0.0353	
46 Tetrahydrofuran	42	10.157	10.126	0.031	84	4447	0.0400	0.0531	
47 1,1,1-Trichloroethane	97	10.712	10.721	-0.009	95	8645	0.0400	0.0420	
48 1,2-Dichloroethane	62	10.814	10.825	-0.011	91	4723	0.0400	0.0381	
49 Cyclohexane	69	11.287	11.287	0.000	68	2389	0.0400	0.0534	
50 Benzene	78	11.287	11.291	-0.004	97	12063	0.0400	0.0445	
52 Carbon tetrachloride	117	11.303	11.310	-0.007	95	7915	0.0400	0.0387	
55 2,3-Dimethylpentane	71	11.373	11.384	-0.011	92	2868	0.0400	0.0451	
51 Thiophene	84	11.551	11.554	-0.003	93	6808	0.0400	0.0442	
56 Isooctane	57	11.992	11.995	-0.003	98	20341	0.0400	0.0468	
57 n-Heptane	71	12.347	12.342	0.005	92	3902	0.0400	0.0409	
58 1,2-Dichloropropane	63	12.444	12.451	-0.007	86	4098	0.0400	0.0402	
59 Trichloroethene	130	12.476	12.480	-0.004	93	4743	0.0400	0.0397	
60 Dibromomethane	93	12.562	12.569	-0.007	94	5534	0.0400	0.0486	
61 Dichlorobromomethane	83	12.697	12.704	-0.007	97	8574	0.0400	0.0430	
63 Methyl methacrylate	41	12.777	12.776	0.001	89	3659	0.0400	0.0394	
64 Methylcyclohexane	83	13.213	13.222	-0.009	92	7322	0.0400	0.0430	
65 4-Methyl-2-pentanone (MIBK	43	13.633	13.618	0.015	94	7724	0.0400	0.0552	
66 cis-1,3-Dichloropropene	75	13.654	13.659	-0.005	91	6201	0.0400	0.0395	
67 trans-1,3-Dichloropropene	75	14.321	14.329	-0.008	95	4713	0.0400	0.0343	
68 Toluene	91	14.456	14.458	-0.002	92	11936	0.0400	0.0399	
69 1,1,2-Trichloroethane	83	14.526	14.532	-0.006	93	3749	0.0400	0.0410	
72 2-Hexanone	58	14.913	14.908	0.005	89	2650	0.0400	0.0376	
73 n-Octane	85	15.096	15.100	-0.004	92	4541	0.0400	0.0437	
74 Chlorodibromomethane	129	15.220	15.227	-0.007	96	7559	0.0400	0.0375	
75 Ethylene Dibromide	107	15.515	15.514	0.001	98	6189	0.0400	0.0365	
76 Tetrachloroethene	129	15.569	15.575	-0.006	96	4909	0.0400	0.0414	
77 2,3-Dimethylheptane	43	16.419	16.423	-0.004	89	16951	0.0400	0.0556	
78 Chlorobenzene	112	16.430	16.437	-0.007	40	8864	0.0400	0.0368	
79 Ethylbenzene	91	16.704	16.711	-0.007	97	14220	0.0400	0.0384	
81 m-Xylene & p-Xylene	91	16.866	16.869	-0.003	0	21664	0.0800	0.0780	
82 n-Nonane	57	17.248	17.252	-0.004	92	8738	0.0400	0.0432	
83 Styrene	104	17.328	17.331	-0.003	96	7700	0.0400	0.0358	
84 Bromoform	173	17.328	17.333	-0.005	90	7178	0.0400	0.0332	
85 o-Xylene	91	17.387	17.391	-0.004	98	11329	0.0400	0.0385	
86 1,1,2,2-Tetrachloroethane	83	17.705	17.708	-0.003	96	8441	0.0400	0.0397	
87 1,2,3-Trichloropropane	110	17.861	17.864	-0.003	94	1986	0.0400	0.0356	
88 Isopropylbenzene	105	17.952	17.956	-0.004	88	16616	0.0400	0.0414	
89 N-Propylbenzene	120	18.458	18.462	-0.004	98	3912	0.0400	0.0355	
90 2-Chlorotoluene	126	18.512	18.516	-0.004	96	4258	0.0400	0.0398	
91 4-Ethyltoluene	105	18.598	18.602	-0.004	97	15269	0.0400	0.0395	
92 1,3,5-Trimethylbenzene	120	18.668	18.672	-0.004	92	5903	0.0400	0.0365	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 Alpha Methyl Styrene	118	18.888	18.891	-0.003	86	5794	0.0400	0.0344	
94 n-Decane	57	18.921	18.923	-0.002	90	11309	0.0400	0.0472	
95 tert-Butylbenzene	119	19.077	19.079	-0.002	93	13756	0.0400	0.0400	
96 1,2,4-Trimethylbenzene	105	19.087	19.091	-0.004	94	12863	0.0400	0.0396	
97 sec-Butylbenzene	105	19.335	19.337	-0.002	98	18860	0.0400	0.0398	
98 1,3-Dichlorobenzene	146	19.362	19.363	-0.001	95	9811	0.0400	0.0403	
99 Benzyl chloride	91	19.426	19.431	-0.005	98	9996	0.0400	0.0381	
100 1,4-Dichlorobenzene	146	19.442	19.445	-0.003	93	9729	0.0400	0.0402	
101 4-Isopropyltoluene	119	19.485	19.489	-0.004	97	14557	0.0400	0.0376	
102 1,2,3-Trimethylbenzene	105	19.545	19.549	-0.004	97	12243	0.0400	0.0385	
103 Butylcyclohexane	83	19.588	19.591	-0.003	95	13053	0.0400	0.0445	
104 2,3-Dihydroindene	117	19.787	19.792	-0.005	93	11869	0.0400	0.0392	
105 1,2-Dichlorobenzene	146	19.792	19.795	-0.003	91	9463	0.0400	0.0411	
106 n-Butylbenzene	91	19.905	19.907	-0.002	97	15282	0.0400	0.0405	
107 Indene	116	19.916	19.918	-0.002	90	9960	0.0400	0.0391	
108 Undecane	57	20.185	20.186	-0.001	95	10683	0.0400	0.0430	
110 1,2-Dibromo-3-Chloropropan	157	20.378	20.381	-0.003	93	4136	0.0400	0.0368	
111 1,2,4,5-Tetramethylbenzene	119	20.658	20.658	0.000	97	11984	0.0400	0.0365	
114 Dodecane	57	21.266	21.268	-0.002	93	8969	0.0400	0.003612	
115 1,2,4-Trichlorobenzene	180	21.508	21.509	-0.001	91	7063	0.0400	0.0406	
116 Naphthalene	128	21.643	21.642	0.001	98	12014	0.0400	0.0436	
118 Hexachlorobutadiene	225	21.799	21.798	0.001	95	7393	0.0400	0.0412	
119 1,2,3-Trichlorobenzene	180	21.858	21.858	0.000	93	5346	0.0400	0.0482	
120 2-Methylnaphthalene	142	22.385	22.385	0.000	96	3662	0.1250	0.1679	
121 1-Methylnaphthalene	142	22.509	22.509	0.000	97	4177	0.1250	0.1932	
A 123 C8 Range	1	15.099	(15.079-15.138)		0	44750	0.0400	0.0515	
S 124 Xylenes, Total	100				0		0.1200	0.1165	
S 125 1,2-Dichloroethene, Total	1				0		0.0800	0.0793	

Reagents:

40L1-3DQP_00001	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL03.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 15-Feb-2018 17:07:30 ALS Bottle#: 8 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007391-005
Misc. Info.: 140829
Operator ID: 403648 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 19-Feb-2018 10:03:06 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa Date: 15-Feb-2018 17:45:23

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.684	9.689	-0.005	92	283788	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.787	11.790	-0.003	95	1596917	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.387	16.389	-0.002	88	1445918	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.990	17.992	-0.002	94	1068525	4.00	4.09	
6 Chlorodifluoromethane	67	4.202	4.203	-0.001	94	3577	0.0800	0.1180	
7 Propene	41	4.213	4.216	-0.003	72	7440	0.0800	0.0901	
8 Dichlorodifluoromethane	85	4.277	4.274	0.003	99	21153	0.0800	0.0831	
9 Chloromethane	52	4.482	4.482	0.000	60	3270	0.0800	0.1098	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.487	4.489	-0.002	91	13879	0.0800	0.0832	
11 Acetaldehyde	44	4.665	4.662	0.003	97	23331	0.4000	0.7058	
12 Vinyl chloride	62	4.681	4.679	0.002	97	8173	0.0800	0.0881	
13 Butadiene	54	4.783	4.777	0.006	64	6527	0.0800	0.0871	
14 Butane	43	4.778	4.777	0.001	87	12961	0.0800	0.0911	
15 Bromomethane	94	5.149	5.146	0.003	97	8215	0.0800	0.0889	
16 Chloroethane	64	5.305	5.304	0.001	95	3968	0.0800	0.0824	
17 Ethanol	31	5.434	5.435	-0.001	97	16323	0.4000	0.4748	
18 Vinyl bromide	106	5.644	5.641	0.003	92	7192	0.0800	0.0819	
19 2-Methylbutane	43	5.692	5.693	-0.001	91	9927	0.0800	0.0947	
20 Trichlorofluoromethane	101	5.929	5.933	-0.004	99	20764	0.0800	0.0843	
21 Acrolein	56	5.956	5.950	0.006	26	3610	0.0800	0.1468	
22 Acetone	58	6.096	6.081	0.015	97	12587	0.2400	0.3896	
24 Pentane	72	6.171	6.171	0.000	97	1626	0.0800	0.1083	
25 Isopropyl alcohol	45	6.209	6.201	0.008	92	24895	0.2400	0.2688	
26 Ethyl ether	31	6.381	6.362	0.019	95	7476	0.0800	0.0935	
27 1,1-Dichloroethene	96	6.693	6.692	0.001	96	8381	0.0800	0.0892	
28 Acrylonitrile	53	6.806	6.809	-0.003	96	5617	0.0800	0.1000	
30 2-Methyl-2-propanol	59	6.897	6.865	0.032	75	9512	0.0800	0.0527	
29 1,1,2-Trichloro-1,2,2-trif	101	6.876	6.875	0.001	96	16313	0.0800	0.0838	
32 Methylene Chloride	84	7.059	7.061	-0.002	96	18593	0.0800	0.1829	
31 3-Chloro-1-propene	39	7.080	7.077	0.003	97	9005	0.0800	0.0817	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	7.242	7.239	0.003	98	24693	0.0800	0.0906	
34 trans-1,2-Dichloroethene	96	7.898	7.903	-0.005	74	7875	0.0800	0.0838	
35 2-Methylpentane	43	7.919	7.917	0.002	93	20535	0.0800	0.0949	
36 Methyl tert-butyl ether	73	8.070	8.053	0.017	95	17128	0.0800	0.0821	
37 1,1-Dichloroethane	63	8.344	8.343	0.001	98	14950	0.0800	0.0847	
38 Vinyl acetate	43	8.441	8.442	-0.001	100	16018	0.0800	0.0796	
40 2-Butanone (MEK)	72	8.941	8.919	0.022	81	3466	0.0800	0.0955	
39 Hexane	56	8.925	8.922	0.003	80	8192	0.0800	0.1073	
41 Isopropyl ether	45	9.108	9.091	0.017	97	20843	0.0800	0.0834	
42 cis-1,2-Dichloroethene	96	9.340	9.347	-0.007	95	8074	0.0800	0.0842	
43 Ethyl acetate	43	9.539	9.529	0.010	97	15186	0.0800	0.0947	
44 Chloroform	83	9.689	9.697	-0.008	29	17816	0.0800	0.0877	
45 Tert-butyl ethyl ether	59	9.808	9.782	0.026	94	18484	0.0800	0.0794	
46 Tetrahydrofuran	42	10.146	10.126	0.020	95	8227	0.0800	0.0956	
47 1,1,1-Trichloroethane	97	10.722	10.721	0.001	96	18145	0.0800	0.0858	
48 1,2-Dichloroethane	62	10.819	10.825	-0.006	95	10626	0.0800	0.0820	
49 Cyclohexane	69	11.287	11.287	0.000	69	4472	0.0800	0.0956	
50 Benzene	78	11.292	11.291	0.001	97	24429	0.0800	0.0862	
52 Carbon tetrachloride	117	11.314	11.310	0.004	97	18207	0.0800	0.0851	
55 2,3-Dimethylpentane	71	11.389	11.384	0.005	91	5875	0.0800	0.0883	
51 Thiophene	84	11.551	11.554	-0.004	95	13462	0.0800	0.0837	
56 Isooctane	57	11.997	11.995	0.002	98	40803	0.0800	0.0898	
57 n-Heptane	71	12.347	12.342	0.005	90	8492	0.0800	0.0852	
58 1,2-Dichloropropane	63	12.454	12.451	0.003	88	9261	0.0800	0.0869	
59 Trichloroethene	130	12.476	12.480	-0.004	95	10397	0.0800	0.0832	
60 Dibromomethane	93	12.567	12.569	-0.002	94	10667	0.0800	0.0896	
61 Dichlorobromomethane	83	12.702	12.704	-0.002	98	16774	0.0800	0.0805	
62 1,4-Dioxane	88	12.761	12.735	0.026	80	2237	0.0800	0.0805	
63 Methyl methacrylate	41	12.782	12.776	0.006	94	8382	0.0800	0.0864	
64 Methylcyclohexane	83	13.224	13.222	0.002	96	15575	0.0800	0.0875	
65 4-Methyl-2-pentanone (MIBK	43	13.632	13.618	0.014	94	14225	0.0800	0.0972	
66 cis-1,3-Dichloropropene	75	13.659	13.659	0.000	96	13343	0.0800	0.0812	
67 trans-1,3-Dichloropropene	75	14.326	14.329	-0.003	97	10875	0.0800	0.0777	
68 Toluene	91	14.461	14.458	0.003	95	25542	0.0800	0.0837	
69 1,1,2-Trichloroethane	83	14.531	14.532	-0.001	96	7985	0.0800	0.0857	
72 2-Hexanone	58	14.918	14.908	0.010	94	5895	0.0800	0.0820	
73 n-Octane	85	15.101	15.100	0.001	94	8774	0.0800	0.0828	
74 Chlorodibromomethane	129	15.225	15.227	-0.002	97	16372	0.0800	0.0796	
75 Ethylene Dibromide	107	15.515	15.514	0.001	94	14297	0.0800	0.0827	
76 Tetrachloroethene	129	15.574	15.575	-0.001	96	10866	0.0800	0.0898	
77 2,3-Dimethylheptane	43	16.424	16.423	0.001	93	29861	0.0800	0.0960	
78 Chlorobenzene	112	16.435	16.437	-0.002	94	20875	0.0800	0.0849	
79 Ethylbenzene	91	16.709	16.711	-0.002	98	32565	0.0800	0.0861	
81 m-Xylene & p-Xylene	91	16.865	16.869	-0.004	0	48711	0.1600	0.1720	
82 n-Nonane	57	17.253	17.252	0.001	93	18443	0.0800	0.0894	
83 Styrene	104	17.328	17.331	-0.003	98	17705	0.0800	0.0807	
84 Bromoform	173	17.333	17.333	0.000	90	17167	0.0800	0.0778	
85 o-Xylene	91	17.393	17.391	0.002	99	24847	0.0800	0.0827	
86 1,1,2,2-Tetrachloroethane	83	17.705	17.708	-0.003	98	18692	0.0800	0.0861	
87 1,2,3-Trichloropropane	110	17.861	17.864	-0.003	98	4845	0.0800	0.0852	
88 Isopropylbenzene	105	17.952	17.956	-0.004	89	36334	0.0800	0.0889	
89 N-Propylbenzene	120	18.458	18.462	-0.004	99	9302	0.0800	0.0827	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
90 2-Chlorotoluene	126	18.517	18.516	0.001	97	9208	0.0800	0.0844	
91 4-Ethyltoluene	105	18.603	18.602	0.001	98	33930	0.0800	0.0860	
92 1,3,5-Trimethylbenzene	120	18.673	18.672	0.001	93	14114	0.0800	0.0855	
93 Alpha Methyl Styrene	118	18.888	18.891	-0.003	90	14312	0.0800	0.0832	
94 n-Decane	57	18.920	18.923	-0.003	91	23094	0.0800	0.0946	
95 tert-Butylbenzene	119	19.076	19.079	-0.003	92	30373	0.0800	0.0866	
96 1,2,4-Trimethylbenzene	105	19.087	19.091	-0.004	96	28923	0.0800	0.0874	
97 sec-Butylbenzene	105	19.335	19.337	-0.002	98	41696	0.0800	0.0863	
98 1,3-Dichlorobenzene	146	19.361	19.363	-0.002	97	22046	0.0800	0.0889	
99 Benzyl chloride	91	19.431	19.431	0.000	98	22135	0.0800	0.0828	
100 1,4-Dichlorobenzene	146	19.442	19.445	-0.003	95	22135	0.0800	0.0897	
101 4-Isopropyltoluene	119	19.485	19.489	-0.004	97	35283	0.0800	0.0895	
102 1,2,3-Trimethylbenzene	105	19.544	19.549	-0.005	97	27902	0.0800	0.0861	
103 Butylcyclohexane	83	19.587	19.591	-0.004	94	26670	0.0800	0.0891	
104 2,3-Dihydroindene	117	19.792	19.792	0.000	94	26808	0.0800	0.0867	
105 1,2-Dichlorobenzene	146	19.792	19.795	-0.003	94	21084	0.0800	0.0899	
106 n-Butylbenzene	91	19.905	19.907	-0.002	98	34682	0.0800	0.0901	
107 Indene	116	19.916	19.918	-0.002	89	21811	0.0800	0.0839	
108 Undecane	57	20.185	20.186	-0.001	96	23414	0.0800	0.0924	
110 1,2-Dibromo-3-Chloropropan	157	20.378	20.381	-0.003	97	9615	0.0800	0.0840	
111 1,2,4,5-Tetramethylbenzene	119	20.658	20.658	0.000	97	29177	0.0800	0.0871	
114 Dodecane	57	21.266	21.268	-0.002	96	20521	0.0800	0.0691	
115 1,2,4-Trichlorobenzene	180	21.508	21.509	-0.001	92	16452	0.0800	0.0926	
116 Naphthalene	128	21.642	21.642	0.000	99	28149	0.0800	0.1002	
118 Hexachlorobutadiene	225	21.798	21.798	0.000	95	17105	0.0800	0.0934	
119 1,2,3-Trichlorobenzene	180	21.858	21.858	0.000	95	11991	0.0800	0.1061	
120 2-Methylnaphthalene	142	22.385	22.385	0.000	97	6317	0.2500	0.2839	
121 1-Methylnaphthalene	142	22.508	22.509	-0.001	98	7343	0.2500	0.3329	
A 123 C8 Range	1	15.108	(15.073-15.143)		0	80373	0.0800	0.0906	
S 124 Xylenes, Total	100				0		0.2400	0.2548	
S 125 1,2-Dichloroethene, Total	1				0		0.1600	0.1680	

Reagents:

40L1-3DQP_00001	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL04.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 15-Feb-2018 17:52:30 ALS Bottle#: 9 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007391-006
Misc. Info.: 140828
Operator ID: 403648 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 19-Feb-2018 10:03:26 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa Date: 16-Feb-2018 09:34:58

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.689	9.689	-0.001	92	299520	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.787	11.790	-0.004	95	1701031	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.386	16.389	-0.003	88	1520404	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.989	17.992	-0.003	94	1086367	4.00	3.95	
6 Chlorodifluoromethane	67	4.218	4.203	0.015	97	5657	0.1600	0.1768	
7 Propene	41	4.228	4.216	0.012	95	14182	0.1600	0.1627	
8 Dichlorodifluoromethane	85	4.282	4.274	0.008	100	42724	0.1600	0.1590	
9 Chloromethane	52	4.497	4.482	0.015	55	5660	0.1600	0.1800	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.497	4.489	0.008	92	28478	0.1600	0.1617	
11 Acetaldehyde	44	4.675	4.662	0.013	97	40347	0.8000	1.16	
12 Vinyl chloride	62	4.691	4.679	0.012	97	16389	0.1600	0.1675	
13 Butadiene	54	4.788	4.777	0.011	67	13259	0.1600	0.1676	
14 Butane	43	4.788	4.777	0.011	85	23931	0.1600	0.1595	
15 Bromomethane	94	5.154	5.146	0.008	96	16066	0.1600	0.1648	
16 Chloroethane	64	5.310	5.304	0.006	98	8085	0.1600	0.1591	
17 Ethanol	31	5.439	5.435	0.004	96	32209	0.8000	0.8876	
18 Vinyl bromide	106	5.649	5.641	0.008	96	14562	0.1600	0.1572	
19 2-Methylbutane	43	5.702	5.693	0.009	91	17850	0.1600	0.1614	
20 Trichlorofluoromethane	101	5.939	5.933	0.006	99	42082	0.1600	0.1619	
21 Acrolein	56	5.966	5.950	0.016	89	4690	0.1600	0.1806	
23 Acetonitrile	40	6.041	6.040	0.001	97	6532	0.1600	0.1988	
22 Acetone	58	6.095	6.081	0.014	98	26867	0.4800	0.7880	
24 Pentane	72	6.176	6.171	0.005	97	3215	0.1600	0.2029	
25 Isopropyl alcohol	45	6.208	6.201	0.007	96	49915	0.4800	0.5106	
26 Ethyl ether	31	6.380	6.362	0.018	95	15056	0.1600	0.1784	
27 1,1-Dichloroethene	96	6.698	6.692	0.006	98	15755	0.1600	0.1589	
28 Acrylonitrile	53	6.816	6.809	0.007	95	9991	0.1600	0.1686	
30 2-Methyl-2-propanol	59	6.897	6.865	0.032	55	18376	0.1600	0.1283	
29 1,1,2-Trichloro-1,2,2-trif	101	6.880	6.875	0.005	97	33602	0.1600	0.1635	
32 Methylene Chloride	84	7.063	7.061	0.002	96	26564	0.1600	0.2476	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
31 3-Chloro-1-propene	39	7.085	7.077	0.008	95	13906	0.1600	0.1336	
33 Carbon disulfide	76	7.246	7.239	0.007	99	46690	0.1600	0.1624	
34 trans-1,2-Dichloroethene	96	7.908	7.903	0.005	98	15649	0.1600	0.1577	
35 2-Methylpentane	43	7.924	7.917	0.007	94	36385	0.1600	0.1592	
36 Methyl tert-butyl ether	73	8.064	8.053	0.011	97	37261	0.1600	0.1692	
37 1,1-Dichloroethane	63	8.344	8.343	0.001	99	29982	0.1600	0.1609	
38 Vinyl acetate	43	8.446	8.442	0.004	100	37307	0.1600	0.1756	
40 2-Butanone (MEK)	72	8.925	8.919	0.006	85	7576	0.1600	0.1979	
39 Hexane	56	8.925	8.922	0.003	73	14214	0.1600	0.1764	
41 Isopropyl ether	45	9.108	9.091	0.017	97	45526	0.1600	0.1726	
42 cis-1,2-Dichloroethene	96	9.344	9.347	-0.003	95	16376	0.1600	0.1618	
43 Ethyl acetate	43	9.538	9.529	0.009	99	31175	0.1600	0.1841	
44 Chloroform	83	9.694	9.697	-0.003	31	35241	0.1600	0.1643	
45 Tert-butyl ethyl ether	59	9.796	9.782	0.014	94	43119	0.1600	0.1756	
46 Tetrahydrofuran	42	10.146	10.126	0.020	91	17204	0.1600	0.1895	
47 1,1,1-Trichloroethane	97	10.727	10.721	0.006	97	35378	0.1600	0.1584	
48 1,2-Dichloroethane	62	10.824	10.825	-0.001	96	21442	0.1600	0.1554	
49 Cyclohexane	69	11.286	11.287	-0.001	70	7932	0.1600	0.1592	
50 Benzene	78	11.292	11.291	0.001	97	48414	0.1600	0.1604	
53 n-Butanol	31	11.335	11.293	0.042	66	4922	0.1600	0.1673	
52 Carbon tetrachloride	117	11.308	11.310	-0.002	97	36066	0.1600	0.1582	
55 2,3-Dimethylpentane	71	11.388	11.384	0.004	91	11913	0.1600	0.1681	
51 Thiophene	84	11.550	11.554	-0.004	96	27334	0.1600	0.1595	
56 Isooctane	57	11.996	11.995	0.001	99	79383	0.1600	0.1640	
57 n-Heptane	71	12.341	12.342	-0.001	92	17167	0.1600	0.1616	
58 1,2-Dichloropropane	63	12.448	12.451	-0.003	90	17767	0.1600	0.1565	
59 Trichloroethene	130	12.480	12.480	0.000	96	21535	0.1600	0.1618	
60 Dibromomethane	93	12.567	12.569	-0.002	95	20766	0.1600	0.1638	
61 Dichlorobromomethane	83	12.706	12.704	0.002	99	34347	0.1600	0.1547	
62 1,4-Dioxane	88	12.760	12.735	0.025	86	4748	0.1600	0.1604	
63 Methyl methacrylate	41	12.776	12.776	0.000	94	17426	0.1600	0.1686	
64 Methylcyclohexane	83	13.223	13.222	0.001	96	30462	0.1600	0.1607	
65 4-Methyl-2-pentanone (MIBK	43	13.632	13.618	0.014	95	27138	0.1600	0.1740	
66 cis-1,3-Dichloropropene	75	13.659	13.659	0.000	96	26097	0.1600	0.1491	
67 trans-1,3-Dichloropropene	75	14.331	14.329	0.002	97	23711	0.1600	0.1610	
68 Toluene	91	14.455	14.458	-0.003	94	54782	0.1600	0.1708	
69 1,1,2-Trichloroethane	83	14.530	14.532	-0.002	97	16317	0.1600	0.1665	
72 2-Hexanone	58	14.923	14.908	0.015	94	11694	0.1600	0.1547	
73 n-Octane	85	15.100	15.100	0.000	93	18132	0.1600	0.1628	
74 Chlorodibromomethane	129	15.219	15.227	-0.008	98	33946	0.1600	0.1570	
75 Ethylene Dibromide	107	15.509	15.514	-0.005	99	29416	0.1600	0.1618	
76 Tetrachloroethene	129	15.574	15.575	-0.001	96	20519	0.1600	0.1613	
77 2,3-Dimethylheptane	43	16.424	16.423	0.001	96	57387	0.1600	0.1755	
78 Chlorobenzene	112	16.434	16.437	-0.003	97	43161	0.1600	0.1669	
79 Ethylbenzene	91	16.709	16.711	-0.002	98	70429	0.1600	0.1771	
81 m-Xylene & p-Xylene	91	16.870	16.869	0.001	0	103040	0.3200	0.3461	
82 n-Nonane	57	17.252	17.252	0.000	93	36604	0.1600	0.1687	
83 Styrene	104	17.333	17.331	0.002	98	38384	0.1600	0.1664	
84 Bromoform	173	17.333	17.333	0.000	85	34267	0.1600	0.1478	
85 o-Xylene	91	17.392	17.391	0.001	98	55661	0.1600	0.1762	
86 1,1,2,2-Tetrachloroethane	83	17.704	17.708	-0.004	99	40240	0.1600	0.1763	
87 1,2,3-Trichloropropane	110	17.860	17.864	-0.004	98	10278	0.1600	0.1718	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 Isopropylbenzene	105	17.957	17.956	0.001	96	76795	0.1600	0.1786	
89 N-Propylbenzene	120	18.462	18.462	0.000	99	20306	0.1600	0.1717	
90 2-Chlorotoluene	126	18.511	18.516	-0.005	98	19495	0.1600	0.1700	
91 4-Ethyltoluene	105	18.602	18.602	0.000	99	74014	0.1600	0.1784	
92 1,3,5-Trimethylbenzene	120	18.667	18.672	-0.005	94	31849	0.1600	0.1835	
93 Alpha Methyl Styrene	118	18.887	18.891	-0.004	87	29994	0.1600	0.1658	
94 n-Decane	57	18.920	18.923	-0.003	90	46614	0.1600	0.1815	
95 tert-Butylbenzene	119	19.076	19.079	-0.003	93	67386	0.1600	0.1827	
96 1,2,4-Trimethylbenzene	105	19.092	19.091	0.001	96	63212	0.1600	0.1816	
97 sec-Butylbenzene	105	19.334	19.337	-0.003	99	93389	0.1600	0.1838	
98 1,3-Dichlorobenzene	146	19.361	19.363	-0.002	97	43715	0.1600	0.1676	
99 Benzyl chloride	91	19.431	19.431	0.000	99	46845	0.1600	0.1667	
100 1,4-Dichlorobenzene	146	19.441	19.445	-0.004	94	43480	0.1600	0.1676	
101 4-Isopropyltoluene	119	19.485	19.489	-0.004	98	77548	0.1600	0.1870	
102 1,2,3-Trimethylbenzene	105	19.549	19.549	0.000	98	62548	0.1600	0.1836	
103 Butylcyclohexane	83	19.592	19.591	0.001	96	55433	0.1600	0.1762	
104 2,3-Dihydroindene	117	19.791	19.792	-0.001	94	59006	0.1600	0.1815	
105 1,2-Dichlorobenzene	146	19.791	19.795	-0.004	96	42959	0.1600	0.1741	
106 n-Butylbenzene	91	19.904	19.907	-0.003	98	74962	0.1600	0.1852	
107 Indene	116	19.915	19.918	-0.003	90	47682	0.1600	0.1745	
108 Undecane	57	20.184	20.186	-0.002	96	46744	0.1600	0.1754	
110 1,2-Dibromo-3-Chloropropan	157	20.378	20.381	-0.003	98	18099	0.1600	0.1503	
111 1,2,4,5-Tetramethylbenzene	119	20.657	20.658	-0.001	97	61721	0.1600	0.1751	
114 Dodecane	57	21.271	21.268	0.002	96	22403	0.1600	0.0736	
115 1,2,4-Trichlorobenzene	180	21.507	21.509	-0.002	94	24193	0.1600	0.1295	
116 Naphthalene	128	21.642	21.642	0.000	99	39105	0.1600	0.1324	
118 Hexachlorobutadiene	225	21.798	21.798	0.000	96	32154	0.1600	0.1670	
119 1,2,3-Trichlorobenzene	180	21.857	21.858	-0.001	95	12782	0.1600	0.1076	
120 2-Methylnaphthalene	142	22.384	22.385	-0.001	98	7493	0.5000	0.3203	
121 1-Methylnaphthalene	142	22.508	22.509	-0.001	98	7235	0.5000	0.3120	
A 123 C8 Range	1	15.103	(15.073-15.153)		0	166916	0.1600	0.1790	
S 124 Xylenes, Total	100				0		0.4800	0.5223	
S 125 1,2-Dichloroethene, Total	1				0		0.3200	0.3196	

Reagents:

40L4DQP_00001	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL05.D
Lims ID: IC L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 15-Feb-2018 18:37:30 ALS Bottle#: 10 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007391-007
Misc. Info.: 140827
Operator ID: 403648 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 19-Feb-2018 10:03:44 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa Date: 16-Feb-2018 09:33:32

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.684	9.689	-0.005	92	281767	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.787	11.790	-0.003	95	1558059	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.386	16.389	-0.003	88	1430478	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.990	17.992	-0.002	97	1057828	4.00	4.09	
6 Chlorodifluoromethane	67	4.207	4.203	0.004	97	12058	0.4000	0.4005	
7 Propene	41	4.218	4.216	0.002	99	33073	0.4000	0.4033	
8 Dichlorodifluoromethane	85	4.277	4.274	0.003	99	106241	0.4000	0.4203	
9 Chloromethane	52	4.487	4.482	0.005	56	12950	0.4000	0.4378	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.492	4.489	0.003	92	72222	0.4000	0.4360	
11 Acetaldehyde	44	4.659	4.662	-0.003	100	83576	2.00	2.55	
12 Vinyl chloride	62	4.681	4.679	0.002	98	41629	0.4000	0.4522	
13 Butadiene	54	4.778	4.777	0.001	68	31237	0.4000	0.4197	
14 Butane	43	4.783	4.777	0.006	86	58983	0.4000	0.4178	
15 Bromomethane	94	5.143	5.146	-0.003	98	38970	0.4000	0.4250	
16 Chloroethane	64	5.305	5.304	0.001	97	19730	0.4000	0.4128	
17 Ethanol	31	5.418	5.435	-0.017	96	80056	2.00	2.35	
18 Vinyl bromide	106	5.644	5.641	0.003	98	37034	0.4000	0.4250	
19 2-Methylbutane	43	5.692	5.693	-0.001	91	45820	0.4000	0.4403	
20 Trichlorofluoromethane	101	5.934	5.933	0.001	99	106737	0.4000	0.4366	
21 Acrolein	56	5.950	5.950	0.000	26	11307	0.4000	0.4630	
23 Acetonitrile	40	6.026	6.040	-0.014	100	15639	0.4000	0.5060	
22 Acetone	58	6.074	6.081	-0.007	98	52018	1.20	1.62	
24 Pentane	72	6.171	6.171	0.000	76	6517	0.4000	0.4371	
25 Isopropyl alcohol	45	6.171	6.201	-0.030	81	142160	1.20	1.55	
26 Ethyl ether	31	6.359	6.362	-0.003	95	36110	0.4000	0.4549	
27 1,1-Dichloroethene	96	6.687	6.692	-0.005	96	39680	0.4000	0.4255	
28 Acrylonitrile	53	6.806	6.809	-0.003	95	25032	0.4000	0.4490	
30 2-Methyl-2-propanol	59	6.827	6.865	-0.038	92	58060	0.4000	0.5212	
29 1,1,2-Trichloro-1,2,2-trif	101	6.876	6.875	0.001	97	84847	0.4000	0.4390	
32 Methylene Chloride	84	7.058	7.061	-0.003	96	48728	0.4000	0.4828	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
31 3-Chloro-1-propene	39	7.075	7.077	-0.002	97	38333	0.4000	0.4499	
33 Carbon disulfide	76	7.236	7.239	-0.003	99	112870	0.4000	0.4172	
34 trans-1,2-Dichloroethene	96	7.898	7.903	-0.005	98	40259	0.4000	0.4314	
35 2-Methylpentane	43	7.914	7.917	-0.003	95	93643	0.4000	0.4357	
36 Methyl tert-butyl ether	73	8.043	8.053	-0.010	96	96118	0.4000	0.4640	
37 1,1-Dichloroethane	63	8.339	8.343	-0.004	100	76318	0.4000	0.4354	
38 Vinyl acetate	43	8.436	8.442	-0.006	100	92910	0.4000	0.4648	
40 2-Butanone (MEK)	72	8.914	8.919	-0.005	96	16551	0.4000	0.4595	
39 Hexane	56	8.914	8.922	-0.008	78	33815	0.4000	0.4461	
41 Isopropyl ether	45	9.081	9.091	-0.010	97	115208	0.4000	0.4642	
42 cis-1,2-Dichloroethene	96	9.345	9.347	-0.002	95	41004	0.4000	0.4307	
43 Ethyl acetate	43	9.522	9.529	-0.007	99	76623	0.4000	0.4811	
44 Chloroform	83	9.689	9.697	-0.008	57	86586	0.4000	0.4290	
45 Tert-butyl ethyl ether	59	9.775	9.782	-0.007	95	108840	0.4000	0.4711	
46 Tetrahydrofuran	42	10.119	10.126	-0.007	93	40956	0.4000	0.4795	
47 1,1,1-Trichloroethane	97	10.717	10.721	-0.004	96	89788	0.4000	0.4274	
48 1,2-Dichloroethane	62	10.819	10.825	-0.006	98	56229	0.4000	0.4449	
49 Cyclohexane	69	11.287	11.287	0.000	79	20197	0.4000	0.4426	
50 Benzene	78	11.287	11.291	-0.004	97	119041	0.4000	0.4305	
53 n-Butanol	31	11.265	11.293	-0.028	88	13885	0.4000	0.5153	
52 Carbon tetrachloride	117	11.303	11.310	-0.007	99	93367	0.4000	0.4470	
55 2,3-Dimethylpentane	71	11.378	11.384	-0.006	90	28672	0.4000	0.4416	
51 Thiophene	84	11.550	11.554	-0.004	96	69518	0.4000	0.4428	
54 Tert-amyl methyl ether	73	11.728	11.726	0.002	98	106673	0.4000	0.5005	
56 Isooctane	57	11.991	11.995	-0.004	99	196445	0.4000	0.4430	
57 n-Heptane	71	12.336	12.342	-0.006	92	43205	0.4000	0.4441	
58 1,2-Dichloropropane	63	12.443	12.451	-0.008	90	44766	0.4000	0.4304	
59 Trichloroethene	130	12.476	12.480	-0.004	96	54179	0.4000	0.4445	
60 Dibromomethane	93	12.562	12.569	-0.007	95	50669	0.4000	0.4363	
61 Dichlorobromomethane	83	12.696	12.704	-0.008	98	88194	0.4000	0.4337	
62 1,4-Dioxane	88	12.728	12.735	-0.007	87	12668	0.4000	0.4671	
63 Methyl methacrylate	41	12.766	12.776	-0.010	94	44804	0.4000	0.4734	
64 Methylcyclohexane	83	13.218	13.222	-0.004	96	75845	0.4000	0.4369	
65 4-Methyl-2-pentanone (MIBK	43	13.605	13.618	-0.013	97	64288	0.4000	0.4501	
66 cis-1,3-Dichloropropene	75	13.654	13.659	-0.005	92	68409	0.4000	0.4267	
67 trans-1,3-Dichloropropene	75	14.326	14.329	-0.003	98	58578	0.4000	0.4228	
68 Toluene	91	14.455	14.458	-0.003	93	131181	0.4000	0.4346	
69 1,1,2-Trichloroethane	83	14.525	14.532	-0.007	97	40303	0.4000	0.4371	
72 2-Hexanone	58	14.902	14.908	-0.006	93	32729	0.4000	0.4602	
73 n-Octane	85	15.095	15.100	-0.005	94	45527	0.4000	0.4343	
74 Chlorodibromomethane	129	15.225	15.227	-0.003	98	88886	0.4000	0.4370	
75 Ethylene Dibromide	107	15.510	15.514	-0.004	99	69856	0.4000	0.4084	
76 Tetrachloroethene	129	15.574	15.575	-0.001	96	52795	0.4000	0.4410	
77 2,3-Dimethylheptane	43	16.419	16.423	-0.004	96	139123	0.4000	0.4523	
78 Chlorobenzene	112	16.435	16.437	-0.002	96	105585	0.4000	0.4340	
79 Ethylbenzene	91	16.709	16.711	-0.002	98	167768	0.4000	0.4485	
81 m-Xylene & p-Xylene	91	16.865	16.869	-0.004	0	251768	0.8000	0.8988	
82 n-Nonane	57	17.247	17.252	-0.005	92	90392	0.4000	0.4428	
83 Styrene	104	17.328	17.331	-0.003	98	99622	0.4000	0.4591	
84 Bromoform	173	17.328	17.333	-0.005	89	89592	0.4000	0.4107	
85 o-Xylene	91	17.387	17.391	-0.004	99	137277	0.4000	0.4619	
86 1,1,2,2-Tetrachloroethane	83	17.704	17.708	-0.004	99	98733	0.4000	0.4597	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
87 1,2,3-Trichloropropane	110	17.860	17.864	-0.004	98	26427	0.4000	0.4695	
88 Isopropylbenzene	105	17.952	17.956	-0.004	93	186877	0.4000	0.4620	
89 N-Propylbenzene	120	18.458	18.462	-0.004	99	51549	0.4000	0.4633	
90 2-Chlorotoluene	126	18.511	18.516	-0.005	97	47705	0.4000	0.4420	
91 4-Ethyltoluene	105	18.597	18.602	-0.005	99	180899	0.4000	0.4633	
92 1,3,5-Trimethylbenzene	120	18.667	18.672	-0.005	93	76220	0.4000	0.4667	
93 Alpha Methyl Styrene	118	18.888	18.891	-0.003	89	76565	0.4000	0.4499	
94 n-Decane	57	18.920	18.923	-0.003	90	113027	0.4000	0.4678	
95 tert-Butylbenzene	119	19.076	19.079	-0.003	95	165330	0.4000	0.4765	
96 1,2,4-Trimethylbenzene	105	19.087	19.091	-0.004	96	154495	0.4000	0.4717	
97 sec-Butylbenzene	105	19.334	19.337	-0.003	99	232101	0.4000	0.4856	
98 1,3-Dichlorobenzene	146	19.361	19.363	-0.002	97	109636	0.4000	0.4468	
99 Benzyl chloride	91	19.426	19.431	-0.005	98	120536	0.4000	0.4558	
100 1,4-Dichlorobenzene	146	19.442	19.445	-0.003	95	108874	0.4000	0.4460	
101 4-Isopropyltoluene	119	19.485	19.489	-0.004	97	187151	0.4000	0.4797	
102 1,2,3-Trimethylbenzene	105	19.544	19.549	-0.005	97	153010	0.4000	0.4773	
103 Butylcyclohexane	83	19.587	19.591	-0.004	96	138319	0.4000	0.4673	
104 2,3-Dihydroindene	117	19.792	19.792	0.000	94	146404	0.4000	0.4786	
105 1,2-Dichlorobenzene	146	19.792	19.795	-0.003	96	106565	0.4000	0.4591	
106 n-Butylbenzene	91	19.905	19.907	-0.002	98	184036	0.4000	0.4833	
107 Indene	116	19.915	19.918	-0.003	92	121997	0.4000	0.4746	
108 Undecane	57	20.184	20.186	-0.002	96	122622	0.4000	0.4891	
110 1,2-Dibromo-3-Chloropropan	157	20.378	20.381	-0.003	98	54065	0.4000	0.4772	
111 1,2,4,5-Tetramethylbenzene	119	20.658	20.658	0.000	97	162287	0.4000	0.4895	
114 Dodecane	57	21.266	21.268	-0.002	96	106198	0.4000	0.5749	
115 1,2,4-Trichlorobenzene	180	21.508	21.509	-0.001	94	87032	0.4000	0.4953	
116 Naphthalene	128	21.642	21.642	0.000	99	151426	0.4000	0.5450	
118 Hexachlorobutadiene	225	21.798	21.798	0.000	95	92129	0.4000	0.5085	
119 1,2,3-Trichlorobenzene	180	21.857	21.858	-0.001	95	63553	0.4000	0.5685	
120 2-Methylnaphthalene	142	22.385	22.385	0.000	100	45438	1.25	2.06	
121 1-Methylnaphthalene	142	22.508	22.509	-0.001	100	46180	1.25	2.12	
A 123 C8 Range	1	15.111	(15.062-15.159)		0	415352	0.4000	0.4734	
S 124 Xylenes, Total	100				0		1.20	1.36	
S 125 1,2-Dichloroethene, Total	1				0		0.8000	0.8621	

Reagents:

40L5DQP_00001	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL06.D
Lims ID: IC L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 15-Feb-2018 19:22:30 ALS Bottle#: 11 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007391-008
Misc. Info.: 140776
Operator ID: 403648 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 19-Feb-2018 10:04:00 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa Date: 16-Feb-2018 09:35:22

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.686	9.689	-0.003	95	283663	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.784	11.790	-0.006	95	1589614	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.383	16.389	-0.006	88	1424004	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.986	17.992	-0.006	95	1019252	4.00	3.96	
6 Chlorodifluoromethane	67	4.199	4.203	-0.004	97	27753	1.00	0.9158	
7 Propene	41	4.209	4.216	-0.007	98	82581	1.00	1.00	
8 Dichlorodifluoromethane	85	4.269	4.274	-0.005	100	254947	1.00	1.00	
9 Chloromethane	52	4.473	4.482	-0.009	98	29822	1.00	1.00	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.484	4.489	-0.005	94	169926	1.00	1.02	
11 Acetaldehyde	44	4.651	4.662	-0.011	98	159683	5.00	4.83	
12 Vinyl chloride	62	4.672	4.679	-0.007	99	98274	1.00	1.06	
13 Butadiene	54	4.769	4.777	-0.008	68	74384	1.00	0.99	
14 Butane	43	4.769	4.777	-0.008	86	138185	1.00	0.9722	
15 Bromomethane	94	5.140	5.146	-0.006	98	93013	1.00	1.01	
16 Chloroethane	64	5.296	5.304	-0.008	99	47525	1.00	0.9878	
17 Ethanol	31	5.414	5.435	-0.021	97	169364	5.00	4.93	
18 Vinyl bromide	106	5.635	5.641	-0.006	98	86990	1.00	0.99	
19 2-Methylbutane	43	5.689	5.693	-0.004	91	101583	1.00	0.9697	
20 Trichlorofluoromethane	101	5.926	5.933	-0.007	100	251225	1.00	1.02	
21 Acrolein	56	5.936	5.950	-0.014	94	20755	1.00	0.8441	
23 Acetonitrile	40	6.012	6.040	-0.028	99	26469	1.00	0.8507	
22 Acetone	58	6.065	6.081	-0.016	98	87339	3.00	2.70	
24 Pentane	72	6.168	6.171	-0.003	97	14849	1.00	0.9893	
25 Isopropyl alcohol	45	6.157	6.201	-0.044	96	266351	3.00	2.88	
26 Ethyl ether	31	6.345	6.362	-0.017	95	65736	1.00	0.8226	
27 1,1-Dichloroethene	96	6.689	6.692	-0.003	98	90621	1.00	0.9654	
28 Acrylonitrile	53	6.797	6.809	-0.012	93	49529	1.00	0.8825	
30 2-Methyl-2-propanol	59	6.808	6.865	-0.057	94	127270	1.00	1.18	
29 1,1,2-Trichloro-1,2,2-trif	101	6.867	6.875	-0.008	98	195021	1.00	1.00	
32 Methylene Chloride	84	7.055	7.061	-0.006	97	93225	1.00	0.9175	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
31 3-Chloro-1-propene	39	7.071	7.077	-0.006	96	83333	1.00	1.01	
33 Carbon disulfide	76	7.233	7.239	-0.006	99	265055	1.00	0.9733	
34 trans-1,2-Dichloroethene	96	7.894	7.903	-0.009	98	92328	1.00	0.9827	
35 2-Methylpentane	43	7.911	7.917	-0.006	94	209227	1.00	0.9669	
36 Methyl tert-butyl ether	73	8.034	8.053	-0.019	97	190134	1.00	0.9116	
37 1,1-Dichloroethane	63	8.336	8.343	-0.007	100	165806	1.00	0.9396	
38 Vinyl acetate	43	8.432	8.442	-0.010	100	177532	1.00	0.8823	
40 2-Butanone (MEK)	72	8.906	8.919	-0.013	96	32107	1.00	0.8854	
39 Hexane	56	8.917	8.922	-0.006	84	73808	1.00	0.9671	
41 Isopropyl ether	45	9.078	9.091	-0.013	97	229240	1.00	0.9176	
42 cis-1,2-Dichloroethene	96	9.341	9.347	-0.006	95	91036	1.00	0.9498	
43 Ethyl acetate	43	9.519	9.529	-0.010	99	141681	1.00	0.8836	
44 Chloroform	83	9.686	9.697	-0.011	95	190800	1.00	0.9391	
45 Tert-butyl ethyl ether	59	9.766	9.782	-0.016	95	214864	1.00	0.9238	
46 Tetrahydrofuran	42	10.116	10.126	-0.010	94	76999	1.00	0.8954	
47 1,1,1-Trichloroethane	97	10.719	10.721	-0.002	97	197454	1.00	0.9336	
48 1,2-Dichloroethane	62	10.821	10.825	-0.004	98	123151	1.00	0.9551	
49 Cyclohexane	69	11.283	11.287	-0.004	75	45080	1.00	0.9684	
50 Benzene	78	11.283	11.291	-0.008	97	263091	1.00	0.9325	
53 n-Butanol	31	11.246	11.293	-0.047	90	29744	1.00	1.08	
52 Carbon tetrachloride	117	11.305	11.310	-0.005	99	209982	1.00	0.9854	
55 2,3-Dimethylpentane	71	11.380	11.384	-0.004	92	63347	1.00	0.9563	
51 Thiophene	84	11.547	11.554	-0.007	95	150312	1.00	0.9384	
54 Tert-amyl methyl ether	73	11.719	11.726	-0.007	98	195521	1.00	0.9215	
56 Isooctane	57	11.988	11.995	-0.007	99	439459	1.00	0.9714	
57 n-Heptane	71	12.338	12.342	-0.004	92	94765	1.00	0.9547	
58 1,2-Dichloropropane	63	12.445	12.451	-0.006	91	100302	1.00	0.9452	
59 Trichloroethene	130	12.478	12.480	-0.002	96	119589	1.00	0.9617	
60 Dibromomethane	93	12.564	12.569	-0.005	95	109851	1.00	0.9271	
61 Dichlorobromomethane	83	12.698	12.704	-0.006	99	195803	1.00	0.9438	
62 1,4-Dioxane	88	12.720	12.735	-0.015	86	28069	1.00	1.01	
63 Methyl methacrylate	41	12.768	12.776	-0.008	94	85989	1.00	0.8905	
64 Methylcyclohexane	83	13.215	13.222	-0.007	96	167878	1.00	0.9480	
65 4-Methyl-2-pentanone (MIBK	43	13.597	13.618	-0.021	97	136923	1.00	0.9396	
66 cis-1,3-Dichloropropene	75	13.656	13.659	-0.003	93	155553	1.00	0.9510	
67 trans-1,3-Dichloropropene	75	14.323	14.329	-0.006	97	128407	1.00	0.9311	
68 Toluene	91	14.452	14.458	-0.006	94	283412	1.00	0.9432	
69 1,1,2-Trichloroethane	83	14.527	14.532	-0.005	98	87152	1.00	0.9494	
72 2-Hexanone	58	14.893	14.908	-0.015	93	69784	1.00	0.9857	
73 n-Octane	85	15.098	15.100	-0.002	94	101126	1.00	0.9692	
74 Chlorodibromomethane	129	15.221	15.227	-0.006	98	200692	1.00	0.99	
75 Ethylene Dibromide	107	15.506	15.514	-0.008	98	165343	1.00	0.9711	
76 Tetrachloroethene	129	15.571	15.575	-0.004	96	114687	1.00	0.9623	
77 2,3-Dimethylheptane	43	16.421	16.423	-0.002	96	306057	1.00	1.00	
78 Chlorobenzene	112	16.432	16.437	-0.005	95	239164	1.00	0.9876	
79 Ethylbenzene	91	16.706	16.711	-0.005	98	342484	1.00	0.9196	
81 m-Xylene & p-Xylene	91	16.867	16.869	-0.002	0	517067	2.00	1.85	
82 n-Nonane	57	17.249	17.252	-0.003	92	195236	1.00	0.9607	
83 Styrene	104	17.325	17.331	-0.006	99	205243	1.00	0.9501	
84 Bromoform	173	17.330	17.333	-0.003	96	208872	1.00	0.9617	
85 o-Xylene	91	17.389	17.391	-0.002	99	275312	1.00	0.9306	
86 1,1,2,2-Tetrachloroethane	83	17.701	17.708	-0.007	99	195397	1.00	0.9139	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
87 1,2,3-Trichloropropane	110	17.863	17.864	-0.001	99	51609	1.00	0.9210	
88 Isopropylbenzene	105	17.949	17.956	-0.007	94	358205	1.00	0.8895	
89 N-Propylbenzene	120	18.460	18.462	-0.002	99	99164	1.00	0.8954	
90 2-Chlorotoluene	126	18.513	18.516	-0.003	97	101293	1.00	0.9428	
91 4-Ethyltoluene	105	18.600	18.602	-0.002	99	344967	1.00	0.8875	
92 1,3,5-Trimethylbenzene	120	18.669	18.672	-0.003	94	147646	1.00	0.9081	
93 Alpha Methyl Styrene	118	18.890	18.891	-0.001	88	149742	1.00	0.8838	
94 n-Decane	57	18.922	18.923	-0.001	90	225316	1.00	0.9369	
95 tert-Butylbenzene	119	19.078	19.079	-0.001	92	309204	1.00	0.8952	
96 1,2,4-Trimethylbenzene	105	19.089	19.091	-0.002	96	292070	1.00	0.8958	
97 sec-Butylbenzene	105	19.331	19.337	-0.006	99	432308	1.00	0.9087	
98 1,3-Dichlorobenzene	146	19.358	19.363	-0.005	97	225116	1.00	0.9216	
99 Benzyl chloride	91	19.428	19.431	-0.003	98	229036	1.00	0.8700	
100 1,4-Dichlorobenzene	146	19.444	19.445	-0.001	94	220578	1.00	0.9076	
101 4-Isopropyltoluene	119	19.487	19.489	-0.002	97	353244	1.00	0.9095	
102 1,2,3-Trimethylbenzene	105	19.546	19.549	-0.003	97	288587	1.00	0.9042	
103 Butylcyclohexane	83	19.589	19.591	-0.002	95	277731	1.00	0.9426	
104 2,3-Dihydroindene	117	19.788	19.792	-0.004	94	276849	1.00	0.9092	
105 1,2-Dichlorobenzene	146	19.794	19.795	-0.001	96	211868	1.00	0.9170	
106 n-Butylbenzene	91	19.907	19.907	0.000	98	341321	1.00	0.9005	
107 Indene	116	19.918	19.918	0.000	89	231067	1.00	0.9030	
108 Undecane	57	20.186	20.186	0.000	96	231645	1.00	0.9282	
110 1,2-Dibromo-3-Chloropropan	157	20.380	20.381	-0.001	98	104745	1.00	0.9287	
111 1,2,4,5-Tetramethylbenzene	119	20.655	20.658	-0.004	98	301194	1.00	0.9125	
114 Dodecane	57	21.268	21.268	0.000	96	183122	1.00	1.04	
115 1,2,4-Trichlorobenzene	180	21.510	21.509	0.001	93	155531	1.00	0.8892	
116 Naphthalene	128	21.639	21.642	-0.003	99	253015	1.00	0.9147	
118 Hexachlorobutadiene	225	21.795	21.798	-0.003	96	162206	1.00	0.8994	
119 1,2,3-Trichlorobenzene	180	21.860	21.858	0.002	95	109718	1.00	0.9858	
120 2-Methylnaphthalene	142	22.387	22.385	0.002	100	67237	3.13	3.07	
121 1-Methylnaphthalene	142	22.510	22.509	0.001	100	63122	3.13	2.91	
A 123 C8 Range	1	15.108	(15.059-15.156)		0	901978	1.00	1.03	
S 124 Xylenes, Total	100				0		3.00	2.78	
S 125 1,2-Dichloroethene, Total	1				0		2.00	1.93	

Reagents:

40L6DQP_00001	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICISL07.D
Lims ID: ICIS L7
Client ID:
Sample Type: ICIS Calib Level: 7
Inject. Date: 15-Feb-2018 20:08:30 ALS Bottle#: 12 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007391-009
Misc. Info.: 140775
Operator ID: 403648 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 19-Feb-2018 10:04:20 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa Date: 16-Feb-2018 09:27:01

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.687	9.689	-0.002	95	286873	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.790	11.790	0.000	95	1605094	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.390	16.389	0.001	88	1448317	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.993	17.992	0.001	95	1023083	4.00	3.91	
6 Chlorodifluoromethane	67	4.205	4.203	0.002	96	54851	2.00	1.79	
7 Propene	41	4.216	4.216	0.000	99	162079	2.00	1.94	
8 Dichlorodifluoromethane	85	4.275	4.274	0.001	100	531010	2.00	2.06	
9 Chloromethane	52	4.485	4.482	0.003	65	59780	2.00	1.98	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.490	4.489	0.001	92	348077	2.00	2.06	
11 Acetaldehyde	44	4.657	4.662	-0.005	98	321920	10.0	9.63	
12 Vinyl chloride	62	4.678	4.679	-0.001	99	202765	2.00	2.16	
13 Butadiene	54	4.775	4.777	-0.002	67	149529	2.00	1.97	
14 Butane	43	4.775	4.777	-0.002	86	288707	2.00	2.01	
15 Bromomethane	94	5.146	5.146	0.000	99	189535	2.00	2.03	
16 Chloroethane	64	5.308	5.304	0.004	100	97167	2.00	2.00	
17 Ethanol	31	5.421	5.435	-0.014	97	339004	10.0	9.75	
18 Vinyl bromide	106	5.641	5.641	0.000	99	181747	2.00	2.05	
19 2-Methylbutane	43	5.690	5.693	-0.003	92	219189	2.00	2.07	
20 Trichlorofluoromethane	101	5.932	5.933	-0.001	100	519886	2.00	2.09	
21 Acrolein	56	5.943	5.950	-0.007	94	50113	2.00	2.02	
23 Acetonitrile	40	6.018	6.040	-0.022	99	60118	2.00	1.91	
22 Acetone	58	6.066	6.081	-0.015	98	180855	6.00	5.54	
24 Pentane	72	6.169	6.171	-0.002	98	30864	2.00	2.03	
25 Isopropyl alcohol	45	6.179	6.201	-0.022	95	488972	6.00	5.22	
26 Ethyl ether	31	6.346	6.362	-0.016	96	148732	2.00	1.84	
27 1,1-Dichloroethene	96	6.690	6.692	-0.002	97	189184	2.00	1.99	
28 Acrylonitrile	53	6.803	6.809	-0.006	95	107948	2.00	1.90	
30 2-Methyl-2-propanol	59	6.820	6.865	-0.045	95	220441	2.00	2.05	
29 1,1,2-Trichloro-1,2,2-trif	101	6.873	6.875	-0.002	98	401001	2.00	2.04	
32 Methylene Chloride	84	7.062	7.061	0.001	97	177679	2.00	1.73	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
31 3-Chloro-1-propene	39	7.072	7.077	-0.005	96	160899	2.00	1.95	
33 Carbon disulfide	76	7.239	7.239	0.000	98	556931	2.00	2.02	
34 trans-1,2-Dichloroethene	96	7.906	7.903	0.003	98	189036	2.00	1.99	
35 2-Methylpentane	43	7.917	7.917	0.000	95	432234	2.00	1.98	
36 Methyl tert-butyl ether	73	8.035	8.053	-0.018	96	396264	2.00	1.88	
37 1,1-Dichloroethane	63	8.342	8.343	-0.001	100	349810	2.00	1.96	
38 Vinyl acetate	43	8.439	8.442	-0.003	100	390265	2.00	1.92	
40 2-Butanone (MEK)	72	8.907	8.919	-0.012	95	65541	2.00	1.79	
39 Hexane	56	8.923	8.922	0.001	85	150365	2.00	1.95	
41 Isopropyl ether	45	9.079	9.091	-0.012	97	466015	2.00	1.84	
42 cis-1,2-Dichloroethene	96	9.348	9.347	0.001	95	190591	2.00	1.97	
43 Ethyl acetate	43	9.525	9.529	-0.004	99	291559	2.00	1.80	
44 Chloroform	83	9.698	9.697	0.001	96	396942	2.00	1.93	
45 Tert-butyl ethyl ether	59	9.767	9.782	-0.015	95	440792	2.00	1.87	
46 Tetrahydrofuran	42	10.112	10.126	-0.014	92	162110	2.00	1.86	
47 1,1,1-Trichloroethane	97	10.720	10.721	-0.001	96	416395	2.00	1.95	
48 1,2-Dichloroethane	62	10.827	10.825	0.002	98	259212	2.00	1.99	
49 Cyclohexane	69	11.284	11.287	-0.003	79	92419	2.00	1.97	
50 Benzene	78	11.290	11.291	-0.001	96	547051	2.00	1.92	
53 n-Butanol	31	11.263	11.293	-0.030	66	50901	2.00	1.83	
52 Carbon tetrachloride	117	11.311	11.310	0.001	99	438828	2.00	2.04	
55 2,3-Dimethylpentane	71	11.381	11.384	-0.003	92	130603	2.00	1.95	
51 Thiophene	84	11.553	11.554	-0.001	95	321955	2.00	1.99	
54 Tert-amyl methyl ether	73	11.726	11.726	0.000	98	411878	2.00	1.91	
56 Isooctane	57	11.995	11.995	0.000	99	900463	2.00	1.97	
57 n-Heptane	71	12.339	12.342	-0.003	92	196222	2.00	1.96	
58 1,2-Dichloropropane	63	12.446	12.451	-0.005	91	210169	2.00	1.96	
59 Trichloroethene	130	12.479	12.480	-0.001	96	250475	2.00	1.99	
60 Dibromomethane	93	12.570	12.569	0.001	95	230836	2.00	1.93	
61 Dichlorobromomethane	83	12.705	12.704	0.001	99	413015	2.00	1.97	
62 1,4-Dioxane	88	12.726	12.735	-0.009	86	53844	2.00	1.93	
63 Methyl methacrylate	41	12.769	12.776	-0.007	94	179409	2.00	1.84	
64 Methylcyclohexane	83	13.221	13.222	-0.001	96	347070	2.00	1.94	
65 4-Methyl-2-pentanone (MIBK	43	13.603	13.618	-0.015	97	269233	2.00	1.83	
66 cis-1,3-Dichloropropene	75	13.657	13.659	-0.002	93	331437	2.00	2.01	
67 trans-1,3-Dichloropropene	75	14.329	14.329	0.000	98	278618	2.00	1.99	
68 Toluene	91	14.458	14.458	0.000	93	600208	2.00	1.96	
69 1,1,2-Trichloroethane	83	14.528	14.532	-0.004	98	184581	2.00	1.98	
72 2-Hexanone	58	14.894	14.908	-0.014	93	136876	2.00	1.90	
73 n-Octane	85	15.099	15.100	-0.002	94	206925	2.00	1.95	
74 Chlorodibromomethane	129	15.228	15.227	0.001	98	432967	2.00	2.10	
75 Ethylene Dibromide	107	15.513	15.514	-0.001	98	354754	2.00	2.05	
76 Tetrachloroethene	129	15.577	15.575	0.002	96	239650	2.00	1.98	
77 2,3-Dimethylheptane	43	16.422	16.423	-0.001	96	619887	2.00	1.99	
78 Chlorobenzene	112	16.438	16.437	0.001	94	496514	2.00	2.02	
79 Ethylbenzene	91	16.712	16.711	0.001	98	729559	2.00	1.93	
81 m-Xylene & p-Xylene	91	16.868	16.869	-0.001	100	1112844	4.00	3.92	
82 n-Nonane	57	17.250	17.252	-0.002	92	403252	2.00	1.95	
83 Styrene	104	17.331	17.331	0.000	99	421470	2.00	1.92	
84 Bromoform	173	17.331	17.333	-0.002	94	452443	2.00	2.05	
85 o-Xylene	91	17.390	17.391	-0.001	99	581607	2.00	1.93	
86 1,1,2,2-Tetrachloroethane	83	17.708	17.708	0.000	99	414828	2.00	1.91	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
87 1,2,3-Trichloropropane	110	17.864	17.864	0.000	99	109836	2.00	1.93	
88 Isopropylbenzene	105	17.955	17.956	-0.001	96	764991	2.00	1.87	
89 N-Propylbenzene	120	18.461	18.462	-0.001	99	212901	2.00	1.89	
90 2-Chlorotoluene	126	18.514	18.516	-0.002	97	212574	2.00	1.95	
91 4-Ethyltoluene	105	18.601	18.602	-0.001	99	745587	2.00	1.89	
92 1,3,5-Trimethylbenzene	120	18.670	18.672	-0.002	93	310461	2.00	1.88	
93 Alpha Methyl Styrene	118	18.891	18.891	0.000	88	334017	2.00	1.94	
94 n-Decane	57	18.923	18.923	0.000	90	468958	2.00	1.92	
95 tert-Butylbenzene	119	19.079	19.079	0.000	92	659713	2.00	1.88	
96 1,2,4-Trimethylbenzene	105	19.090	19.091	-0.001	96	625778	2.00	1.89	
97 sec-Butylbenzene	105	19.338	19.337	0.001	98	914293	2.00	1.89	
98 1,3-Dichlorobenzene	146	19.364	19.363	0.001	98	477551	2.00	1.92	
99 Benzyl chloride	91	19.429	19.431	-0.002	98	518315	2.00	1.94	
100 1,4-Dichlorobenzene	146	19.445	19.445	0.000	94	470366	2.00	1.90	
101 4-Isopropyltoluene	119	19.488	19.489	-0.001	97	743248	2.00	1.88	
102 1,2,3-Trimethylbenzene	105	19.547	19.549	-0.002	98	611735	2.00	1.88	
103 Butylcyclohexane	83	19.590	19.591	-0.001	95	578459	2.00	1.93	
104 2,3-Dihydroindene	117	19.789	19.792	-0.003	95	589287	2.00	1.90	
105 1,2-Dichlorobenzene	146	19.795	19.795	0.000	97	443319	2.00	1.89	
106 n-Butylbenzene	91	19.908	19.907	0.001	98	724644	2.00	1.88	
107 Indene	116	19.919	19.918	0.000	90	503526	2.00	1.93	
108 Undecane	57	20.187	20.186	0.001	96	455946	2.00	1.80	
110 1,2-Dibromo-3-Chloropropan	157	20.381	20.381	0.000	97	225034	2.00	1.96	
111 1,2,4,5-Tetramethylbenzene	119	20.655	20.658	-0.003	97	624537	2.00	1.86	
114 Dodecane	57	21.269	21.268	0.001	96	306380	2.00	1.77	
115 1,2,4-Trichlorobenzene	180	21.511	21.509	0.002	94	336684	2.00	1.89	
116 Naphthalene	128	21.640	21.642	-0.002	99	518551	2.00	1.84	
118 Hexachlorobutadiene	225	21.796	21.798	-0.002	95	340335	2.00	1.86	
119 1,2,3-Trichlorobenzene	180	21.860	21.858	0.002	95	206227	2.00	1.82	
120 2-Methylnaphthalene	142	22.382	22.385	-0.003	99	118911	6.25	5.34	
121 1-Methylnaphthalene	142	22.511	22.509	0.002	100	106135	6.25	4.80	
A 123 C8 Range	1	15.115	(15.060-15.189)		0	1850127	2.00	2.08	
S 124 Xylenes, Total	100				0		6.00	5.86	
S 125 1,2-Dichloroethene, Total	1				0		4.00	3.96	

Reagents:

40L7DQP_00001	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL08.D
Lims ID: IC L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 15-Feb-2018 20:53:30 ALS Bottle#: 13 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007391-010
Misc. Info.: 140774
Operator ID: 403648 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 19-Feb-2018 10:04:33 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa Date: 16-Feb-2018 09:35:55

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.695	9.689	0.006	94	270136	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.793	11.790	0.003	95	1552764	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.392	16.389	0.003	88	1459814	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.995	17.992	0.003	96	1067616	4.00	4.05	
6 Chlorodifluoromethane	67	4.202	4.203	-0.001	96	101106	4.00	3.50	
7 Propene	41	4.218	4.216	0.002	99	316474	4.00	4.03	
8 Dichlorodifluoromethane	85	4.278	4.274	0.004	100	1026119	4.00	4.23	
9 Chloromethane	52	4.482	4.482	0.000	98	109960	4.00	3.88	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.487	4.489	-0.002	92	642320	4.00	4.04	
11 Acetaldehyde	44	4.660	4.662	-0.002	99	652801	20.0	20.7	
12 Vinyl chloride	62	4.681	4.679	0.002	99	374370	4.00	4.24	
13 Butadiene	54	4.778	4.777	0.001	66	277320	4.00	3.89	
14 Butane	43	4.778	4.777	0.001	86	537741	4.00	3.97	
15 Bromomethane	94	5.149	5.146	0.003	99	353158	4.00	4.02	
16 Chloroethane	64	5.305	5.304	0.001	99	182916	4.00	3.99	
17 Ethanol	31	5.434	5.435	-0.001	96	715122	20.0	21.9	
18 Vinyl bromide	106	5.639	5.641	-0.002	98	338017	4.00	4.05	
19 2-Methylbutane	43	5.692	5.693	-0.001	92	392146	4.00	3.93	
20 Trichlorofluoromethane	101	5.935	5.933	0.002	100	944269	4.00	4.03	
21 Acrolein	56	5.945	5.950	-0.005	94	102480	4.00	4.38	
23 Acetonitrile	40	6.026	6.040	-0.014	99	131375	4.00	4.43	
22 Acetone	58	6.069	6.081	-0.012	98	406789	12.0	13.2	
24 Pentane	72	6.171	6.171	0.000	96	55484	4.00	3.88	
25 Isopropyl alcohol	45	6.193	6.201	-0.008	96	1055630	12.0	12.0	
26 Ethyl ether	31	6.343	6.362	-0.019	96	321989	4.00	4.23	
27 1,1-Dichloroethene	96	6.693	6.692	0.001	96	344392	4.00	3.85	
28 Acrylonitrile	53	6.806	6.809	-0.003	95	230835	4.00	4.32	
30 2-Methyl-2-propanol	59	6.828	6.865	-0.037	94	415127	4.00	4.14	
29 1,1,2-Trichloro-1,2,2-trif	101	6.876	6.875	0.001	97	753175	4.00	4.06	
32 Methylene Chloride	84	7.064	7.061	0.003	97	329860	4.00	3.41	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
31 3-Chloro-1-propene	39	7.080	7.077	0.003	96	328625	4.00	4.26	
33 Carbon disulfide	76	7.242	7.239	0.003	98	1014855	4.00	3.91	
34 trans-1,2-Dichloroethene	96	7.903	7.903	0.000	98	356777	4.00	3.99	
35 2-Methylpentane	43	7.914	7.917	-0.003	94	796987	4.00	3.87	
36 Methyl tert-butyl ether	73	8.027	8.053	-0.026	96	905606	4.00	4.56	
37 1,1-Dichloroethane	63	8.345	8.343	0.002	100	686686	4.00	4.09	
38 Vinyl acetate	43	8.441	8.442	-0.001	100	865889	4.00	4.52	
40 2-Butanone (MEK)	72	8.909	8.919	-0.010	97	154279	4.00	4.47	
39 Hexane	56	8.920	8.922	-0.002	78	286027	4.00	3.94	
41 Isopropyl ether	45	9.082	9.091	-0.009	97	1063058	4.00	4.47	
42 cis-1,2-Dichloroethene	96	9.350	9.347	0.003	95	373543	4.00	4.09	
43 Ethyl acetate	43	9.528	9.529	-0.001	99	683903	4.00	4.48	
44 Chloroform	83	9.706	9.697	0.009	97	779025	4.00	4.03	
45 Tert-butyl ethyl ether	59	9.770	9.782	-0.012	95	1019842	4.00	4.60	
46 Tetrahydrofuran	42	10.109	10.126	-0.017	94	340009	4.00	4.15	
47 1,1,1-Trichloroethane	97	10.722	10.721	0.001	96	804959	4.00	4.00	
48 1,2-Dichloroethane	62	10.830	10.825	0.005	98	509786	4.00	4.05	
49 Cyclohexane	69	11.287	11.287	0.000	93	171655	4.00	3.77	
50 Benzene	78	11.292	11.291	0.001	97	1065062	4.00	3.86	
53 n-Butanol	31	11.266	11.293	-0.027	74	111381	4.00	4.15	
52 Carbon tetrachloride	117	11.314	11.310	0.004	99	851003	4.00	4.09	
55 2,3-Dimethylpentane	71	11.384	11.384	0.000	91	249155	4.00	3.85	
51 Thiophene	84	11.556	11.554	0.002	95	626957	4.00	4.01	
54 Tert-amyl methyl ether	73	11.723	11.726	-0.003	98	951508	4.00	4.37	
56 Isooctane	57	11.997	11.995	0.002	99	1723360	4.00	3.90	
57 n-Heptane	71	12.341	12.342	-0.001	91	381559	4.00	3.94	
58 1,2-Dichloropropane	63	12.454	12.451	0.003	91	421493	4.00	4.07	
59 Trichloroethene	130	12.481	12.480	0.001	96	493629	4.00	4.06	
60 Dibromomethane	93	12.573	12.569	0.004	95	457388	4.00	3.95	
61 Dichlorobromomethane	83	12.707	12.704	0.003	99	823450	4.00	4.06	
62 1,4-Dioxane	88	12.723	12.735	-0.012	84	123538	4.00	4.57	
63 Methyl methacrylate	41	12.772	12.776	-0.004	94	430723	4.00	4.57	
64 Methylcyclohexane	83	13.224	13.222	0.002	96	668329	4.00	3.86	
65 4-Methyl-2-pentanone (MIBK	43	13.606	13.618	-0.012	97	659992	4.00	4.64	
66 cis-1,3-Dichloropropene	75	13.659	13.659	0.000	93	670433	4.00	4.20	
67 trans-1,3-Dichloropropene	75	14.332	14.329	0.003	98	591191	4.00	4.18	
68 Toluene	91	14.461	14.458	0.003	94	1239377	4.00	4.02	
69 1,1,2-Trichloroethane	83	14.536	14.532	0.004	98	385134	4.00	4.09	
72 2-Hexanone	58	14.897	14.908	-0.011	94	325452	4.00	4.48	
73 n-Octane	85	15.101	15.100	0.001	93	411769	4.00	3.85	
74 Chlorodibromomethane	129	15.230	15.227	0.003	98	877444	4.00	4.23	
75 Ethylene Dibromide	107	15.515	15.514	0.001	98	728486	4.00	4.17	
76 Tetrachloroethene	129	15.575	15.575	0.000	96	477136	4.00	3.91	
77 2,3-Dimethylheptane	43	16.424	16.423	0.001	96	1209837	4.00	3.85	
78 Chlorobenzene	112	16.441	16.437	0.004	94	1012976	4.00	4.08	
79 Ethylbenzene	91	16.715	16.711	0.004	98	1566611	4.00	4.10	
81 m-Xylene & p-Xylene	91	16.871	16.869	0.002	99	2392826	8.00	8.37	
82 n-Nonane	57	17.253	17.252	0.001	91	832138	4.00	3.99	
83 Styrene	104	17.334	17.331	0.003	98	973459	4.00	4.40	
84 Bromoform	173	17.334	17.333	0.001	96	934107	4.00	4.20	
85 o-Xylene	91	17.393	17.391	0.002	99	1252990	4.00	4.13	
86 1,1,2,2-Tetrachloroethane	83	17.710	17.708	0.002	99	920868	4.00	4.20	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
87 1,2,3-Trichloropropane	110	17.866	17.864	0.002	99	246555	4.00	4.29	
88 Isopropylbenzene	105	17.958	17.956	0.002	96	1687204	4.00	4.09	
89 N-Propylbenzene	120	18.463	18.462	0.001	99	482571	4.00	4.25	
90 2-Chlorotoluene	126	18.517	18.516	0.001	97	454373	4.00	4.13	
91 4-Ethyltoluene	105	18.603	18.602	0.001	98	1700936	4.00	4.27	
92 1,3,5-Trimethylbenzene	120	18.673	18.672	0.001	93	712579	4.00	4.28	
93 Alpha Methyl Styrene	118	18.894	18.891	0.003	88	752971	4.00	4.34	
94 n-Decane	57	18.926	18.923	0.003	91	993210	4.00	4.03	
95 tert-Butylbenzene	119	19.082	19.079	0.003	93	1493882	4.00	4.22	
96 1,2,4-Trimethylbenzene	105	19.093	19.091	0.002	96	1415936	4.00	4.24	
97 sec-Butylbenzene	105	19.340	19.337	0.003	98	2048964	4.00	4.20	
98 1,3-Dichlorobenzene	146	19.367	19.363	0.004	97	1035883	4.00	4.14	
99 Benzyl chloride	91	19.432	19.431	0.001	98	1212674	4.00	4.49	
100 1,4-Dichlorobenzene	146	19.448	19.445	0.003	94	1035664	4.00	4.16	
101 4-Isopropyltoluene	119	19.491	19.489	0.002	97	1693897	4.00	4.25	
102 1,2,3-Trimethylbenzene	105	19.550	19.549	0.001	98	1385849	4.00	4.24	
103 Butylcyclohexane	83	19.593	19.591	0.002	95	1214365	4.00	4.02	
104 2,3-Dihydroindene	117	19.792	19.792	0.000	95	1307644	4.00	4.19	
105 1,2-Dichlorobenzene	146	19.797	19.795	0.002	96	975697	4.00	4.12	
106 n-Butylbenzene	91	19.910	19.907	0.003	98	1638649	4.00	4.22	
107 Indene	116	19.921	19.918	0.003	91	1132821	4.00	4.32	
108 Undecane	57	20.185	20.186	-0.001	96	1036819	4.00	4.05	
110 1,2-Dibromo-3-Chloropropan	157	20.384	20.381	0.003	98	514013	4.00	4.45	
111 1,2,4,5-Tetramethylbenzene	119	20.658	20.658	0.000	97	1523328	4.00	4.50	
114 Dodecane	57	21.266	21.268	-0.002	96	629519	4.00	3.83	
115 1,2,4-Trichlorobenzene	180	21.508	21.509	-0.001	93	789833	4.00	4.40	
116 Naphthalene	128	21.643	21.642	0.001	99	1217927	4.00	4.30	
118 Hexachlorobutadiene	225	21.799	21.798	0.001	95	736883	4.00	3.99	
119 1,2,3-Trichlorobenzene	180	21.858	21.858	0.000	95	458814	4.00	4.02	
120 2-Methylnaphthalene	142	22.385	22.385	0.000	100	234598	12.5	10.4	
121 1-Methylnaphthalene	142	22.509	22.509	0.000	100	206757	12.5	9.29	
A 123 C8 Range	1	15.119	(15.063-15.176)		0	3707341	4.00	4.14	
S 124 Xylenes, Total	100				0		12.0	12.5	
S 125 1,2-Dichloroethene, Total	1				0		8.00	8.08	

Reagents:

40L8DQP_00001	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL09.D
Lims ID: IC L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 15-Feb-2018 21:39:30 ALS Bottle#: 14 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007391-011
Misc. Info.: 140773
Operator ID: 403648 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 19-Feb-2018 10:04:51 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa Date: 16-Feb-2018 09:36:13

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.690	9.689	0.001	93	295689	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.794	11.790	0.004	95	1657510	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.393	16.389	0.004	87	1547348	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.996	17.992	0.004	96	1117665	4.00	4.00	
6 Chlorodifluoromethane	67	4.187	4.203	-0.016	96	214696	8.00	6.80	
7 Propene	41	4.198	4.216	-0.018	99	647152	8.00	7.52	
8 Dichlorodifluoromethane	85	4.257	4.274	-0.017	100	2062839	8.00	7.78	
9 Chloromethane	52	4.467	4.482	-0.015	98	228533	8.00	7.36	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.478	4.489	-0.011	92	1377554	8.00	7.92	
11 Acetaldehyde	44	4.650	4.662	-0.012	99	1220010	40.0	35.4	
12 Vinyl chloride	62	4.666	4.679	-0.013	99	777336	8.00	8.05	
13 Butadiene	54	4.763	4.777	-0.014	69	586005	8.00	7.50	
14 Butane	43	4.763	4.777	-0.014	85	1100932	8.00	7.43	
15 Bromomethane	94	5.134	5.146	-0.012	98	759169	8.00	7.89	
16 Chloroethane	64	5.295	5.304	-0.009	99	387996	8.00	7.74	
17 Ethanol	31	5.430	5.435	-0.005	96	1279493	40.0	35.7	
18 Vinyl bromide	106	5.634	5.641	-0.007	98	722769	8.00	7.90	
19 2-Methylbutane	43	5.683	5.693	-0.010	91	825846	8.00	7.56	
20 Trichlorofluoromethane	101	5.925	5.933	-0.008	100	2068202	8.00	8.06	
21 Acrolein	56	5.941	5.950	-0.009	94	182696	8.00	7.13	
23 Acetonitrile	40	6.016	6.040	-0.024	98	227816	8.00	7.02	
22 Acetone	58	6.059	6.081	-0.022	98	685323	24.0	20.4	
24 Pentane	72	6.161	6.171	-0.010	98	117550	8.00	7.51	
25 Isopropyl alcohol	45	6.188	6.201	-0.013	95	1918054	24.0	19.9	
26 Ethyl ether	31	6.339	6.362	-0.023	96	553177	8.00	6.64	
27 1,1-Dichloroethene	96	6.683	6.692	-0.009	97	754423	8.00	7.71	
28 Acrylonitrile	53	6.807	6.809	-0.002	94	436353	8.00	7.46	
30 2-Methyl-2-propanol	59	6.823	6.865	-0.042	94	919383	8.00	8.41	
29 1,1,2-Trichloro-1,2,2-trif	101	6.866	6.875	-0.009	97	1586774	8.00	7.82	
32 Methylene Chloride	84	7.060	7.061	-0.001	97	680277	8.00	6.42	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
31 3-Chloro-1-propene	39	7.071	7.077	-0.007	96	656238	8.00	7.80	
33 Carbon disulfide	76	7.232	7.239	-0.007	99	2180282	8.00	7.68	
34 trans-1,2-Dichloroethene	96	7.904	7.903	0.001	97	754307	8.00	7.70	
35 2-Methylpentane	43	7.910	7.917	-0.007	94	1652759	8.00	7.33	
36 Methyl tert-butyl ether	73	8.023	8.053	-0.030	96	1590174	8.00	7.31	
37 1,1-Dichloroethane	63	8.340	8.343	-0.003	100	1397954	8.00	7.60	
38 Vinyl acetate	43	8.437	8.442	-0.005	100	1582936	8.00	7.55	
40 2-Butanone (MEK)	72	8.905	8.919	-0.014	96	265192	8.00	7.02	
39 Hexane	56	8.916	8.922	-0.006	83	591318	8.00	7.43	
41 Isopropyl ether	45	9.077	9.091	-0.014	97	1860936	8.00	7.15	
42 cis-1,2-Dichloroethene	96	9.351	9.347	0.004	95	771979	8.00	7.73	
43 Ethyl acetate	43	9.524	9.529	-0.005	99	1177995	8.00	7.05	
44 Chloroform	83	9.701	9.697	0.004	96	1591098	8.00	7.51	
45 Tert-butyl ethyl ether	59	9.766	9.782	-0.016	95	1767069	8.00	7.29	
46 Tetrahydrofuran	42	10.105	10.126	-0.021	94	641564	8.00	7.16	
47 1,1,1-Trichloroethane	97	10.718	10.721	-0.003	96	1669563	8.00	7.57	
48 1,2-Dichloroethane	62	10.825	10.825	0.000	98	1050690	8.00	7.81	
49 Cyclohexane	69	11.288	11.287	0.001	95	357423	8.00	7.36	
50 Benzene	78	11.293	11.291	0.002	97	2097890	8.00	7.13	
53 n-Butanol	31	11.245	11.293	-0.048	81	202000	8.00	7.05	
52 Carbon tetrachloride	117	11.310	11.310	0.000	97	1762311	8.00	7.93	
55 2,3-Dimethylpentane	71	11.385	11.384	0.001	92	508864	8.00	7.37	
51 Thiophene	84	11.557	11.554	0.003	95	1270708	8.00	7.61	
54 Tert-amyl methyl ether	73	11.724	11.726	-0.002	98	1659453	8.00	7.20	
56 Isooctane	57	11.993	11.995	-0.002	99	3486427	8.00	7.39	
57 n-Heptane	71	12.342	12.342	0.000	91	777358	8.00	7.51	
58 1,2-Dichloropropane	63	12.455	12.451	0.004	91	847107	8.00	7.66	
59 Trichloroethene	130	12.482	12.480	0.002	96	1003544	8.00	7.74	
60 Dibromomethane	93	12.574	12.569	0.005	94	926694	8.00	7.50	
61 Dichlorobromomethane	83	12.708	12.704	0.004	99	1676336	8.00	7.75	
62 1,4-Dioxane	88	12.719	12.735	-0.016	84	219872	8.00	7.62	
63 Methyl methacrylate	41	12.773	12.776	-0.003	94	735125	8.00	7.30	
64 Methylcyclohexane	83	13.225	13.222	0.003	97	1368540	8.00	7.41	
65 4-Methyl-2-pentanone (MIBK	43	13.601	13.618	-0.017	97	1085608	8.00	7.14	
66 cis-1,3-Dichloropropene	75	13.660	13.659	0.001	93	1355923	8.00	7.95	
67 trans-1,3-Dichloropropene	75	14.333	14.329	0.004	97	1173124	8.00	7.83	
68 Toluene	91	14.462	14.458	0.004	94	2422147	8.00	7.42	
69 1,1,2-Trichloroethane	83	14.537	14.532	0.005	98	753906	8.00	7.56	
72 2-Hexanone	58	14.892	14.908	-0.016	94	574790	8.00	7.47	
73 n-Octane	85	15.102	15.100	0.002	92	828864	8.00	7.31	
74 Chlorodibromomethane	129	15.231	15.227	0.004	97	1787283	8.00	8.12	
75 Ethylene Dibromide	107	15.516	15.514	0.002	98	1453979	8.00	7.86	
76 Tetrachloroethene	129	15.575	15.575	0.000	96	957712	8.00	7.40	
77 2,3-Dimethylheptane	43	16.425	16.423	0.002	95	2270585	8.00	6.82	
78 Chlorobenzene	112	16.442	16.437	0.005	94	1997116	8.00	7.59	
79 Ethylbenzene	91	16.716	16.711	0.005	98	2951613	8.00	7.29	
81 m-Xylene & p-Xylene	91	16.872	16.869	0.003	99	4391902	16.0	14.5	
82 n-Nonane	57	17.254	17.252	0.002	90	1567651	8.00	7.10	
83 Styrene	104	17.335	17.331	0.004	98	1795211	8.00	7.65	
84 Bromoform	173	17.335	17.333	0.002	97	1951424	8.00	8.27	
85 o-Xylene	91	17.394	17.391	0.003	99	2323383	8.00	7.23	
86 1,1,2,2-Tetrachloroethane	83	17.711	17.708	0.003	99	1634322	8.00	7.03	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
87 1,2,3-Trichloropropane	110	17.867	17.864	0.003	99	441919	8.00	7.26	
88 Isopropylbenzene	105	17.959	17.956	0.003	96	3047982	8.00	6.97	
89 N-Propylbenzene	120	18.464	18.462	0.002	99	873966	8.00	7.26	
90 2-Chlorotoluene	126	18.518	18.516	0.002	97	856661	8.00	7.34	
91 4-Ethyltoluene	105	18.604	18.602	0.002	98	2987293	8.00	7.07	
92 1,3,5-Trimethylbenzene	120	18.674	18.672	0.002	93	1262527	8.00	7.15	
93 Alpha Methyl Styrene	118	18.895	18.891	0.004	88	1370381	8.00	7.44	
94 n-Decane	57	18.927	18.923	0.004	91	1756545	8.00	6.72	
95 tert-Butylbenzene	119	19.083	19.079	0.004	92	2592000	8.00	6.91	
96 1,2,4-Trimethylbenzene	105	19.094	19.091	0.003	95	2456158	8.00	6.93	
97 sec-Butylbenzene	105	19.341	19.337	0.004	98	3532437	8.00	6.83	
98 1,3-Dichlorobenzene	146	19.363	19.363	0.000	98	1934769	8.00	7.29	
99 Benzyl chloride	91	19.433	19.431	0.002	98	2192216	8.00	7.66	
100 1,4-Dichlorobenzene	146	19.449	19.445	0.004	94	1947184	8.00	7.37	
101 4-Isopropyltoluene	119	19.492	19.489	0.003	97	2903808	8.00	6.88	
102 1,2,3-Trimethylbenzene	105	19.551	19.549	0.002	98	2418553	8.00	6.97	
103 Butylcyclohexane	83	19.594	19.591	0.003	95	2202912	8.00	6.88	
104 2,3-Dihydroindene	117	19.793	19.792	0.001	94	2301054	8.00	6.95	
105 1,2-Dichlorobenzene	146	19.798	19.795	0.003	96	1777289	8.00	7.08	
106 n-Butylbenzene	91	19.911	19.907	0.004	98	2760230	8.00	6.70	
107 Indene	116	19.922	19.918	0.004	90	1991794	8.00	7.16	
108 Undecane	57	20.186	20.186	0.000	95	1863928	8.00	6.87	
110 1,2-Dibromo-3-Chloropropan	157	20.385	20.381	0.004	97	946492	8.00	7.72	
111 1,2,4,5-Tetramethylbenzene	119	20.659	20.658	0.001	97	2566257	8.00	7.16	
114 Dodecane	57	21.267	21.268	-0.001	97	1292753	8.00	8.26	
115 1,2,4-Trichlorobenzene	180	21.509	21.509	0.000	93	1465426	8.00	7.71	
116 Naphthalene	128	21.643	21.642	0.001	99	2135019	8.00	7.10	
118 Hexachlorobutadiene	225	21.799	21.798	0.001	95	1335307	8.00	6.81	
119 1,2,3-Trichlorobenzene	180	21.859	21.858	0.001	95	871367	8.00	7.21	
120 2-Methylnaphthalene	142	22.386	22.385	0.001	100	617406	25.0	25.9	
121 1-Methylnaphthalene	142	22.510	22.509	0.001	100	536661	25.0	22.7	
A 123 C8 Range	1	15.110	(15.053-15.209)		0	7331415	8.00	7.72	
S 124 Xylenes, Total	100				0		24.0	21.7	
S 125 1,2-Dichloroethene, Total	1				0		16.0	15.4	

Reagents:

40L9DQP_00001	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D
Lims ID: IC L10
Client ID:
Sample Type: IC Calib Level: 10
Inject. Date: 15-Feb-2018 22:24:30 ALS Bottle#: 15 Worklist Smp#: 12
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007391-012
Misc. Info.: 140768
Operator ID: 403648 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 19-Feb-2018 10:05:10 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa Date: 16-Feb-2018 09:36:32

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.710	9.689	0.021	93	291505	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.808	11.790	0.018	95	1648330	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.402	16.389	0.013	88	1543316	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	18.005	17.992	0.013	96	1068475	4.00	3.83	
6 Chlorodifluoromethane	67	4.201	4.203	-0.002	96	440085	16.0	14.1	
7 Propene	41	4.217	4.216	0.001	99	1263500	16.0	14.9	
8 Dichlorodifluoromethane	85	4.271	4.274	-0.003	100	4108290	16.0	15.7	
9 Chloromethane	52	4.481	4.482	-0.001	98	439355	16.0	14.4	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.486	4.489	-0.003	91	2692563	16.0	15.7	
11 Acetaldehyde	44	4.664	4.662	0.002	99	2375156	80.0	69.9	
12 Vinyl chloride	62	4.680	4.679	0.001	99	1533687	16.0	16.1	
13 Butadiene	54	4.777	4.777	0.000	68	1140773	16.0	14.8	
14 Butane	43	4.777	4.777	0.000	85	2153025	16.0	14.7	
15 Bromomethane	94	5.148	5.146	0.002	99	1529331	16.0	16.1	
16 Chloroethane	64	5.309	5.304	0.005	99	787780	16.0	15.9	
17 Ethanol	31	5.471	5.435	0.036	96	2178805	80.0	61.7	
18 Vinyl bromide	106	5.648	5.641	0.007	98	1469727	16.0	16.3	
19 2-Methylbutane	43	5.697	5.693	0.004	91	1650561	16.0	15.3	
20 Trichlorofluoromethane	101	5.939	5.933	0.006	100	4119857	16.0	16.3	
21 Acrolein	56	5.955	5.950	0.005	95	406528	16.0	16.1	
23 Acetonitrile	40	6.035	6.040	-0.005	99	482336	16.0	15.1	
22 Acetone	58	6.079	6.081	-0.003	97	1390929	48.0	41.9	
24 Pentane	72	6.175	6.171	0.004	99	244732	16.0	15.9	
25 Isopropyl alcohol	45	6.251	6.201	0.050	98	3482589	48.0	36.6	
26 Ethyl ether	31	6.347	6.362	-0.015	96	1171220	16.0	14.3	
27 1,1-Dichloroethene	96	6.697	6.692	0.005	97	1535615	16.0	15.9	
28 Acrylonitrile	53	6.826	6.809	0.017	94	902964	16.0	15.7	
30 2-Methyl-2-propanol	59	6.885	6.865	0.020	93	1632262	16.0	15.2	
29 1,1,2-Trichloro-1,2,2-trif	101	6.880	6.875	0.005	96	3139209	16.0	15.7	
32 Methylene Chloride	84	7.074	7.061	0.013	97	1349970	16.0	12.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
31 3-Chloro-1-propene	39	7.090	7.077	0.013	97	1319889	16.0	16.0	
33 Carbon disulfide	76	7.246	7.239	0.007	99	4378353	16.0	15.6	
34 trans-1,2-Dichloroethene	96	7.913	7.903	0.010	97	1495456	16.0	15.5	
35 2-Methylpentane	43	7.924	7.917	0.007	93	3175157	16.0	14.3	
36 Methyl tert-butyl ether	73	8.037	8.053	-0.016	96	3259814	16.0	15.2	
37 1,1-Dichloroethane	63	8.359	8.343	0.016	100	2804661	16.0	15.5	
38 Vinyl acetate	43	8.456	8.442	0.014	100	3288528	16.0	15.9	
40 2-Butanone (MEK)	72	8.930	8.919	0.011	97	501778	16.0	13.5	
39 Hexane	56	8.930	8.922	0.008	87	1164610	16.0	14.8	
41 Isopropyl ether	45	9.096	9.091	0.005	96	3697020	16.0	14.4	
42 cis-1,2-Dichloroethene	96	9.365	9.347	0.018	95	1553316	16.0	15.8	
43 Ethyl acetate	43	9.554	9.529	0.025	99	2276697	16.0	13.8	
44 Chloroform	83	9.720	9.697	0.023	97	3188140	16.0	15.3	
45 Tert-butyl ethyl ether	59	9.785	9.782	0.003	95	3540153	16.0	14.8	
46 Tetrahydrofuran	42	10.124	10.126	-0.002	93	1211876	16.0	13.7	
47 1,1,1-Trichloroethane	97	10.732	10.721	0.011	96	3337256	16.0	15.4	
48 1,2-Dichloroethane	62	10.845	10.825	0.020	98	2135949	16.0	16.0	
49 Cyclohexane	69	11.297	11.287	0.010	95	685290	16.0	14.2	
50 Benzene	78	11.307	11.291	0.016	97	4024394	16.0	13.8	
53 n-Butanol	31	11.280	11.293	-0.013	66	362827	16.0	12.7	
52 Carbon tetrachloride	117	11.323	11.310	0.013	99	3537791	16.0	16.0	
55 2,3-Dimethylpentane	71	11.393	11.384	0.009	91	1017496	16.0	14.8	
51 Thiophene	84	11.571	11.554	0.017	96	2563344	16.0	15.4	
54 Tert-amyl methyl ether	73	11.738	11.726	0.012	98	3235728	16.0	14.1	
56 Isooctane	57	12.007	11.995	0.012	98	6676767	16.0	14.2	
57 n-Heptane	71	12.356	12.342	0.014	90	1540847	16.0	15.0	
58 1,2-Dichloropropane	63	12.469	12.451	0.018	90	1682910	16.0	15.3	
59 Trichloroethene	130	12.496	12.480	0.016	96	1968061	16.0	15.3	
60 Dibromomethane	93	12.588	12.569	0.019	94	1863214	16.0	15.2	
61 Dichlorobromomethane	83	12.722	12.704	0.018	99	3382471	16.0	15.7	
62 1,4-Dioxane	88	12.744	12.735	0.009	83	344425	16.0	12.0	
63 Methyl methacrylate	41	12.792	12.776	0.016	94	1438539	16.0	14.4	
64 Methylcyclohexane	83	13.233	13.222	0.011	96	2709025	16.0	14.8	
65 4-Methyl-2-pentanone (MIBK	43	13.621	13.618	0.003	97	2127971	16.0	14.1	
66 cis-1,3-Dichloropropene	75	13.674	13.659	0.015	93	2720193	16.0	16.0	
67 trans-1,3-Dichloropropene	75	14.347	14.329	0.018	98	2433426	16.0	16.3	
68 Toluene	91	14.476	14.458	0.018	94	4918045	16.0	15.1	
69 1,1,2-Trichloroethane	83	14.546	14.532	0.014	98	1513985	16.0	15.2	
72 2-Hexanone	58	14.912	14.908	0.004	94	1137183	16.0	14.8	
73 n-Octane	85	15.111	15.100	0.011	90	1606217	16.0	14.2	
74 Chlorodibromomethane	129	15.245	15.227	0.018	97	3568712	16.0	16.3	
75 Ethylene Dibromide	107	15.530	15.514	0.016	98	2951686	16.0	16.0	
76 Tetrachloroethene	129	15.584	15.575	0.009	96	1889134	16.0	14.6	
77 2,3-Dimethylheptane	43	16.429	16.423	0.006	93	4040042	16.0	12.2	
78 Chlorobenzene	112	16.450	16.437	0.013	93	3891277	16.0	14.8	
79 Ethylbenzene	91	16.724	16.711	0.013	98	5915991	16.0	14.7	
81 m-Xylene & p-Xylene	91	16.880	16.869	0.011	98	8546976	32.0	28.3	
82 n-Nonane	57	17.262	17.252	0.010	88	3005085	16.0	13.6	
83 Styrene	104	17.343	17.331	0.012	98	3536130	16.0	15.1	
84 Bromoform	173	17.348	17.333	0.015	97	3797430	16.0	16.1	
85 o-Xylene	91	17.402	17.391	0.011	99	4691784	16.0	14.6	
86 1,1,2,2-Tetrachloroethane	83	17.720	17.708	0.012	100	3277617	16.0	14.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
87 1,2,3-Trichloropropane	110	17.876	17.864	0.012	98	906990	16.0	14.9	
88 Isopropylbenzene	105	17.967	17.956	0.011	97	6046514	16.0	13.9	
89 N-Propylbenzene	120	18.473	18.462	0.011	99	1773765	16.0	14.8	
90 2-Chlorotoluene	126	18.527	18.516	0.011	97	1710230	16.0	14.7	
91 4-Ethyltoluene	105	18.613	18.602	0.011	97	5957624	16.0	14.1	
92 1,3,5-Trimethylbenzene	120	18.683	18.672	0.011	93	2530049	16.0	14.4	
93 Alpha Methyl Styrene	118	18.903	18.891	0.012	88	2737983	16.0	14.9	
94 n-Decane	57	18.930	18.923	0.007	93	3214750	16.0	12.3	
95 tert-Butylbenzene	119	19.086	19.079	0.007	92	4982279	16.0	13.3	
96 1,2,4-Trimethylbenzene	105	19.102	19.091	0.011	95	4740203	16.0	13.4	
97 sec-Butylbenzene	105	19.344	19.337	0.007	97	6638117	16.0	12.9	
98 1,3-Dichlorobenzene	146	19.371	19.363	0.008	98	3759992	16.0	14.2	
99 Benzyl chloride	91	19.441	19.431	0.010	98	4160862	16.0	14.6	
100 1,4-Dichlorobenzene	146	19.457	19.445	0.012	92	3756592	16.0	14.3	
101 4-Isopropyltoluene	119	19.500	19.489	0.011	96	5376440	16.0	12.8	
102 1,2,3-Trimethylbenzene	105	19.559	19.549	0.010	97	4664935	16.0	13.5	
103 Butylcyclohexane	83	19.597	19.591	0.006	94	4125394	16.0	12.9	
104 2,3-Dihydroindene	117	19.802	19.792	0.010	95	4376817	16.0	13.3	
105 1,2-Dichlorobenzene	146	19.807	19.795	0.012	95	3354013	16.0	13.4	
106 n-Butylbenzene	91	19.915	19.907	0.007	99	5013238	16.0	12.2	
107 Indene	116	19.925	19.918	0.007	90	3775959	16.0	13.6	
108 Undecane	57	20.189	20.186	0.003	93	3254285	16.0	12.0	
110 1,2-Dibromo-3-Chloropropan	157	20.388	20.381	0.007	97	1781427	16.0	14.6	
111 1,2,4,5-Tetramethylbenzene	119	20.662	20.658	0.004	97	4688609	16.0	13.1	
114 Dodecane	57	21.270	21.268	0.002	96	2025925	16.0	15.9	
115 1,2,4-Trichlorobenzene	180	21.512	21.509	0.003	94	2668565	16.0	14.1	
116 Naphthalene	128	21.647	21.642	0.005	98	3783262	16.0	12.6	
118 Hexachlorobutadiene	225	21.803	21.798	0.005	94	2542924	16.0	13.0	
119 1,2,3-Trichlorobenzene	180	21.862	21.858	0.004	95	1500391	16.0	12.4	
120 2-Methylnaphthalene	142	22.384	22.385	-0.001	100	166663	50.0	7.02	
121 1-Methylnaphthalene	142	22.507	22.509	-0.002	99	88097	50.0	3.74	
A 123 C8 Range	1	15.121	(15.061-15.239)		0	14016806	16.0	14.8	
S 124 Xylenes, Total	100				0		48.0	42.9	
S 125 1,2-Dichloroethene, Total	1				0		32.0	31.3	

Reagents:

40L10DQP_00001	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Lab Sample ID: CCVIS 140-18440/2 Calibration Date: 02/28/2018 10:44

Instrument ID: MJ Calib Start Date: 02/15/2018 15:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/15/2018 22:24

Lab File ID: JCCVB28.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4274	0.4167		1.95	2.00	-2.5	30.0
Propene	Ave	1.164	1.241		2.13	2.00	6.6	30.0
Dichlorodifluoromethane	Ave	3.588	4.111		2.29	2.00	14.6	30.0
Chloromethane	Ave	0.4199	0.4581		2.18	2.00	9.1	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.352	2.649		2.25	2.00	12.7	30.0
Acetaldehyde	Ave	0.4660	0.4497		9.65	10.0	-3.5	30.0
Vinyl chloride	Ave	1.307	1.542		2.36	2.00	18.0	30.0
1,3-Butadiene	Ave	1.057	1.136		2.15	2.00	7.5	30.0
Butane	Ave	2.004	2.214		2.21	2.00	10.5	30.0
Bromomethane	Ave	1.302	1.434		2.20	2.00	10.1	30.0
Chloroethane	Ave	0.6785	0.7307		2.15	2.00	7.7	30.0
Ethanol	Ave	0.4846	0.5072		10.5	10.0	4.7	30.0
Vinyl bromide	Ave	1.237	1.364		2.21	2.00	10.3	30.0
2-Methylbutane	Ave	1.477	1.645		2.23	2.00	11.3	30.0
Trichlorofluoromethane	Ave	3.471	3.978		2.29	2.00	14.6	30.0
Acrolein	Ave	0.3467	0.2859		1.65	2.00	-17.6	30.0
Acetonitrile	Ave	0.4388	0.3957		1.80	2.00	-9.8	30.0
Acetone	Ave	0.4553	0.4237		5.58	6.00	-7.0	30.0
Pentane	Ave	0.2117	0.2274		2.15	2.00	7.4	30.0
Isopropyl alcohol	Ave	1.306	1.258		5.78	6.00	-3.7	30.0
Ethyl ether	Ave	1.127	1.017		1.80	2.00	-9.8	30.0
1,1-Dichloroethene	Ave	1.324	1.400		2.11	2.00	5.7	30.0
Acrylonitrile	Ave	0.7914	0.6910		1.75	2.00	-12.7	30.0
tert-Butyl alcohol	Lin1		1.587		2.12	2.00	5.8	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.744	2.973		2.17	2.00	8.3	30.0
Methylene Chloride	Ave	1.433	1.316		1.84	2.00	-8.1	30.0
3-Chloropropene	Lin1		1.191		2.07	2.00	3.6	30.0
Carbon disulfide	Ave	3.840	4.104		2.14	2.00	6.9	30.0
trans-1,2-Dichloroethene	Ave	1.325	1.380		2.08	2.00	4.2	30.0
2-Methylpentane	Ave	3.051	3.139		2.06	2.00	2.9	30.0
Methyl tert-butyl ether	Ave	2.941	2.668		1.81	2.00	-9.3	30.0
1,1-Dichloroethane	Ave	2.488	2.418		1.94	2.00	-2.8	30.0
Vinyl acetate	Ave	2.838	2.527		1.78	2.00	-10.9	30.0
2-Butanone (MEK)	Ave	0.5113	0.4323		1.69	2.00	-15.4	30.0
Hexane	Ave	1.076	1.042		1.94	2.00	-3.1	30.0
Isopropyl ether	Ave	3.523	3.056		1.73	2.00	-13.3	30.0
cis-1,2-Dichloroethene	Ave	1.352	1.295		1.92	2.00	-4.2	30.0
Ethyl acetate	Ave	2.261	1.950		1.72	2.00	-13.8	30.0
Chloroform	Ave	2.865	2.729		1.91	2.00	-4.7	30.0
Tert-butyl ethyl ether	Ave	3.280	2.921		1.78	2.00	-10.9	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Lab Sample ID: CCVIS 140-18440/2 Calibration Date: 02/28/2018 10:44

Instrument ID: MJ Calib Start Date: 02/15/2018 15:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/15/2018 22:24

Lab File ID: JCCVB28.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.213	1.044		1.72	2.00	-13.9	30.0
1,1,1-Trichloroethane	Ave	2.982	2.908		1.95	2.00	-2.5	30.0
1,2-Dichloroethane	Ave	0.3245	0.3100		1.91	2.00	-4.5	30.0
Benzene	Ave	0.7099	0.6224		1.75	2.00	-12.3	30.0
Cyclohexane	Ave	0.1171	0.1131		1.93	2.00	-3.5	30.0
Carbon tetrachloride	Ave	0.5362	0.5509		2.05	2.00	2.7	30.0
1-Butanol	Ave	0.0692	0.0800		2.31	2.00	15.7	30.0
2,3-Dimethylpentane	Ave	0.1667	0.1515		1.82	2.00	-9.1	30.0
Thiophene	Ave	0.4031	0.3787		1.88	2.00	-6.1	30.0
Tert-amyl methyl ether	Ave	0.5960	0.5471		1.84	2.00	-8.2	30.0
2,2,4-Trimethylpentane	Ave	1.138	1.052		1.85	2.00	-7.6	30.0
Heptane	Ave	0.2498	0.2227		1.78	2.00	-10.8	30.0
1,2-Dichloropropane	Ave	0.2670	0.2402		1.80	2.00	-10.0	30.0
Trichloroethene	Ave	0.3129	0.2932		1.87	2.00	-6.3	30.0
Dibromomethane	Ave	0.2981	0.2675		1.79	2.00	-10.3	30.0
Bromodichloromethane	Ave	0.5220	0.4881		1.87	2.00	-6.5	30.0
1,4-Dioxane	Ave	0.0696	0.0626		1.80	2.00	-10.1	30.0
Methyl methacrylate	Ave	0.2430	0.2012		1.66	2.00	-17.2	30.0
Methylcyclohexane	Ave	0.4456	0.4027		1.81	2.00	-9.6	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3667	0.2865		1.56	2.00	-21.9	30.0
cis-1,3-Dichloropropene	Ave	0.4116	0.3822		1.86	2.00	-7.1	30.0
trans-1,3-Dichloropropene	Ave	0.3874	0.3434		1.77	2.00	-11.4	30.0
Toluene	Ave	0.8440	0.7453		1.77	2.00	-11.7	30.0
1,1,2-Trichloroethane	Ave	0.2578	0.2248		1.74	2.00	-12.8	30.0
2-Hexanone	Ave	0.1989	0.1527		1.54	2.00	-23.2	30.0
Octane	Ave	0.2931	0.2601		1.77	2.00	-11.3	30.0
Dibromochloromethane	Ave	0.5688	0.5513		1.94	2.00	-3.1	30.0
1,2-Dibromoethane (EDB)	Ave	0.4783	0.4353		1.82	2.00	-9.0	30.0
Tetrachloroethene	Ave	0.3348	0.3045		1.82	2.00	-9.1	30.0
2,3-Dimethylheptane	Ave	0.8602	0.7754		1.80	2.00	-9.9	30.0
Chlorobenzene	Ave	0.6802	0.6203		1.82	2.00	-8.8	30.0
Ethylbenzene	Ave	1.046	0.8731		1.67	2.00	-16.5	30.0
m-Xylene & p-Xylene	Ave	0.7833	0.6678		3.41	4.00	-14.7	30.0
Nonane	Ave	0.5709	0.4921		1.72	2.00	-13.8	30.0
Bromoform	Ave	0.6101	0.5664		1.86	2.00	-7.2	30.0
Styrene	Ave	0.6068	0.5191		1.71	2.00	-14.5	30.0
o-Xylene	Ave	0.8310	0.7037		1.69	2.00	-15.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6006	0.4926		1.64	2.00	-18.0	30.0
1,2,3-Trichloropropane	Ave	0.1574	0.1329		1.69	2.00	-15.6	30.0
Isopropylbenzene	Ave	1.131	0.9299		1.64	2.00	-17.8	30.0
Propylbenzene	Ave	0.3111	0.2573		1.65	2.00	-17.3	30.0

FORM VII TO 15 LL

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Lab Sample ID: CCVIS 140-18440/2 Calibration Date: 02/28/2018 10:44

Instrument ID: MJ Calib Start Date: 02/15/2018 15:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/15/2018 22:24

Lab File ID: JCCVB28.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chlorotoluene	Ave	0.3018	0.2532		1.68	2.00	-16.1	30.0
4-Ethyltoluene	Ave	1.092	0.8890		1.63	2.00	-18.6	30.0
1,3,5-Trimethylbenzene	Ave	0.4567	0.3702		1.62	2.00	-18.9	30.0
Alpha Methyl Styrene	Ave	0.4759	0.3745		1.57	2.00	-21.3	30.0
Decane	Ave	0.6756	0.5597		1.66	2.00	-17.1	30.0
tert-Butylbenzene	Ave	0.9702	0.7893		1.63	2.00	-18.6	30.0
1,2,4-Trimethylbenzene	Ave	0.9159	0.7410		1.62	2.00	-19.1	30.0
sec-Butylbenzene	Ave	1.336	1.089		1.63	2.00	-18.5	30.0
1,3-Dichlorobenzene	Ave	0.6861	0.5585		1.63	2.00	-18.6	30.0
Benzyl chloride	Ave	0.7395	0.6023		1.63	2.00	-18.6	30.0
1,4-Dichlorobenzene	Ave	0.6827	0.5495		1.61	2.00	-19.5	30.0
4-Isopropyltoluene	Ave	1.091	0.8830		1.62	2.00	-19.1	30.0
1,2,3-Trimethylbenzene	Ave	0.8965	0.7234		1.61	2.00	-19.3	30.0
Butylcyclohexane	Ave	0.8276	0.6944		1.68	2.00	-16.1	30.0
Indane	Ave	0.8553	0.6891		1.61	2.00	-19.4	30.0
1,2-Dichlorobenzene	Ave	0.6490	0.5209		1.61	2.00	-19.7	30.0
Butylbenzene	Ave	1.065	0.8447		1.59	2.00	-20.7	30.0
Indene	Ave	0.7188	0.5579		1.55	2.00	-22.4	30.0
Undecane	Ave	0.7010	0.5149		1.47	2.00	-26.5	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.3168	0.2527		1.60	2.00	-20.2	30.0
1,2,4,5-Tetramethylbenzene	Ave	0.9272	0.7430		1.60	2.00	-19.9	30.0
Dodecane	Qua		0.2499		1.01	2.00	-49.5*	30.0
1,2,4-Trichlorobenzene	Ave	0.4913	0.3303		1.34	2.00	-32.8*	30.0
Naphthalene	Ave	0.7770	0.4751		1.22	2.00	-38.9*	30.0
Hexachlorobutadiene	Ave	0.5066	0.3939		1.56	2.00	-22.2	30.0
1,2,3-Trichlorobenzene	Ave	0.3126	0.1740		1.11	2.00	-44.4*	30.0
2-Methylnaphthalene	Ave	0.0616	0.0227		2.30	6.25	-63.2*	50.0
1-Methylnaphthalene	Ave	0.0610	0.0210		2.15	6.25	-65.5*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7231	0.7056		3.90	4.00	-2.4	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180226-7501.b\JCCVB28.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 28-Feb-2018 10:44:30 ALS Bottle#: 15 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007501-002
Misc. Info.: P56
Operator ID: 007126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MJ\20180226-7501.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 28-Feb-2018 14:37:53 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK005

First Level Reviewer: tajh Date: 28-Feb-2018 11:27:59

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.690	9.690	0.000	94	238046	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.788	11.788	0.000	95	1347490	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.387	16.387	0.000	88	1223696	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.991	17.991	0.000	95	863380	4.00	3.90	
6 Chlorodifluoromethane	67	4.208	4.208	0.000	96	49597	2.00	1.95	
7 Propene	41	4.219	4.219	0.000	99	147756	2.00	2.13	
8 Dichlorodifluoromethane	85	4.278	4.278	0.000	100	489348	2.00	2.29	
9 Chloromethane	52	4.488	4.488	0.000	98	54520	2.00	2.18	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.493	4.493	0.000	98	315339	2.00	2.25	
11 Acetaldehyde	44	4.660	4.660	0.000	97	267608	10.0	9.65	
12 Vinyl chloride	62	4.682	4.682	0.000	99	183577	2.00	2.36	
14 Butane	43	4.779	4.779	0.000	86	263550	2.00	2.21	
13 Butadiene	54	4.779	4.779	0.000	66	135201	2.00	2.15	
15 Bromomethane	94	5.150	5.150	0.000	98	170620	2.00	2.20	
16 Chloroethane	64	5.306	5.306	0.000	98	86971	2.00	2.15	
17 Ethanol	31	5.435	5.435	0.000	96	301858	10.0	10.5	
18 Vinyl bromide	106	5.639	5.639	0.000	99	162342	2.00	2.21	
19 2-Methylbutane	43	5.693	5.693	0.000	92	195758	2.00	2.23	
20 Trichlorofluoromethane	101	5.935	5.935	0.000	100	473424	2.00	2.29	
21 Acrolein	56	5.951	5.951	0.000	93	34023	2.00	1.65	
23 Acetonitrile	40	6.027	6.027	0.000	99	47096	2.00	1.80	
22 Acetone	58	6.075	6.075	0.000	98	151278	6.00	5.58	
24 Pentane	72	6.172	6.172	0.000	97	27066	2.00	2.15	
25 Isopropyl alcohol	45	6.193	6.193	0.000	95	449042	6.00	5.78	
26 Ethyl ether	31	6.355	6.355	0.000	96	120991	2.00	1.80	
27 1,1-Dichloroethene	96	6.694	6.694	0.000	96	166604	2.00	2.11	
28 Acrylonitrile	53	6.807	6.807	0.000	94	82250	2.00	1.75	
30 2-Methyl-2-propanol	59	6.839	6.839	0.000	95	188830	2.00	2.12	
29 1,1,2-Trichloro-1,2,2-trif	101	6.877	6.877	0.000	97	353813	2.00	2.17	
32 Methylene Chloride	84	7.059	7.059	0.000	97	156647	2.00	1.84	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
31 3-Chloro-1-propene	39	7.076	7.076	0.000	96	141794	2.00	2.07	
33 Carbon disulfide	76	7.242	7.242	0.000	98	488477	2.00	2.14	
34 trans-1,2-Dichloroethene	96	7.904	7.904	0.000	97	164245	2.00	2.08	
35 2-Methylpentane	43	7.915	7.915	0.000	94	373607	2.00	2.06	
36 Methyl tert-butyl ether	73	8.038	8.038	0.000	96	317566	2.00	1.81	
37 1,1-Dichloroethane	63	8.340	8.340	0.000	100	287794	2.00	1.94	
38 Vinyl acetate	43	8.442	8.442	0.000	100	300762	2.00	1.78	
40 2-Butanone (MEK)	72	8.910	8.910	0.000	96	51458	2.00	1.69	
39 Hexane	56	8.921	8.921	0.000	82	124059	2.00	1.94	
41 Isopropyl ether	45	9.082	9.082	0.000	97	363725	2.00	1.73	
42 cis-1,2-Dichloroethene	96	9.346	9.346	0.000	95	154142	2.00	1.92	
43 Ethyl acetate	43	9.529	9.529	0.000	99	232097	2.00	1.72	
44 Chloroform	83	9.695	9.695	0.000	95	324871	2.00	1.91	
45 Tert-butyl ethyl ether	59	9.771	9.771	0.000	95	347714	2.00	1.78	
46 Tetrahydrofuran	42	10.115	10.115	0.000	94	124303	2.00	1.72	
47 1,1,1-Trichloroethane	97	10.717	10.717	0.000	96	346132	2.00	1.95	
48 1,2-Dichloroethane	62	10.820	10.820	0.000	98	208860	2.00	1.91	
49 Cyclohexane	69	11.288	11.288	0.000	88	76170	2.00	1.93	
50 Benzene	78	11.288	11.288	0.000	97	419347	2.00	1.75	
52 Carbon tetrachloride	117	11.309	11.309	0.000	99	371184	2.00	2.05	
53 n-Butanol	31	11.331	11.331	0.000	66	53925	2.00	2.31	M
55 2,3-Dimethylpentane	71	11.379	11.379	0.000	93	102076	2.00	1.82	
51 Thiophene	84	11.551	11.551	0.000	96	255141	2.00	1.88	
54 Tert-amyl methyl ether	73	11.723	11.723	0.000	99	334753	2.00	1.84	
56 Isooctane	57	11.992	11.992	0.000	98	709067	2.00	1.85	
57 n-Heptane	71	12.342	12.342	0.000	92	150048	2.00	1.78	
58 1,2-Dichloropropane	63	12.450	12.450	0.000	91	161860	2.00	1.80	
59 Trichloroethene	130	12.477	12.477	0.000	96	197522	2.00	1.87	
60 Dibromomethane	93	12.568	12.568	0.000	95	180249	2.00	1.79	
61 Dichlorobromomethane	83	12.702	12.702	0.000	99	328842	2.00	1.87	
62 1,4-Dioxane	88	12.719	12.719	0.000	86	42154	2.00	1.80	
63 Methyl methacrylate	41	12.772	12.772	0.000	94	135559	2.00	1.66	
64 Methylcyclohexane	83	13.219	13.219	0.000	96	271282	2.00	1.81	
65 4-Methyl-2-pentanone (MIBK	43	13.606	13.606	0.000	96	192994	2.00	1.56	
66 cis-1,3-Dichloropropene	75	13.655	13.655	0.000	93	257519	2.00	1.86	
67 trans-1,3-Dichloropropene	75	14.327	14.327	0.000	97	210108	2.00	1.77	
68 Toluene	91	14.456	14.456	0.000	93	456003	2.00	1.77	
69 1,1,2-Trichloroethane	83	14.526	14.526	0.000	98	137522	2.00	1.74	
72 2-Hexanone	58	14.897	14.897	0.000	93	93435	2.00	1.54	
73 n-Octane	85	15.096	15.096	0.000	93	159123	2.00	1.77	
74 Chlorodibromomethane	129	15.225	15.225	0.000	97	337318	2.00	1.94	
75 Ethylene Dibromide	107	15.511	15.511	0.000	98	266328	2.00	1.82	
76 Tetrachloroethene	129	15.570	15.570	0.000	96	186279	2.00	1.82	
77 2,3-Dimethylheptane	43	16.420	16.420	0.000	96	474416	2.00	1.80	
78 Chlorobenzene	112	16.436	16.436	0.000	94	379515	2.00	1.82	
79 Ethylbenzene	91	16.710	16.710	0.000	98	534218	2.00	1.67	
81 m-Xylene & p-Xylene	91	16.866	16.866	0.000	100	817133	4.00	3.41	
82 n-Nonane	57	17.248	17.248	0.000	93	301110	2.00	1.72	
83 Styrene	104	17.329	17.329	0.000	98	317622	2.00	1.71	
84 Bromoform	173	17.329	17.329	0.000	96	346575	2.00	1.86	
85 o-Xylene	91	17.388	17.388	0.000	98	430569	2.00	1.69	
86 1,1,2,2-Tetrachloroethane	83	17.705	17.705	0.000	99	301423	2.00	1.64	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
87 1,2,3-Trichloropropane	110	17.861	17.861	0.000	99	81310	2.00	1.69	
88 Isopropylbenzene	105	17.953	17.953	0.000	95	568966	2.00	1.64	
89 N-Propylbenzene	120	18.459	18.459	0.000	99	157403	2.00	1.65	
90 2-Chlorotoluene	126	18.512	18.512	0.000	97	154913	2.00	1.68	
91 4-Ethyltoluene	105	18.598	18.598	0.000	99	543925	2.00	1.63	
92 1,3,5-Trimethylbenzene	120	18.668	18.668	0.000	93	226509	2.00	1.62	
93 Alpha Methyl Styrene	118	18.889	18.889	0.000	88	229143	2.00	1.57	
94 n-Decane	57	18.921	18.921	0.000	90	342476	2.00	1.66	
95 tert-Butylbenzene	119	19.077	19.077	0.000	91	482948	2.00	1.63	
96 1,2,4-Trimethylbenzene	105	19.088	19.088	0.000	96	453381	2.00	1.62	
97 sec-Butylbenzene	105	19.335	19.335	0.000	98	666035	2.00	1.63	
98 1,3-Dichlorobenzene	146	19.362	19.362	0.000	97	341699	2.00	1.63	
99 Benzyl chloride	91	19.427	19.427	0.000	98	368491	2.00	1.63	
100 1,4-Dichlorobenzene	146	19.443	19.443	0.000	95	336178	2.00	1.61	
101 4-Isopropyltoluene	119	19.486	19.486	0.000	97	540272	2.00	1.62	
102 1,2,3-Trimethylbenzene	105	19.545	19.545	0.000	98	442622	2.00	1.61	
103 Butylcyclohexane	83	19.588	19.588	0.000	95	424872	2.00	1.68	
104 2,3-Dihydroindene	117	19.787	19.787	0.000	94	421631	2.00	1.61	
105 1,2-Dichlorobenzene	146	19.793	19.793	0.000	96	318706	2.00	1.61	
106 n-Butylbenzene	91	19.906	19.906	0.000	98	516846	2.00	1.59	
107 Indene	116	19.916	19.916	0.000	97	341318	2.00	1.55	
108 Undecane	57	20.185	20.185	0.000	96	315041	2.00	1.47	
110 1,2-Dibromo-3-Chloropropan	157	20.379	20.379	0.000	98	154621	2.00	1.60	
111 1,2,4,5-Tetramethylbenzene	119	20.653	20.653	0.000	97	454604	2.00	1.60	
114 Dodecane	57	21.267	21.267	0.000	96	152924	2.00	1.01	
115 1,2,4-Trichlorobenzene	180	21.509	21.509	0.000	94	202103	2.00	1.34	
116 Naphthalene	128	21.638	21.638	0.000	99	290684	2.00	1.22	
118 Hexachlorobutadiene	225	21.794	21.794	0.000	95	241014	2.00	1.56	
119 1,2,3-Trichlorobenzene	180	21.858	21.858	0.000	95	106433	2.00	1.11	
120 2-Methylnaphthalene	142	22.386	22.386	0.000	100	43367	6.25	2.30	
121 1-Methylnaphthalene	142	22.509	22.509	0.000	100	40195	6.25	2.15	
A 123 C8 Range	1	15.112	(15.058-15.182)		0	1450673	2.00	1.93	
S 124 Xylenes, Total	100				0		6.00	5.10	
S 125 1,2-Dichloroethene, Total	1				0		4.00	4.00	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40CV101P_00056	Amount Added: 100.00	Units: ml	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
SV-001-C-24	140-10791-1	100
SV-004-C-24	140-10791-2	101
SV-102-C-24	140-10791-3	99
SV-102-C-24 DL	140-10791-3 DL	101
SV-155-C-24	140-10791-4	98
SV-153-C-24	140-10791-5	102
SV-DUP01-C-24	140-10791-6	100
SV-133-C-24	140-10791-7	100
SV-133-C-24 DL	140-10791-7 DL	101
SV-060-C-24	140-10791-8	99
SV-150-C-24	140-10791-9	99
SV-152-C-24	140-10791-10	98
SV-141-C-24	140-10791-11	99
SV-142-C-24	140-10791-12	100
SV-088-C-24	140-10791-13	100
SV-113-C-24	140-10791-14	99
SV-149-C-24	140-10791-15	102
IA-BCK-1-24	140-10791-16	100
IA-BCK-2-24	140-10791-17	100
IA-BCK-3-24	140-10791-18	101
IA-BCK-4-24	140-10791-19	101
	MB 140-18440/4	99
	LCS 140-18440/1002	98

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180226-7501.b\JB28P103DL.D				
Lims ID:	140-10791-A-3				
Client ID:	SV-102-C-24				
Sample Type:	Client				
Inject. Date:	01-Mar-2018 04:23:30	ALS Bottle#:	3	Worklist Smp#:	25
Purge Vol:	500.000 mL	Dil. Factor:	4.0300		
Sample Info:	140-0007501-025				
Misc. Info.:	140-10791-a-3@4.03				
Operator ID:	007126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20180226-7501.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	01-Mar-2018 10:57:27	Calib Date:	15-Feb-2018 22:24:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK007				

First Level Reviewer: tajh Date: 01-Mar-2018 10:56:45

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.03	100.65

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Matrix: Air Level: Low Lab File ID: JCCVB28-LCS.d

Lab ID: LCS 140-18440/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.75	88	70-130	
Carbon tetrachloride	2.00	2.05	103	70-130	
Chlorodifluoromethane	2.00	1.95	98	60-140	
Chloroform	2.00	1.91	95	70-130	
cis-1,2-Dichloroethene	2.00	1.92	96	70-130	
Dichlorodifluoromethane	2.00	2.29	115	60-140	
1,1-Dichloroethane	2.00	1.94	97	70-130	
1,2-Dichloroethane	2.00	1.91	96	70-130	
1,1-Dichloroethene	2.00	2.11	106	70-130	
Ethylbenzene	2.00	1.67	83	70-130	
Methylene Chloride	2.00	1.84	92	70-130	
Methyl tert-butyl ether	2.00	1.81	91	60-140	
Naphthalene	2.00	1.22	61	60-140	
Tetrachloroethene	2.00	1.82	91	70-130	
Toluene	2.00	1.77	88	70-130	
trans-1,2-Dichloroethene	2.00	2.08	104	70-130	
1,2,4-Trichlorobenzene	2.00	1.34	67	60-140	
1,1,1-Trichloroethane	2.00	1.95	98	70-130	
1,1,2-Trichloroethane	2.00	1.74	87	70-130	
Trichloroethene	2.00	1.87	94	70-130	
1,2,3-Trimethylbenzene	2.00	1.61	81	70-130	
1,2,4-Trimethylbenzene	2.00	1.62	81	70-130	
1,3,5-Trimethylbenzene	2.00	1.62	81	70-130	
Vinyl chloride	2.00	2.36	118	70-130	
Xylenes, Total	6.00	5.10	85	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-10791-1

SDG No.:

Lab File ID: JBFBB15.D BFB Injection Date: 02/15/2018

Instrument ID: MJ BFB Injection Time: 14:16

Analysis Batch No.: 18185

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.2 ✓	
75	30.0 - 60.0 % of mass 95	52.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	104.0	
175	5.0 - 9.0 % of mass 174	7.7	(7.4) 1
176	95.0 - 101.0 % of mass 174	102.5	(98.5) 1
177	5.0 - 9.0 % of mass 176	6.9	(6.8) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-18185/3	JB15ICL01.D	02/15/2018	15:35
	IC 140-18185/4	JB15ICL02.D	02/15/2018	16:21
	IC 140-18185/5	JB15ICL03.D	02/15/2018	17:07
	IC 140-18185/6	JB15ICL04.D	02/15/2018	17:52
	IC 140-18185/7	JB15ICL05.D	02/15/2018	18:37
	IC 140-18185/8	JB15ICL06.D	02/15/2018	19:22
	ICIS 140-18185/9	JB15ICISL07.D	02/15/2018	20:08
	IC 140-18185/10	JB15ICL08.D	02/15/2018	20:53
	IC 140-18185/11	JB15ICL09.D	02/15/2018	21:39
	IC 140-18185/12	JB15ICL10.D	02/15/2018	22:24
	ICV 140-18185/15	JLCSB16.D	02/16/2018	00:43

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JBFBB15.D\MJ_TO15.rslt\spectra.d
Injection Date: 15-Feb-2018 14:16:30
Spectrum: Tune Spec :Average 284-286(4.42-4.43) Bgrd 270(4.34)
Base Peak: 174.00
Minimum % Base Peak: 0
Number of Points: 83

m/z	Y	m/z	Y	m/z	Y	m/z	Y
28.00	106	57.00	5180	82.00	1147	129.00	397
29.00	51	58.00	110	87.00	5542	130.00	847
31.00	4246	60.00	1574	88.00	5589	131.00	273
32.00	334	61.00	8010	91.00	862	135.00	608
33.00	880	62.00	8327	92.00	5626	137.00	391
36.00	1420	63.00	6584	93.00	8251	141.00	2355
37.00	7330	64.00	574	94.00	21784	143.00	2654
38.00	6730	67.00	668	95.00	176384	146.00	108
39.00	2983	68.00	19808	96.00	11748	147.00	101
40.00	30	69.00	19736	97.00	422	148.00	569
43.00	218	70.00	1389	104.00	973	150.00	133
44.00	936	72.00	1031	105.00	416	155.00	479
45.00	1633	73.00	7862	106.00	922	157.00	534
47.00	1227	74.00	31072	107.00	119	159.00	150
48.00	921	75.00	92560	113.00	106	161.00	102
49.00	7091	76.00	7920	115.00	132	174.00	183488
50.00	33912	77.00	1118	116.00	707	175.00	13588
51.00	9776	78.00	483	117.00	798	176.00	180800
52.00	330	79.00	6276	118.00	876	177.00	12220
55.00	447	80.00	1882	119.00	973	178.00	273
56.00	2998	81.00	6677	128.00	700		

TETRA TECH

INTERNAL CORRESPONDENCE

TO: **A. APANAVAGE** **DATE:** **APRIL 6, 2018**

FROM: **LEIGH A. CIOFANI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
LOCKHEED MARTIN CORPORATION (LMC) – MIDDLE RIVER COMPLEX (MRC)
SAMPLE DELIVERY GROUP (SDG) 140-10792-1

SAMPLES: 12 / Air / VOC

SV-075-A-24	SV-095-A-24	SV-168-A-24
SV-178-MB-2	SV-179-MB-2	SV-180-MB-2
SV-181-MB-2	SV-182-MB-2	SV-184-MB-2
SV-185-MB-2	SV-186-MB-2	SV-187-MB-2

OVERVIEW

The sample set for LMC – MRC, SDG 140-10792-1, consists of twelve (12) soil vapor (SV) environmental samples. All samples were analyzed for select volatile organic compounds (VOCs). No field duplicate pairs are included in this SDG.

The samples were collected by Tetra Tech on February 21, 2018, and analyzed by TestAmerica. All analyses were conducted in accordance with EPA Method TO-15 analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, laboratory method blank results, laboratory control sample results, surrogate recoveries, internal standard areas, chromatographic resolution, compound identification, compound quantitation, and detection limits. Areas of concern are listed below.

MAJOR PROBLEMS

- None.

MINOR PROBLEMS

- Detected results reported below the reporting limit (RL) but above the method detection limit (MDL) were qualified as estimated (J).

NOTES

Twenty-five VOC target compounds were reported for the TO-15 analysis of the samples.

Non-detected results were reported to the MDL.

The laboratory case narrative indicates that a sample SV-183-MB-2 was received by the laboratory but was not listed on the chain of custody. The case narrative notes that the sample was not analyzed, as per client instructions.

In samples SV-181-MB-2 and SV-182-MB-2, the analyte 1,1-dichloroethane exceeded the instrument calibration range during the original analysis. Samples SV-181-MB-2 and SV-182-MB-2 were reanalyzed at a dilution factors of 5 and 10, respectively, and the laboratory reported the result for 1,1-dichloroethane from the reanalysis.

EXECUTIVE SUMMARY

Laboratory Performance: None.

Other Factors Affecting Data Quality: Results above the MDL but below the RL were qualified as estimated.

The data for these analyses were reviewed with reference to the USEPA "National Functional Guidelines for Organic Superfund Methods Data Review" (January 2017) and USEPA Method TO-15 analytical and reporting protocols. The text of this report has been formulated to address only those areas affecting data quality.

Leigh A. Ciofani

Tetra Tech, Inc.
Leigh A. Ciofani
Environmental Scientist/Data Validator

Joseph A. Samchuck

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

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

Appendix A

Qualified Analytical Results

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted method detection limit for sample and method.
J	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

Qualifier Codes:

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

PROJ_NO: 08388	NSAMPLE	SV-075-A-24			SV-095-A-24			SV-168-A-24			SV-178-MB-2		
SDG: 140-10792-1	LAB_ID	140-10792-3			140-10792-2			140-10792-1			140-10792-4		
FRACTION: OV-M3	SAMP_DATE	2/21/2018			2/21/2018			2/21/2018			2/21/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.33	U		9.3	J	P	1	J	P
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		2.9	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		3.6	J	P	0.33	J	P
1,1-DICHLOROETHENE		0.28	U		0.28	U		500			0.28	U	
1,2,3-TRIMETHYLBENZENE		29			0.84	U		4.2	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		7.2	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		94			3			3.1	U		2.1		
1,2-DICHLOROETHANE		0.38	U		0.38	U		1.9	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		52			1.2	J	P	3.2	U		0.64	U	
BENZENE		0.51	J	P	0.37	U		1.8	U		0.37	J	P
CARBON TETRACHLORIDE		0.47	U		0.47	U		2.4	U		0.56	J	P
CHLORODIFLUOROMETHANE		1.5			3.5			1.5	J	P	1.3	J	P
CHLOROFORM		0.37	U		0.37	U		3.6	J	P	0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		6.1	J	P	0.48	U	
DICHLORODIFLUOROMETHANE		2.3			1.9	J	P	3.5	J	P	2.1		
ETHYLBENZENE		1.2	J	P	1.7			2.9	U		0.93	J	P
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		6.1	U		1.2	U	
METHYLENE CHLORIDE		3.3	J	P	2.4	J	P	14	J	P	2.3	J	P
NAPHTHALENE		84			1	U		5.2	U		1.3		
TETRACHLOROETHENE		1.1	J	P	1.7	J	P	23			0.54	U	
TOLUENE		4.9			3.3			11	U		3.5		
TOTAL XYLENES		13			9.2			2.6	U		5.3		
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		2	U		0.4	U	
TRICHLOROETHENE		2.6			6			1300			0.38	U	
VINYL CHLORIDE		0.37	U		0.37	U		1.9	U		0.37	U	

PROJ_NO: 08388	NSAMPLE	SV-179-MB-2			SV-180-MB-2			SV-181-MB-2			SV-182-MB-2		
SDG: 140-10792-1	LAB_ID	140-10792-6			140-10792-5			140-10792-7			140-10792-8		
FRACTION: OV-M3	SAMP_DATE	2/21/2018			2/21/2018			2/21/2018			2/21/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.46	J	P	28			59		
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		44			0.2	U		610			1500		
1,1-DICHLOROETHENE		1.8			0.28	U		53			49		
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		1.6	J	P	1.7	J	P	1.8	J	P	1.8	J	P
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		0.37	U		0.51	J	P	0.53	J	P	0.81	J	P
CARBON TETRACHLORIDE		0.47	U		0.51	J	P	0.47	U		0.47	U	
CHLORODIFLUOROMETHANE		1.1	J	P	1.2	J	P	1.2	J	P	1	J	P
CHLOROFORM		0.37	U		0.37	U		0.37	U		0.58	J	P
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		2			1.7	J	P	2.1			1.8	J	P
ETHYLBENZENE		0.84	J	P	1.3	J	P	0.89	J	P	1.1	J	P
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		2.3	J	P	2.4	J	P	3.7			2.8	J	P
NAPHTHALENE		1	U		1	U		1	U		1	U	
TETRACHLOROETHENE		0.54	U		0.54	U		0.54	U		17		
TOLUENE		3			4.4			3.5			4.2		
TOTAL XYLENES		4.8			7.2			5.3			6.4		
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.38	U		0.38	U		0.38	U		1.5		
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 08388	NSAMPLE	SV-184-MB-2			SV-185-MB-2			SV-186-MB-2			SV-187-MB-2		
SDG: 140-10792-1	LAB_ID	140-10792-9			140-10792-12			140-10792-11			140-10792-10		
FRACTION: OV-M3	SAMP_DATE	2/21/2018			2/21/2018			2/21/2018			2/21/2018		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.4	J	P	5.8			0.33	U		1.3	J	P
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.75	J	P	48			1.6	J	P	1.4	J	P
1,1-DICHLOROETHENE		0.28	U		7.2			0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		1.7	J	P	1.7	J	P	1.7	J	P	2		
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		0.37	U		0.79	J	P	0.9	J	P	0.64	J	P
CARBON TETRACHLORIDE		0.47	U		0.52	J	P	0.5	J	P	3.6		
CHLORODIFLUOROMETHANE		1.1	J	P	1.1	J	P	1	J	P	1	J	P
CHLOROFORM		0.37	U		0.55	J	P	0.37	U		0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		2			1.9	J	P	1.9	J	P	1.9	J	P
ETHYLBENZENE		0.77	J	P	1.1	J	P	1.4	J	P	0.94	J	P
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		2.3	J	P	8			6.2			2.5	J	P
NAPHTHALENE		1	U		1	U		1	U		1	U	
TETRACHLOROETHENE		0.54	U		39			13			0.7	J	P
TOLUENE		3			6.2			6.5			4.7		
TOTAL XYLENES		4.6			6.4			7.2			6.2		
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.38	U		2			0.38	U		0.38	U	
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

Appendix B

Results as Reported by the Laboratory

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-075-A-24 Lab Sample ID: 140-10792-3

Matrix: Air Lab File ID: RC01P103.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:10

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 15:39

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.41		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.28	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.96	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	16		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.16	J	0.40	0.080
108-88-3	Toluene	92.14	1.3		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.49		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	5.8		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	19		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	11		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-075-A-24 Lab Sample ID: 140-10792-3

Matrix: Air Lab File ID: RC01P103.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:10

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 15:39

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.51	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.2	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	84		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.1	J	2.7	0.54
108-88-3	Toluene	92.14	4.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.6		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	29		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	94		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	52		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	13		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-095-A-24 Lab Sample ID: 140-10792-2

Matrix: Air Lab File ID: RC01P102.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 13:05

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 14:52

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.0		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.40		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.69	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.25	J	0.40	0.080
108-88-3	Toluene	92.14	0.86		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.1		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.61		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.24	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-095-A-24 Lab Sample ID: 140-10792-2

Matrix: Air Lab File ID: RC01P102.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 13:05

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 14:52

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.7		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.7	J	2.7	0.54
108-88-3	Toluene	92.14	3.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	6.0		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	3.0		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.2	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	9.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-168-A-24 | Lab Sample ID: 140-10792-1

Matrix: Air | Lab File ID: RC01P101.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 12:07

Sample wt/vol: 20(mL) | Date Analyzed: 03/01/2018 14:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18444 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		2.0	0.58
56-23-5	Carbon tetrachloride	153.81	ND		2.0	0.38
75-45-6	Chlorodifluoromethane	86.47	0.42	J	2.0	0.38
67-66-3	Chloroform	119.38	0.74	J	2.0	0.38
156-59-2	cis-1,2-Dichloroethene	96.94	1.5	J	2.0	0.60
75-71-8	Dichlorodifluoromethane	120.91	0.71	J	2.0	0.68
75-34-3	1,1-Dichloroethane	98.96	0.88	J	2.0	0.25
107-06-2	1,2-Dichloroethane	98.96	ND		2.0	0.48
75-35-4	1,1-Dichloroethene	96.94	130		2.0	0.35
100-41-4	Ethylbenzene	106.17	ND		2.0	0.68
75-09-2	Methylene Chloride	84.93	3.9	J	5.0	3.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		10	1.7
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	3.5		2.0	0.40
108-88-3	Toluene	92.14	ND		3.0	3.0
156-60-5	trans-1,2-Dichloroethene	96.94	ND		2.0	0.50
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		2.0	0.98
71-55-6	1,1,1-Trichloroethane	133.41	1.7	J	2.0	0.30
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.0	0.53
79-01-6	Trichloroethene	131.39	250		1.0	0.35
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.85
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.63
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.65
75-01-4	Vinyl chloride	62.50	ND		1.0	0.73
1330-20-7	Xylenes, Total	106.17	ND		4.0	0.60

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-168-A-24 Lab Sample ID: 140-10792-1

Matrix: Air Lab File ID: RC01P101.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:07

Sample wt/vol: 20(mL) Date Analyzed: 03/01/2018 14:05

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		6.4	1.8
56-23-5	Carbon tetrachloride	153.81	ND		13	2.4
75-45-6	Chlorodifluoromethane	86.47	1.5	J	7.1	1.3
67-66-3	Chloroform	119.38	3.6	J	9.8	1.8
156-59-2	cis-1,2-Dichloroethene	96.94	6.1	J	7.9	2.4
75-71-8	Dichlorodifluoromethane	120.91	3.5	J	9.9	3.3
75-34-3	1,1-Dichloroethane	98.96	3.6	J	8.1	1.0
107-06-2	1,2-Dichloroethane	98.96	ND		8.1	1.9
75-35-4	1,1-Dichloroethene	96.94	500		7.9	1.4
100-41-4	Ethylbenzene	106.17	ND		8.7	2.9
75-09-2	Methylene Chloride	84.93	14	J	17	11
1634-04-4	Methyl tert-butyl ether	88.15	ND		36	6.1
91-20-3	Naphthalene	128.17	ND		5.2	5.2
127-18-4	Tetrachloroethene	165.83	23		14	2.7
108-88-3	Toluene	92.14	ND		11	11
156-60-5	trans-1,2-Dichloroethene	96.94	ND		7.9	2.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		15	7.2
71-55-6	1,1,1-Trichloroethane	133.41	9.3	J	11	1.6
79-00-5	1,1,2-Trichloroethane	133.41	ND		11	2.9
79-01-6	Trichloroethene	131.39	1300		5.4	1.9
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		9.8	4.2
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		9.8	3.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		9.8	3.2
75-01-4	Vinyl chloride	62.50	ND		2.6	1.9
1330-20-7	Xylenes, Total	106.17	ND		17	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-178-MB-2 | Lab Sample ID: 140-10792-4

Matrix: Air | Lab File ID: RC01P104.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 12:16

Sample wt/vol: 100(mL) | Date Analyzed: 03/01/2018 16:26

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18444 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.12	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.089	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.38	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.42		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.081	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.21	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.68	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.26		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.93		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.19	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.42		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-178-MB-2 Lab Sample ID: 140-10792-4

Matrix: Air Lab File ID: RC01P104.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:16

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 16:26

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.37	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.56	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.33	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.93	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.3		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.0	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	2.1		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.3		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-179-MB-2 | Lab Sample ID: 140-10792-6

Matrix: Air | Lab File ID: RC01P106.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 12:19

Sample wt/vol: 100(mL) | Date Analyzed: 03/01/2018 18:00

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18444 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.30	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	11		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.45		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.19	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.66	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.79		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.33	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-179-MB-2 Lab Sample ID: 140-10792-6

Matrix: Air Lab File ID: RC01P106.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:19

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 18:00

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.1	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	44		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.8		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.84	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.6	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.8		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-180-MB-2 Lab Sample ID: 140-10792-5

Matrix: Air Lab File ID: RC01P105.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:18

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 17:13

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.080	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.33	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.35	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.30	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.69	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.084	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.34	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.7		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-180-MB-2 | Lab Sample ID: 140-10792-5

Matrix: Air | Lab File ID: RC01P105.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 12:18

Sample wt/vol: 100(mL) | Date Analyzed: 03/01/2018 17:13

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18444 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.51	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.51	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.7	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.3	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.46	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.7	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-181-MB-2 | Lab Sample ID: 140-10792-7

Matrix: Air | Lab File ID: RC01P107.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 12:19

Sample wt/vol: 100(mL) | Date Analyzed: 03/01/2018 18:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18444 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.33	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.42		0.40	0.14
75-34-3	*1,1-Dichloroethane*	*98.96*	*150*	*E*	*0.40*	*0.050*
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	13		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.21	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.93		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	5.2		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.37	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-181-MB-2 Lab Sample ID: 140-10792-7

Matrix: Air Lab File ID: RC01P107.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:19

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 18:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.53	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	*1,1-Dichloroethane*	*98.96*	*600*	*E*	*1.6*	*0.20*
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	53		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.89	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.7		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	28		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.8	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.3		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-181-MB-2 DL Lab Sample ID: 140-10792-7 DL

Matrix: Air Lab File ID: RC02P116.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:19

Sample wt/vol: 20(mL) Date Analyzed: 03/03/2018 04:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18530 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	98.96	150		2.0	0.25

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-181-MB-2 DL Lab Sample ID: 140-10792-7 DL

Matrix: Air Lab File ID: RC02P116.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:19

Sample wt/vol: 20(mL) Date Analyzed: 03/03/2018 04:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18530 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	98.96	610		8.1	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-182-MB-2 Lab Sample ID: 140-10792-8

Matrix: Air Lab File ID: RC01P108.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:22

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 19:33

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.25	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.29	J	0.40	0.075
67-66-3	Chloroform	119.38	0.12	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.37	J	0.40	0.14
75-34-3	*1,1-Dichloroethane*	*98.96*	*260*	*E*	*0.40*	*0.050*
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	12		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.26	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.81	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	2.4		0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	11		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.28		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.36	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.5		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	109		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-182-MB-2 Lab Sample ID: 140-10792-8

Matrix: Air Lab File ID: RC01P108.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:22

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 19:33

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.81	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.0	J	1.4	0.27
67-66-3	Chloroform	119.38	0.58	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.8	J	2.0	0.67
75-34-3	*1,1-Dichloroethane*	*98.96*	*1100*	*E*	*1.6*	*0.20*
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	49		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.1	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	17		2.7	0.54
108-88-3	Toluene	92.14	4.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	59		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.8	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	6.4		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	109		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-182-MB-2 DL Lab Sample ID: 140-10792-8 DL

Matrix: Air Lab File ID: RC02P201.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:22

Sample wt/vol: 10(mL) Date Analyzed: 03/03/2018 05:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18530 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	98.96	360		4.0	0.50

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-182-MB-2 DL Lab Sample ID: 140-10792-8 DL

Matrix: Air Lab File ID: RC02P201.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:22

Sample wt/vol: 10(mL) Date Analyzed: 03/03/2018 05:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18530 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	98.96	1500		16	2.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-184-MB-2 | Lab Sample ID: 140-10792-9

Matrix: Air | Lab File ID: RC01P109.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 12:24

Sample wt/vol: 100(mL) | Date Analyzed: 03/01/2018 20:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18444 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.32	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.40		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.19	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.18	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.67	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.79		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.074	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.34	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-184-MB-2 Lab Sample ID: 140-10792-9

Matrix: Air Lab File ID: RC01P109.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:24

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 20:20

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.1	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.75	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.77	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.40	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.7	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.6		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-185-MB-2 | Lab Sample ID: 140-10792-12

Matrix: Air | Lab File ID: RC01P112D.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 12:34

Sample wt/vol: 100(mL) | Date Analyzed: 03/01/2018 22:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18444 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.25	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.083	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.32	J	0.40	0.075
67-66-3	Chloroform	119.38	0.11	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	12		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	1.8		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.26	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.3		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	5.8		0.40	0.080
108-88-3	Toluene	92.14	1.7		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	1.1		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.38		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.35	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.5		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-185-MB-2 | Lab Sample ID: 140-10792-12

Matrix: Air | Lab File ID: RC01P112D.D

Analysis Method: TO 15 LL | Date Collected: 02/21/2018 12:34

Sample wt/vol: 100(mL) | Date Analyzed: 03/01/2018 22:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18444 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.79	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.52	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.1	J	1.4	0.27
67-66-3	Chloroform	119.38	0.55	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	48		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	7.2		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.1	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	8.0		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	39		2.7	0.54
108-88-3	Toluene	92.14	6.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	5.8		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.0		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.7	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	6.4		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-186-MB-2 Lab Sample ID: 140-10792-11

Matrix: Air Lab File ID: RC01P111.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:33

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 21:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.28	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.080	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.29	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.39	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.31	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.8		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.9		0.40	0.080
108-88-3	Toluene	92.14	1.7		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.36	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.7		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-186-MB-2 Lab Sample ID: 140-10792-11

Matrix: Air Lab File ID: RC01P111.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:33

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 21:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.90	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.50	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.0	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	1.6	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.4	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	6.2		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	13		2.7	0.54
108-88-3	Toluene	92.14	6.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.7	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-187-MB-2 Lab Sample ID: 140-10792-10

Matrix: Air Lab File ID: RC01P110.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:26

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 21:08

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.20	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.58		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.29	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.35	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.22	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.73	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.10	J	0.40	0.080
108-88-3	Toluene	92.14	1.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.24	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.40		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-187-MB-2 Lab Sample ID: 140-10792-10

Matrix: Air Lab File ID: RC01P110.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:26

Sample wt/vol: 100(mL) Date Analyzed: 03/01/2018 21:08

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.64	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	3.6		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.0	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	1.4	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.94	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.5	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.70	J	2.7	0.54
108-88-3	Toluene	92.14	4.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.3	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	2.0		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	6.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

Appendix C

Support Documentation

Job Narrative
140-10792-1

Receipt
The samples were received on 2/23/2018 at 10:30 AM. The samples arrived in good condition and properly preserved.

Receipt Exceptions
Sample SV-183-MB-2 (140-10792-13) was received by the lab, but it was not listed on the Chain-of-Custody (COC). The client confirmed this sample was not to be analyzed.

Air - GC/MS VOA - Method TO-15 LL
EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

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

Comments
No additional comments.

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: Tetra Tech, Inc.
Project/Site: Middle River, MD

TestAmerica Job ID: 140-10792-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: Middle River, MD

TestAmerica Job ID: 140-10792-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-10792-1	SV-168-A-24	Air	02/21/18 12:07	02/23/18 10:30
140-10792-2	SV-095-A-24	Air	02/21/18 13:05	02/23/18 10:30
140-10792-3	SV-075-A-24	Air	02/21/18 12:10	02/23/18 10:30
140-10792-4	SV-178-MB-2	Air	02/21/18 12:16	02/23/18 10:30
140-10792-5	SV-180-MB-2	Air	02/21/18 12:18	02/23/18 10:30
140-10792-6	SV-179-MB-2	Air	02/21/18 12:19	02/23/18 10:30
140-10792-7	SV-181-MB-2	Air	02/21/18 12:19	02/23/18 10:30
140-10792-8	SV-182-MB-2	Air	02/21/18 12:22	02/23/18 10:30
140-10792-9	SV-184-MB-2	Air	02/21/18 12:24	02/23/18 10:30
140-10792-10	SV-187-MB-2	Air	02/21/18 12:26	02/23/18 10:30
140-10792-11	SV-186-MB-2	Air	02/21/18 12:33	02/23/18 10:30
140-10792-12	SV-185-MB-2	Air	02/21/18 12:34	02/23/18 10:30

Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865.291.3000 fax 865.584.4315

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Tony Apanavage	Site Contact: Tony Apanavage	Date: 2/21/2018	COC No.
Tera Tech	Tel/Fax: (301)528-3021	Lab Contact: John McFadden	Carrier: Fedex	9 of 9 COCs
20251 Century Blvd. Ste 200	Analysis Turnaround Time			Job No. 180325
Germantown, Maryland 20874	Calendar (C) or Work Days (W) _____			
Phone: (301)528-5552	TAT if different from Below ___Standard_____			
	☐ 2 weeks			SDG No.
Project Name: 112IC08388	☐ 1 week			
Site: Middle River, MD	☐ 2 days	140-10792 Chain of Custody		
P O #	☐ 1 day			Sampler: MULLIS/PRYOR

Sample Identification	Sample Date	Time Start	Time Stop	Canister Volume in Field "Hg (Start)	Canister Volume in Field "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	Sample Specific Notes:
SV-168-A-24	2/21/2018	1026	1207	-30	0	09717	11663	X	
SV-095-A-24	2/21/2018	1205	1305	-30	-3	10080	11833	X	
SV-075-A-24	2/21/2018	1038	1210	-24	0	09841	09586	X	
SV-178-MB-2	2/21/2018	1058	1216	-30	0	10140	11825	X	Received @ ambient
SV-180-MB-2	2/21/2018	1102	1218	-30	-5	09753	11830	X	1 box, Fedex so
SV-179-MB-2	2/21/2018	1108	1219	-30	0	10294	11820	X	tr K# 77 4905 9458
SV-181-MB-2	2/21/2018	1108	1219	-29.5	-1	10665	11828	X	No Custody seal
SV-182-MB-2	2/21/2018	1112	1222	-30	-6	11550	10494	X	KW 2/23/18
SV-184-MB-2	2/21/2018	1118	1224	-29	0	10845	11645	X	
SV-187-MB-2	2/21/2018	1122	1226	-30	-2	11515	11710	X	
SV-186-MB-2	2/21/2018	1130	1233	-30	-3	10289	11591	X	
SV-185-MB-2	2/21/2018	1132	1234	-26	0	10583	09736	X	
									1 T, 18 cams
									~~20 cams~~ KW 2/23/18
									16 flows

Special Instructions/QC Requirements & Comments: **Contracted Analyte List**

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Walt [signature]	TT Inc	2/22/18 / 1150	[signature]		2/22/18 / 1150
			[signature]	TA-[illegible]	2/23/18 1030

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

03/08/2018

Loc: 140
10792

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST **Log In Number:**

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	/			☐ **Containers, Broken**
2. Were ambient air containers received intact?			/	☒ Checked in lab
3. The coolers/containers custody seal if present, is it intact?			/	☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			/	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	/			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	/			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	/			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	/			☒ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	/			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?	/			☐ **Sample Not Listed on COC**
11. Is the client and project name/# identified?	/			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	/			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	/			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	/			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	/			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			/	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			/	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			/	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			/	☐ If no, lab will adjust
20. For rad samples was sample activity info. Provided?			/	☐ Project missing info

Comments/Actions Taken

8. sample SV-183-MB-2 was received, but is not listed on the COC.

Labeling Verified by: **Date:**

pH test strip lot number:

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: 14002945 PM Instructions: _____

Sample Receiving Associate: _____ Date: 2/23/18

QA026R30.doc, 080916

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 2/27/2018

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
afb	140-10792-A-1	11663	10477	b	1	0	1100	
afb	140-10792-A-2	11833	10631	b	1	-3.5	1101	
afb	140-10792-A-3	09586	10600	b	1	0	1102	
afb	140-10792-A-4	11825	10631	b	1	0	1103	
afb	140-10792-A-5	11830	10631	b	1	-6.8	1104	
afb	140-10792-A-6	11820	10631	b	1	-1.1	1105	
afb	140-10792-A-7	11828	10631	b	1	-1.5	1106	
afb	140-10792-A-8	10494	10549	b	1	-6.3	1107	
afb	140-10792-A-9	11645	10600	b	1	-2.2	1108	
afb	140-10792-A-10	11710	10600	b	1	-3.1	1109	
afb	140-10792-A-11	11591	10477	b	1	-2.9	1110	
afb	140-10792-A-12	09736	10477	b	1	-2.5	1111	
afb	140-10792-A-13	10969	10549	b	1	-29.2	1112	not used

Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Lab File ID: RBFBA30.D BFB Injection Date: 01/30/2018

Instrument ID: MR BFB Injection Time: 11:12

Analysis Batch No.: 17762

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.1	
75	30.0 - 60.0 % of mass 95	54.8	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	78.1	
175	5.0 - 9.0 % of mass 174	5.7	(7.3) 1
176	95.0 - 101.0 % of mass 174	76.6	(98.2) 1
177	5.0 - 9.0 % of mass 176	5.0	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-17762/3	RA30IC01.D	01/30/2018	12:29
	IC 140-17762/4	RA30IC02.D	01/30/2018	13:16
	IC 140-17762/5	RA30IC03.D	01/30/2018	14:04
	IC 140-17762/6	RA30IC04.D	01/30/2018	14:50
	IC 140-17762/7	RA30IC05.D	01/30/2018	15:39
	IC 140-17762/8	RA30IC06.D	01/30/2018	16:27
	ICIS 140-17762/9	RA30IC07.D	01/30/2018	17:15
	IC 140-17762/10	RA30IC08.D	01/30/2018	18:03
	IC 140-17762/11	RA30IC09.D	01/30/2018	18:50
	IC 140-17762/12	RA30IC10.D	01/30/2018	19:38
	ICV 140-17762/14	RA30ICV.D	01/30/2018	21:11

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-17762/3	RA30IC01.D
Level 2	IC 140-17762/4	RA30IC02.D
Level 3	IC 140-17762/5	RA30IC03.D
Level 4	IC 140-17762/6	RA30IC04.D
Level 5	IC 140-17762/7	RA30IC05.D
Level 6	IC 140-17762/8	RA30IC06.D
Level 7	ICIS 140-17762/9	RA30IC07.D
Level 8	IC 140-17762/10	RA30IC08.D
Level 9	IC 140-17762/11	RA30IC09.D
Level 10	IC 140-17762/12	RA30IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Chlorodifluoromethane	+++++ 0.4996	+++++ 0.5018	0.5364 0.4761	0.5007 0.4556	0.4969 0.4366	Ave		0.4879				6.4		30.0			
Propene	+++++ 1.0148	+++++ 1.0127	+++++ 0.9251	1.0749 0.8535	1.0335 0.7750	Ave		0.9557				11.4		30.0			
Dichlorodifluoromethane	+++++ 3.8576	+++++ 3.8716	3.9445 3.4238	4.4278 3.3920	3.8443 3.2841	Ave		3.7557				10.0		30.0			
Chloromethane	+++++ 0.3356	+++++ 0.3504	+++++ 0.3161	0.4352 0.2922	0.3844 0.2804	Ave		0.3421				15.8		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	2.9869 2.5228	2.8020 2.5888	2.6799 2.4191	2.4834 2.2928	2.5057 2.1607	Ave		2.5442				9.4		30.0			
Vinyl chloride	1.2473 1.0050	1.2981 1.0133	1.0342 0.9733	1.0613 0.9642	1.0145 0.8783	Ave		1.0490				12.2		30.0			
1,3-Butadiene	+++++ 0.6759	+++++ 0.6901	0.7589 0.6575	0.7160 0.6429	0.6702 0.6007	Ave		0.6765				7.0		30.0			
Butane	+++++ 1.1770	+++++ 1.1571	1.1761 1.0993	1.1870 1.0664	1.1472 0.9821	Ave		1.1240				6.3		30.0			
Bromomethane	+++++ 0.9756	+++++ 0.9799	1.0961 0.9468	0.9664 0.9339	0.9805 0.8851	Ave		0.9705				6.2		30.0			
Chloroethane	+++++ 0.4798	+++++ 0.4684	0.5400 0.4543	0.5007 0.4508	0.4816 0.4272	Ave		0.4754				7.2		30.0			
Ethanol	+++++ 0.3138	+++++ 0.3115	+++++ 0.2974	0.3206 0.2839	0.3092 0.2628	Ave		0.2999				6.8		30.0			
Vinyl bromide	+++++ 0.9734	+++++ 0.9603	1.0223 0.9264	0.9931 0.9030	0.9628 0.8698	Ave		0.9514				5.2		30.0			
2-Methylbutane	+++++ 0.7927	0.8473 0.7870	0.8827 0.7573	0.8140 0.7354	0.8057 0.7063	Ave		0.7921				6.9		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Acrolein	+++++ 0.2131	+++++ 0.2023	+++++ 0.1714	0.2463 0.2369	0.2775 0.1986	Ave		0.2209				16.0		30.0			
Trichlorofluoromethane	3.8163 3.6210	3.8962 3.5670	3.7377 3.3875	3.7221 3.2631	3.6118 3.0510	Ave		3.5674				7.4		30.0			
Acetonitrile	+++++ 0.2710	+++++ 0.2792	+++++ 0.2690	+++++ 0.2590	0.3012 0.2516	Ave		0.2718				6.4		30.0			
Acetone	+++++ 0.4445	+++++ 0.4298	+++++ 0.3730	+++++ 0.3559	0.5743 0.3319	Ave		0.4182				21.0		30.0			
Isopropyl alcohol	+++++ 1.7615	+++++ 1.7262	+++++ 1.6035	1.7601 1.4471	1.7064 1.2490	Ave		1.6077				12.0		30.0			
Pentane	+++++ 0.2821	0.3253 0.2863	0.3062 0.2706	0.2848 0.2514	0.2797 0.2238	Ave		0.2789				10.5		30.0			
Ethyl ether	+++++ 1.0595	+++++ 1.0591	1.1464 0.9558	1.0861 0.8868	1.0639 0.8197	Ave		1.0097				11.0		30.0			
1,1-Dichloroethene	1.8230 1.4732	1.6952 1.5251	1.5415 1.4388	1.4628 1.3846	1.4710 1.3297	Ave		1.5145				9.6		30.0			
Acrylonitrile	+++++ 0.9755	1.0491 1.0149	0.9699 0.9431	0.9648 0.8986	0.9313 0.8597	Ave		0.9563				6.0		30.0			
tert-Butyl alcohol	+++++ 3.0919	+++++ 3.1666	3.2956 2.9405	3.0814 2.8297	3.0612 2.6483	Ave		3.0144				6.7		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	3.6835 3.3085	3.3240 3.3647	3.3270 3.1386	3.2027 2.9781	3.2883 2.7719	Ave		3.2387				7.5		30.0			
Methylene Chloride	+++++ 1.5226	+++++ 1.4846	+++++ 1.3365	2.3963 1.2627	1.7575 1.1890	Ave		1.5642				26.4		30.0			
3-Chloropropene	+++++ 1.2912	1.4624 1.2679	1.3517 1.1239	1.2960 1.1775	1.2499 1.0934	Ave		1.2571				9.1		30.0			
Carbon disulfide	+++++ 4.3010	4.5429 4.3495	4.2824 4.0908	4.2202 3.9413	4.1883 3.7920	Ave		4.1898				5.3		30.0			
trans-1,2-Dichloroethene	+++++ 1.5663	1.6529 1.6054	1.5536 1.5101	1.5451 1.4740	1.5012 1.4213	Ave		1.5366				4.5		30.0			
Methyl tert-butyl ether	+++++ 4.8878	4.9780 5.0046	4.7681 4.7335	4.6401 4.5480	4.7610 4.3260	Ave		4.7386				4.5		30.0			
1,1-Dichloroethane	3.2552 2.9583	3.2402 2.9974	3.0427 2.7728	2.9120 2.6386	2.9342 2.5185	Ave		2.9270				8.0		30.0			
Vinyl acetate	+++++ 3.0422	+++++ 3.0483	2.4722 2.8443	2.4587 3.0745	2.7400 2.9503	Ave		2.8288				8.9		30.0			
2-Butanone (MEK)	+++++ 0.7255	+++++ 0.7913	+++++ 0.7057	0.7096 0.7007	0.7825 0.6631	Ave		0.7255				6.4		30.0			
Hexane	+++++ 1.2050	1.3784 1.2187	1.2369 1.1204	1.1721 1.0624	1.1769 0.9868	Ave		1.1731				9.5		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
cis-1,2-Dichloroethene	1.9071 1.6125	1.8156 1.6678	1.6641 1.5780	1.6147 1.5302	1.6025 1.4817	Ave		1.6474				7.8		30.0			
Ethyl acetate	+++++ 2.7290	+++++ 2.8405	2.1840 2.6632	2.2813 2.5958	2.5408 2.4854	Ave		2.5400				8.7		30.0			
Chloroform	4.2863 3.7052	3.8694 3.7903	3.7705 3.5491	3.6794 3.4047	3.6984 3.2578	Ave		3.7011				7.5		30.0			
Tetrahydrofuran	+++++ 1.3407	+++++ 1.3730	1.3680 1.2688	1.3174 1.2195	1.3030 1.1665	Ave		1.2946				5.6		30.0			
1,1,1-Trichloroethane	4.1703 3.9689	4.0153 4.0994	3.8140 3.8790	3.6871 3.7835	3.8389 3.6271	Ave		3.8883				4.5		30.0			
1,2-Dichloroethane	0.4598 0.4390	0.4262 0.4435	0.4288 0.4170	0.3913 0.4087	0.4251 0.3915	Ave		0.4231				5.2		30.0			
Benzene	0.8742 0.7844	0.8183 0.7925	0.7957 0.7383	0.7735 0.6873	0.7655 0.6121	Ave		0.7642				9.5		30.0			
1-Butanol	+++++ 0.0491	+++++ 0.0535	+++++ 0.0554	+++++ 0.0549	0.0399 0.0507	Ave		0.0506				11.4		30.0			
Cyclohexane	+++++ 0.1282	0.1302 0.1319	0.1361 0.1198	0.1248 0.1109	0.1254 0.0971	Ave		0.1227				9.8		30.0			
Carbon tetrachloride	0.6377 0.6481	0.5867 0.6494	0.5971 0.6370	0.5827 0.6239	0.6061 0.5914	Ave		0.6160				4.2		30.0			
2,2,4-Trimethylpentane	+++++ 1.1700	+++++ 1.1823	1.1763 1.1037	1.1213 1.0350	1.1405 0.9359	Ave		1.1081				7.6		30.0			
1,2-Dichloropropane	0.2892 0.2749	0.2827 0.2781	0.2783 0.2608	0.2653 0.2439	0.2652 0.2201	Ave		0.2659				7.7		30.0			
Heptane	+++++ 0.2794	0.2806 0.2826	0.2727 0.2668	0.2557 0.2502	0.2719 0.2244	Ave		0.2649				7.1		30.0			
Trichloroethene	0.3941 0.3561	0.3498 0.3989	0.3569 0.4050	0.3383 0.3430	0.3431 0.3253	Ave		0.3611				7.8		30.0			
Dibromomethane	+++++ 0.3180	+++++ 0.3337	0.3335 0.3154	0.3130 0.3075	0.3081 0.2866	Ave		0.3145				4.8		30.0			
Bromodichloromethane	0.5552 0.5927	0.5165 0.6275	0.5155 0.6065	0.5215 0.5926	0.5443 0.5621	Ave		0.5634				7.1		30.0			
1,4-Dioxane	+++++ 0.1244	0.1026 0.1255	0.1107 0.1188	0.1100 0.1111	0.1114 0.0998	Ave		0.1127				7.8		30.0			
Methyl methacrylate	+++++ 0.2534	+++++ 0.2814	+++++ 0.2766	0.1921 0.2732	0.2185 0.2613	Ave		0.2509				13.3		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.4476	+++++ 0.4761	0.4073 0.4607	0.3703 0.4462	0.4067 0.4120	Ave		0.4284				8.2		30.0			
cis-1,3-Dichloropropene	0.4432 0.4616	0.4182 0.4890	0.4016 0.4666	0.4077 0.4542	0.4258 0.4244	Ave		0.4392				6.4		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
trans-1,3-Dichloropropene	0.5110 0.5036	0.4535 0.5257	0.4406 0.5134	0.4431 0.5163	0.4525 0.4903	Ave		0.4850				7.0		30.0			
Toluene	1.2824 1.1325	1.1432 1.1561	1.0870 1.0939	1.0545 1.0385	1.0799 0.9486	Ave		1.1017				7.9		30.0			
1,1,2-Trichloroethane	0.3289 0.3161	0.3191 0.3218	0.2970 0.3044	0.2890 0.2905	0.3016 0.2671	Ave		0.3035				6.1		30.0			
2-Hexanone	+++++ 0.2856	+++++ 0.3067	0.1978 0.3130	0.1839 0.2994	0.2390 0.2768	Ave		0.2628				19.0		30.0			
Dibromochloromethane	0.5478 0.6218	0.4611 0.6757	0.5045 0.6734	0.4783 0.6763	0.5239 0.6415	Ave		0.5804				14.9		30.0			
Octane	0.3713 0.3761	0.3521 0.3823	0.3634 0.3590	0.3351 0.3411	0.3561 0.3074	Ave		0.3544				6.2		30.0			
1,2-Dibromoethane (EDB)	0.5777 0.5703	0.4862 0.5934	0.5028 0.5775	0.5036 0.5627	0.5214 0.5228	Ave		0.5418				7.1		30.0			
Tetrachloroethene	0.4510 0.4222	0.4302 0.4299	0.4096 0.4116	0.3928 0.3938	0.4006 0.3646	Ave		0.4106				5.9		30.0			
Chlorobenzene	1.0111 0.8808	0.9072 0.8981	0.8780 0.8583	0.8277 0.8176	0.8488 0.7523	Ave		0.8680				7.8		30.0			
Ethylbenzene	1.6592 1.4956	1.4733 1.5265	1.4692 1.4423	1.3826 1.3480	1.4274 1.1942	Ave		1.4418				8.4		30.0			
m-Xylene & p-Xylene	1.2623 1.1995	1.1484 1.2020	1.1693 1.1112	1.0926 1.0102	1.1299 0.8551	Ave		1.1181				10.3		30.0			
Bromoform	0.4567 0.5340	0.3917 0.5876	0.3879 0.5961	0.3803 0.6243	0.4243 0.6099	Ave		0.4993				20.2		30.0			
Styrene	+++++ 0.7708	+++++ 0.8353	0.5730 0.8116	0.5596 0.7867	0.6410 0.7271	Ave		0.7131				15.2		30.0			
Nonane	0.6231 0.6749	0.6344 0.6650	0.6202 0.5965	0.5897 0.5334	0.6338 0.4526	Ave		0.6024				11.0		30.0			
o-Xylene	1.3802 1.2416	1.2323 1.2309	1.2402 1.1408	1.1662 1.0563	1.1911 0.9246	Ave		1.1804				10.4		30.0			
1,1,2,2-Tetrachloroethane	0.7571 0.7998	0.6769 0.7375	0.6943 0.6416	0.6940 0.7009	0.7398 0.6230	Ave		0.7065				7.6		30.0			
1,2,3-Trichloropropane	0.2821 0.2687	0.2608 0.2698	0.2586 0.2533	0.2448 0.2410	0.2532 0.2251	Ave		0.2557				6.4		30.0			
Isopropylbenzene	+++++ 1.6847	1.7627 1.6664	1.6980 1.5413	1.5734 1.4182	1.6200 1.2451	Ave		1.5789				10.2		30.0			
Propylbenzene	0.4393 0.4800	0.4121 0.4854	0.4266 0.4494	0.4019 0.4134	0.4353 0.3689	Ave		0.4312				8.2		30.0			
2-Chlorotoluene	0.4307 0.4308	0.4121 0.4227	0.4100 0.3945	0.3900 0.3647	0.4077 0.3250	Ave		0.3988				8.2		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
4-Ethyltoluene	1.6721 1.8578	1.5887 1.8488	1.6064 1.7062	1.5559 1.5414	1.6697 1.3406	Ave		1.6388				9.3		30.0			
1,3,5-Trimethylbenzene	0.6886 0.7368	0.6438 0.7377	0.6390 0.6854	0.6228 0.6329	0.6583 0.5712	Ave		0.6617				7.8		30.0			
Alpha Methyl Styrene	+++++ 0.5961	+++++ 0.6811	+++++ 0.6723	0.3867 0.6319	0.4651 0.5717	Ave		0.5721				19.1		30.0			
Decane	0.7782 0.9615	0.7577 0.9673	0.8036 0.8765	0.7851 0.7693	0.8536 0.6351	Ave		0.8188				12.2		30.0			
tert-Butylbenzene	1.6747 1.7037	1.5629 1.6867	1.5711 1.5356	1.5162 1.3829	1.5602 1.1822	Ave		1.5376				10.2		30.0			
1,2,4-Trimethylbenzene	1.4061 1.5971	1.3356 1.5702	1.4117 1.4079	1.3483 1.2376	1.4396 1.0385	Ave		1.3793				11.6		30.0			
1,3-Dichlorobenzene	0.9382 0.9839	0.8463 0.9937	0.8839 0.9167	0.8388 0.8391	0.8924 0.7369	Ave		0.8870				8.7		30.0			
sec-Butylbenzene	2.1386 2.2501	1.9617 2.2330	1.9986 2.0283	1.9397 1.7523	2.0522 1.4290	Ave		1.9784				12.2		30.0			
Benzyl chloride	0.9176 1.2280	0.8673 1.3521	0.8700 1.2619	0.8429 1.1005	1.0250 0.9090	Ave		1.0374				18.1		30.0			
1,4-Dichlorobenzene	0.9388 0.9885	0.8643 0.9957	0.8741 0.9128	0.8360 0.8274	0.8810 0.7278	Ave		0.8846				9.0		30.0			
4-Isopropyltoluene	1.7285 1.9959	1.5857 2.0202	1.7817 1.8554	1.6423 1.6625	1.7503 1.3675	Ave		1.7390				11.1		30.0			
1,2,3-Trimethylbenzene	1.5856 1.7943	1.5711 1.7803	1.5668 1.6018	1.4899 1.4272	1.6163 1.2294	Ave		1.5663				10.4		30.0			
1,2-Dichlorobenzene	0.8942 0.9621	0.8150 0.9678	0.8654 0.8979	0.8005 0.8158	0.8702 0.7264	Ave		0.8615				8.7		30.0			
Butylbenzene	1.4292 1.8444	1.3568 1.8896	1.4519 1.7531	1.4134 1.5467	1.5664 1.2564	Ave		1.5508				13.8		30.0			
Undecane	0.7892 1.0726	0.7390 1.1100	0.7934 1.0270	0.8096 0.9132	0.8805 0.7285	Ave		0.8863				15.8		30.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.5969	+++++ 0.6647	0.3685 0.6164	0.3739 0.6149	0.4386 0.5398	Ave		0.5267				22.2		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 0.9191	+++++ 0.9859	0.7212 0.9676	0.6936 0.9342	0.7408 0.8332	Ave		0.8495				13.9		30.0			
Dodecane	+++++ 0.9928	+++++ 1.1283	0.5865 1.0229	0.6183 0.9289	0.6706 0.6900	Ave		0.8298				25.4		30.0			
1,2,4-Trichlorobenzene	+++++ 0.7149	0.4150 0.8253	0.4838 0.8320	0.4553 0.8417	0.5017 0.7379	Ave		0.6453				27.7		30.0			
Naphthalene	1.0448 1.6712	0.9243 1.9078	1.1299 1.8929	1.1276 1.8463	1.2769 1.5182	Ave		1.4340				26.4		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Hexachlorobutadiene	0.7046 0.7752	0.6195 0.8332	0.6587 0.8074	0.6012 0.7762	0.6084 0.6733	Ave		0.7058				12.3		30.0			
1,2,3-Trichlorobenzene	+++++ 0.6757	+++++ 0.7953	0.4965 0.7779	0.4801 0.7989	0.4939 0.7046	Ave		0.6529				21.7		30.0			
2-Methylnaphthalene	+++++ 0.2487	+++++ 0.4641	+++++ 0.4569	+++++ 0.4755	0.1340 0.3372	Ave		0.3527				39.5		50.0			
1-Methylnaphthalene	+++++ 0.2715	+++++ 0.5022	+++++ 0.4656	0.2315 0.4794	0.1676 0.3359	Ave		0.3505				38.1		50.0			
4-Bromofluorobenzene (Surr)	0.7650 0.7800	0.7779 0.7658	0.7890 0.7351	0.7826 0.7176	0.7941 0.6764	Ave		0.7584				5.0		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-17762/3	RA30IC01.D
Level 2	IC 140-17762/4	RA30IC02.D
Level 3	IC 140-17762/5	RA30IC03.D
Level 4	IC 140-17762/6	RA30IC04.D
Level 5	IC 140-17762/7	RA30IC05.D
Level 6	IC 140-17762/8	RA30IC06.D
Level 7	ICIS 140-17762/9	RA30IC07.D
Level 8	IC 140-17762/10	RA30IC08.D
Level 9	IC 140-17762/11	RA30IC09.D
Level 10	IC 140-17762/12	RA30IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorodifluoromethane	CBM	Ave	+++++ 49960	+++++ 99602	4119 192008	7784 373011	19042 719553	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	+++++ 101480	+++++ 201013	+++++ 373101	16712 698857	39604 1277376	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	+++++ 385761	+++++ 768499	30290 1380786	68839 2777340	147314 5412793	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	+++++ 33564	+++++ 69549	+++++ 127494	6766 239224	14731 462204	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	5510 252275	10542 513872	20579 975595	38610 1877362	96019 3561275	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	2301 100495	4884 201144	7942 392525	16500 789520	38877 1447608	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	+++++ 67588	+++++ 136978	5828 265156	11132 526420	25683 990068	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	+++++ 117697	+++++ 229678	9031 443357	18455 873129	43962 1618667	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	+++++ 97562	+++++ 194501	8417 381835	15024 764670	37574 1458793	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	+++++ 47978	+++++ 92980	4147 183236	7784 369095	18456 704038	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	+++++ 156896	+++++ 309152	+++++ 599728	24919 1162228	59239 2165410	+++++ 5.01	+++++ 9.99	+++++ 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	+++++ 97338	+++++ 190610	7850 373599	15440 739337	36894 1433559	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	+++++ 79273	3188 156213	6778 305420	12656 602150	30876 1164068	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Acrolein	CBM	Ave	+++++ 21312	+++++ 40157	+++++ 69130	3830 193944	10635 327310	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Trichlorofluoromethane	CBM	Ave	7040 362096	14659 708040	28702 1366159	57868 2671794	138405 5028632	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Acetonitrile	CBM	Ave	+++++ 27104	+++++ 55420	+++++ 108488	+++++ 212047	11541 414724	+++++ 1.00	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0
Acetone	CBM	Ave	+++++ 133362	+++++ 255969	+++++ 451316	+++++ 874182	66025 1641135	+++++ 3.01	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.20 48.0
Isopropyl alcohol	CBM	Ave	+++++ 528496	+++++ 1027986	+++++ 1940134	82100 3554966	196181 6176210	+++++ 3.01	+++++ 5.99	+++++ 12.0	0.480 24.0	1.20 48.0
Pentane	CBM	Ave	+++++ 28211	1224 56821	2351 109148	4428 205846	10720 368799	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Ethyl ether	CBM	Ave	+++++ 105952	+++++ 210233	8803 385484	16886 726094	40771 1351034	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethene	CBM	Ave	3363 147316	6378 302733	11837 580273	22742 1133673	56370 2191529	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	+++++ 97550	3947 201452	7448 380336	15000 735807	35688 1416916	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
tert-Butyl alcohol	CBM	Ave	+++++ 309191	+++++ 628551	25307 1185900	47907 2316983	117307 4364855	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	6795 330843	12506 667885	25548 1265800	49793 2438487	126008 4568598	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Methylene Chloride	CBM	Ave	+++++ 152260	+++++ 294696	+++++ 539025	37255 1033868	67350 1959635	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0
3-Chloropropene	CBM	Ave	+++++ 129123	5502 251667	10380 453252	20149 964101	47897 1802055	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Carbon disulfide	CBM	Ave	+++++ 430092	17092 863361	32885 1649806	65612 3227149	160500 6249903	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	+++++ 156625	6219 318661	11930 609026	24021 1206934	57527 2342499	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	+++++ 488775	18729 993401	36615 1909019	72140 3723922	182444 7130125	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethane	CBM	Ave	6005 295826	12191 594968	23365 1118272	45273 2160451	112441 4150884	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	+++++ 304213	+++++ 605079	18984 1147099	38225 2517397	104997 4862704	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
2-Butanone (MEK)	CBM	Ave	+++++ 72547	+++++ 157076	+++++ 284611	11032 573697	29985 1092853	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0
Hexane	CBM	Ave	+++++ 120502	5186 241914	9498 451862	18222 869891	45099 1626366	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
cis-1,2-Dichloroethene	CBM	Ave	3518 161247	6831 331061	12779 636383	25103 1252882	61408 2442184	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Ethyl acetate	CBM	Ave	+++++ 272902	+++++ 563824	16771 1074075	35467 2125431	97364 4096409	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chloroform	CBM	Ave	7907 370515	14558 752364	28954 1431329	57203 2787766	141724 5369459	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	+++++ 134069	+++++ 272546	10505 511682	20481 998545	49933 1922640	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	7693 396883	15107 813727	29288 1564396	57324 3097922	147109 5978105	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	5237 266293	9999 535650	20209 1019982	37522 2013816	100014 3907140	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	9957 475845	19199 957247	37499 1805776	74171 3386082	180099 6108554	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	+++++ 29797	+++++ 64569	+++++ 135506	+++++ 270253	9384 506348	+++++ 1.00	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	+++++ 77754	3056 159306	6414 293021	11967 546616	29509 968821	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	7263 393178	13765 784365	28139 1557932	55870 3073958	142596 5902097	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	+++++ 709763	+++++ 1428084	55433 2699507	107521 5099511	268337 9340512	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	3294 166795	6633 335945	13116 637774	25436 1201630	62400 2196910	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	+++++ 169496	6584 341354	12852 652666	24522 1232469	63962 2239236	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	4489 216055	8207 481860	16817 990611	32437 1689959	80726 3246702	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	+++++ 192925	+++++ 403081	15715 771427	30017 1514919	72482 2859943	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	6323 359583	12118 757973	24293 1483398	50003 2919706	128060 5610234	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	+++++ 75444	2408 151582	5216 290497	10547 547334	26213 995848	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	+++++ 153737	+++++ 339847	+++++ 676432	18423 1346179	51419 2607373	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	+++++ 271515	+++++ 575108	19192 1126777	35511 2198186	95687 4112261	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
cis-1,3-Dichloropropene	DFBZ	Ave	5048 280020	9812 590578	18927 1141143	39090 2237825	100184 4235998	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd5	Ave	5113 264281	9248 552390	18004 1089547	37170 2203158	93053 4251750	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Toluene	CBZd5	Ave	12831 594266	23313 1214847	44415 2321715	88464 4431626	222095 8226314	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd5	Ave	3291 165862	6507 338126	12134 646119	24240 1239731	62032 2316335	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Hexanone	CBZd 5	Ave	+++++ 149844	+++++ 322256	8080 664344	15426 1277875	49161 2400790	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Dibromochloromethane	CBZd 5	Ave	5481 326299	9403 710033	20613 1429129	40122 2886064	107735 5563126	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Octane	CBZd 5	Ave	3715 197364	7181 401741	14847 761888	28115 1455739	73235 2665696	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	5780 299269	9915 623528	20544 1225652	42246 2401387	107221 4533785	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Tetrachloroethene	CBZd 5	Ave	4512 221546	8773 451735	16736 873561	32954 1680400	82386 3162320	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Chlorobenzene	CBZd 5	Ave	10116 462209	18500 943722	35874 1821596	69433 3488920	174562 6524458	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Ethylbenzene	CBZd 5	Ave	16601 784804	30045 1604021	60028 3061101	115987 5752584	293553 10356375	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd 5	Ave	25259 1258868	46840 2526057	95548 4717005	183320 8622122	464738 14832360	0.0392 2.00	0.0784 3.99	0.157 8.00	0.320 16.0	0.800 32.0
Bromoform	CBZd 5	Ave	4569 280201	7987 617419	15850 1265260	31906 2664358	87253 5289308	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Styrene	CBZd 5	Ave	+++++ 404492	+++++ 877726	23411 1722436	46940 3357063	131824 6305273	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Nonane	CBZd 5	Ave	6234 354142	12938 698726	25340 1266112	49466 2276291	130349 3925374	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
o-Xylene	CBZd 5	Ave	13809 651529	25131 1293453	50674 2421285	97828 4507688	244961 8018750	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	7575 419698	13804 774984	28370 1361818	58220 2991028	152141 5403129	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd 5	Ave	2822 140977	5319 283509	10568 537694	20539 1028585	52066 1952171	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Isopropylbenzene	CBZd 5	Ave	+++++ 884009	35946 1751008	69379 3271189	131986 6052009	333169 10798333	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Propylbenzene	CBZd 5	Ave	4395 251895	8404 510087	17429 953864	33714 1764153	89517 3199258	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
2-Chlorotoluene	CBZd 5	Ave	4309 226074	8403 444172	16753 837183	32718 1556290	83842 2818704	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	16730 974862	32398 1942649	65633 3621190	130522 6577901	343391 11626420	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	6890 386617	13130 775132	26109 1454797	52246 2700808	135393 4953675	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	+++++ 312791	+++++ 715672	+++++ 1426907	32438 2696582	95659 4958200	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	7786 504552	15452 1016420	32834 1860379	65857 3283161	175546 5508017	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
tert-Butylbenzene	CBZd 5	Ave	16756 894018	31873 1772333	64192 3259179	127195 5901403	320875 10252438	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	14068 838081	27236 1649904	57678 2988133	113107 5281375	296062 9006683	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	9387 516305	17259 1044130	36114 1945670	70364 3580637	183533 6390995	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	21397 1180727	40006 2346383	81660 4304932	162720 7478024	422045 12393102	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	9181 644403	17686 1420806	35545 2678333	70710 4696324	210797 7883232	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	9393 518691	17625 1046250	35715 1937249	70131 3530827	181180 6311344	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	17294 1047342	32338 2122805	72796 3937880	137773 7094422	359958 11859110	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	15864 941539	32040 1870714	64016 3399572	124983 6090386	332416 10662003	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	8947 504861	16621 1016927	35357 1905685	67149 3481297	178966 6299641	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	14299 967842	27670 1985514	59321 3720801	118568 6600625	322145 10895604	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	7896 562815	15070 1166396	32417 2179717	67912 3897040	181085 6317836	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	+++++ 313235	+++++ 698408	15056 1308310	31369 2624159	90207 4681454	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 482300	+++++ 1035933	29468 2053724	58187 3986557	152347 7226247	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Ave	+++++ 520941	+++++ 1185570	23965 2170914	51872 3963852	137913 5984092	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2,4-Trichlorobenzene	CBZd 5	Ave	+++++ 375125	8463 867227	19766 1765909	38197 3591958	103182 6399037	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	10453 876926	18850 2004705	46167 4017474	94589 7879181	262605 13166564	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Hexachlorobutadiene	CBZd 5	Ave	7050 406766	12634 875521	26912 1713702	50435 3312283	125133 5838950	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	+++++ 354574	+++++ 835689	20286 1650977	40272 3409456	101572 6110654	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	+++++ 300143	+++++ 1121735	+++++ 2230513	+++++ 4666996	63395 6724954	+++++ 2.30	+++++ 4.59	+++++ 9.20	+++++ 18.4	0.920 36.8
1-Methylnaphthalene	CBZd 5	Ave	+++++ 327721	+++++ 1213833	+++++ 2273024	44657 4705374	79264 6700143	+++++ 2.30	+++++ 4.59	+++++ 9.20	0.368 18.4	0.920 36.8
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1562115 1634670	1618846 1611533	1644837 1560168	1641285 1531137	1633174 1466410	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

Curve Type Legend:
Ave = Average ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-17762/3	RA30IC01.D
Level 2	IC 140-17762/4	RA30IC02.D
Level 3	IC 140-17762/5	RA30IC03.D
Level 4	IC 140-17762/6	RA30IC04.D
Level 5	IC 140-17762/7	RA30IC05.D
Level 6	IC 140-17762/8	RA30IC06.D
Level 7	ICIS 140-17762/9	RA30IC07.D
Level 8	IC 140-17762/10	RA30IC08.D
Level 9	IC 140-17762/11	RA30IC09.D
Level 10	IC 140-17762/12	RA30IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	+++++	9.9						50			
Propene	+++++	+++++	+++++	12.5						50		
Dichlorodifluoromethane	+++++	+++++	5.0						50			
Chloromethane	+++++	+++++	+++++	27.2						50		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	17.4						50					
Vinyl chloride	18.9						50					
1,3-Butadiene	+++++	+++++	12.2						50			
Butane	+++++	+++++	4.6						50			
Bromomethane	+++++	+++++	12.9						50			
Chloroethane	+++++	+++++	13.6						50			
Ethanol	+++++	+++++	+++++	6.9						50		
Vinyl bromide	+++++	+++++	7.5						50			
2-Methylbutane	+++++	7.0						50				
Acrolein	+++++	+++++	+++++	11.5						50		

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Trichlorofluoromethane	7.0						50					
Acetonitrile	+++++	+++++	+++++	+++++	10.8						50	
Acetone	+++++	+++++	+++++	+++++	37.3						80	
Isopropyl alcohol	+++++	+++++	+++++	9.5						50		
Pentane	+++++	16.6						50				
Ethyl ether	+++++	+++++	13.5						50			
1,1-Dichloroethene	20.4						50					
Acrylonitrile	+++++	9.7						50				
tert-Butyl alcohol	+++++	+++++	9.3						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	13.7						50					
Methylene Chloride	+++++	+++++	+++++	53.2						80		
3-Chloropropene	+++++	16.3						50				
Carbon disulfide	+++++	8.4						50				
trans-1,2-Dichloroethene	+++++	7.6						50				
Methyl tert-butyl ether	+++++	5.1						50				
1,1-Dichloroethane	11.2						50					
Vinyl acetate	+++++	+++++	-12.6						50			
2-Butanone (MEK)	+++++	+++++	+++++	-2.2						50		
Hexane	+++++	17.5						50				
cis-1,2-Dichloroethene	15.8						50					
Ethyl acetate	+++++	+++++	-14.0						50			

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chloroform	15.8						50					
Tetrahydrofuran	+++++	+++++	5.7						50			
1,1,1-Trichloroethane	7.2						50					
1,2-Dichloroethane	8.7						50					
Benzene	14.4						50					
1-Butanol	+++++	+++++	+++++	+++++	-21.1						50	
Cyclohexane	+++++	6.1						50				
Carbon tetrachloride	3.5						50					
2,2,4-Trimethylpentane	+++++	+++++	6.1						50			
1,2-Dichloropropane	8.8						50					
Heptane	+++++	5.9						50				
Trichloroethene	9.2						50					
Dibromomethane	+++++	+++++	6.0						50			
Bromodichloromethane	-1.5						50					
1,4-Dioxane	+++++	-8.9						50				
Methyl methacrylate	+++++	+++++	+++++	-23.4						50		
4-Methyl-2-pentanone (MIBK)	+++++	+++++	-4.9						50			
cis-1,3-Dichloropropene	0.9						50					
trans-1,3-Dichloropropene	5.4						50					
Toluene	16.4						50					
1,1,2-Trichloroethane	8.4						50					

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
2-Hexanone	+++++	+++++	-24.7						50			
Dibromochloromethane	-5.6						50					
Octane	4.8						50					
1,2-Dibromoethane (EDB)	6.6						50					
Tetrachloroethene	9.8						50					
Chlorobenzene	16.5						50					
Ethylbenzene	15.1						50					
m-Xylene & p-Xylene	12.9						50					
Bromoform	-8.5						50					
Styrene	+++++	+++++	-19.7						50			
Nonane	3.4						50					
o-Xylene	16.9						50					
1,1,2,2-Tetrachloroethane	7.2						50					
1,2,3-Trichloropropane	10.3						50					
Isopropylbenzene	+++++	11.6						50				
Propylbenzene	1.9						50					
2-Chlorotoluene	8.0						50					
4-Ethyltoluene	2.0						50					
1,3,5-Trimethylbenzene	4.1						50					
Alpha Methyl Styrene	+++++	+++++	+++++	-32.4						50		
Decane	-5.0						50					

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
tert-Butylbenzene	8.9						50					
1,2,4-Trimethylbenzene	1.9						50					
1,3-Dichlorobenzene	5.8						50					
sec-Butylbenzene	8.1						50					
Benzyl chloride	-11.5						50					
1,4-Dichlorobenzene	6.1						50					
4-Isopropyltoluene	-0.6						50					
1,2,3-Trimethylbenzene	1.2						50					
1,2-Dichlorobenzene	3.8						50					
Butylbenzene	-7.8						50					
Undecane	-11.0						50					
1,2-Dibromo-3-Chloropropane	+++++	+++++	-30.0						50			
1,2,4,5-Tetramethylbenzene	+++++	+++++	-15.1						50			
Dodecane	+++++	+++++	-29.3						50			
1,2,4-Trichlorobenzene	+++++	-35.7						50				
Naphthalene	-27.1						80					
Hexachlorobutadiene	-0.2						50					
1,2,3-Trichlorobenzene	+++++	+++++	-24.0						50			
2-Methylnaphthalene	+++++	+++++	+++++	+++++	-62.0						80	
1-Methylnaphthalene	+++++	+++++	+++++	-34.0						80		

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Lab Sample ID: ICV 140-17762/14 Calibration Date: 01/30/2018 21:11

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RA30ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4879	0.5051		2.56	2.47	3.5	35.0
Propene	Ave	0.9557	0.9570		2.47	2.47	0.1	35.0
Dichlorodifluoromethane	Ave	3.756	4.377		2.88	2.47	16.6	35.0
Chloromethane	Ave	0.3421	0.3220		2.32	2.47	-5.9	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.544	2.591		2.52	2.47	1.9	35.0
Vinyl chloride	Ave	1.049	1.041		2.45	2.47	-0.8	35.0
1,3-Butadiene	Ave	0.6765	0.6768		2.47	2.47	0.0	35.0
Butane	Ave	1.124	1.183		2.60	2.47	5.2	35.0
Bromomethane	Ave	0.9705	0.9841		2.50	2.47	1.4	35.0
Chloroethane	Ave	0.4754	0.4775		2.48	2.47	0.5	35.0
Ethanol	Ave	0.2999	0.2849		11.7	12.3	-5.0	35.0
Vinyl bromide	Ave	0.9514	1.041		2.70	2.47	9.4	35.0
2-Methylbutane	Ave	0.7921	0.8138		2.54	2.47	2.8	35.0
Acrolein	Ave	0.2209	0.2275		2.54	2.47	3.0	35.0
Trichlorofluoromethane	Ave	3.567	3.678		2.55	2.47	3.1	35.0
Acetonitrile	Ave	0.2718	0.2877		2.61	2.47	5.8	35.0
Acetone	Ave	0.4182	0.3903		6.91	7.41	-6.7	35.0
Isopropyl alcohol	Ave	1.608	1.805		8.32	7.41	12.3	35.0
Pentane	Ave	0.2789	0.2842		2.52	2.47	1.9	35.0
Ethyl ether	Ave	1.010	1.023		2.50	2.47	1.4	35.0
1,1-Dichloroethene	Ave	1.514	1.434		2.34	2.47	-5.3	35.0
Acrylonitrile	Ave	0.9563	0.9635		2.49	2.47	0.8	35.0
tert-Butyl alcohol	Ave	3.014	3.014		2.47	2.47	0.0	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.239	3.252		2.48	2.47	0.4	35.0
Methylene Chloride	Ave	1.564	1.381		2.18	2.47	-11.7	35.0
3-Chloropropene	Ave	1.257	1.307		2.57	2.47	4.0	35.0
Carbon disulfide	Ave	4.190	4.077		2.40	2.47	-2.7	35.0
trans-1,2-Dichloroethene	Ave	1.537	1.515		2.44	2.47	-1.4	35.0
Methyl tert-butyl ether	Ave	4.739	4.873		2.54	2.47	2.8	35.0
1,1-Dichloroethane	Ave	2.927	2.890		2.44	2.47	-1.2	35.0
Vinyl acetate	Ave	2.829	3.271		2.85	2.47	15.6	35.0
2-Butanone (MEK)	Ave	0.7255	0.7119		2.42	2.47	-1.9	35.0
Hexane	Ave	1.173	1.154		2.43	2.47	-1.7	35.0
cis-1,2-Dichloroethene	Ave	1.647	1.637		2.45	2.47	-0.6	35.0
Ethyl acetate	Ave	2.540	2.598		2.53	2.47	2.3	35.0
Chloroform	Ave	3.701	3.702		2.47	2.47	0.0	35.0
Tetrahydrofuran	Ave	1.295	1.329		2.54	2.47	2.7	35.0
1,1,1-Trichloroethane	Ave	3.888	4.070		2.58	2.47	4.7	35.0
1,2-Dichloroethane	Ave	0.4231	0.4407		2.57	2.47	4.2	35.0
1-Butanol	Ave	0.0506	0.0556		2.72	2.47	10.0	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Lab Sample ID: ICV 140-17762/14 Calibration Date: 01/30/2018 21:11

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RA30ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzene	Ave	0.7642	0.7746		2.50	2.47	1.4	35.0
Cyclohexane	Ave	0.1227	0.1250		2.51	2.47	1.8	35.0
Carbon tetrachloride	Ave	0.6160	0.6889		2.76	2.47	11.8	35.0
2,2,4-Trimethylpentane	Ave	1.108	1.146		2.55	2.47	3.4	35.0
1,2-Dichloropropane	Ave	0.2659	0.2696		2.50	2.47	1.4	35.0
Heptane	Ave	0.2649	0.2721		2.54	2.47	2.7	35.0
Trichloroethene	Ave	0.3611	0.3691		2.52	2.47	2.2	35.0
Dibromomethane	Ave	0.3145	0.3283		2.58	2.47	4.4	35.0
Bromodichloromethane	Ave	0.5634	0.6271		2.75	2.47	11.3	35.0
1,4-Dioxane	Ave	0.1127	0.1179		2.58	2.47	4.7	35.0
Methyl methacrylate	Ave	0.2509	0.2746		2.70	2.47	9.4	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4284	0.4624		2.67	2.47	7.9	35.0
cis-1,3-Dichloropropene	Ave	0.4392	0.4887		2.75	2.47	11.3	35.0
trans-1,3-Dichloropropene	Ave	0.4850	0.5351		2.72	2.47	10.3	35.0
Toluene	Ave	1.102	1.122		2.52	2.47	1.9	35.0
1,1,2-Trichloroethane	Ave	0.3035	0.3092		2.52	2.47	1.9	35.0
2-Hexanone	Ave	0.2628	0.2981		2.80	2.47	13.5	35.0
Dibromochloromethane	Ave	0.5804	0.6993		2.98	2.47	20.5	35.0
Octane	Ave	0.3544	0.3754		2.62	2.47	5.9	35.0
1,2-Dibromoethane (EDB)	Ave	0.5418	0.5896		2.69	2.47	8.8	35.0
Tetrachloroethene	Ave	0.4106	0.4276		2.57	2.47	4.1	35.0
Chlorobenzene	Ave	0.8680	0.8977		2.55	2.47	3.4	35.0
Ethylbenzene	Ave	1.442	1.497		2.56	2.47	3.8	35.0
m-Xylene & p-Xylene	Ave	1.118	1.183		5.23	4.94	5.8	35.0
Bromoform	Ave	0.4993	0.6381		3.16	2.47	27.8	35.0
Styrene	Ave	0.7131	0.8370		2.90	2.47	17.4	35.0
Nonane	Ave	0.6024	0.6373		2.61	2.47	5.8	35.0
o-Xylene	Ave	1.180	1.193		2.49	2.47	1.0	35.0
1,1,2,2-Tetrachloroethane	Ave	0.7065	0.7765		2.71	2.47	9.9	35.0
1,2,3-Trichloropropane	Ave	0.2557	0.2673		2.58	2.47	4.5	35.0
Isopropylbenzene	Ave	1.579	1.681		2.63	2.47	6.5	35.0
Propylbenzene	Ave	0.4312	0.4920		2.82	2.47	14.1	35.0
2-Chlorotoluene	Ave	0.3988	0.4292		2.66	2.47	7.6	35.0
4-Ethyltoluene	Ave	1.639	1.745		2.63	2.47	6.5	35.0
1,3,5-Trimethylbenzene	Ave	0.6617	0.7303		2.73	2.47	10.4	35.0
Alpha Methyl Styrene	Ave	0.5721	0.6952		3.00	2.47	21.5	35.0
Decane	Ave	0.8188	0.9370		2.83	2.47	14.4	35.0
tert-Butylbenzene	Ave	1.538	1.672		2.69	2.47	8.8	35.0
1,2,4-Trimethylbenzene	Ave	1.379	1.533		2.74	2.47	11.1	35.0
1,3-Dichlorobenzene	Ave	0.8870	0.9882		2.75	2.47	11.4	35.0
sec-Butylbenzene	Ave	1.978	2.196		2.74	2.47	11.0	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Lab Sample ID: ICV 140-17762/14 Calibration Date: 01/30/2018 21:11

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RA30ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzyl chloride	Ave	1.037	1.335		3.18	2.47	28.7	35.0
1,4-Dichlorobenzene	Ave	0.8846	0.9798		2.74	2.47	10.8	35.0
4-Isopropyltoluene	Ave	1.739	1.961		2.78	2.47	12.7	35.0
1,2,3-Trimethylbenzene	Ave	1.566	1.539		2.43	2.47	-1.7	35.0
1,2-Dichlorobenzene	Ave	0.8615	0.9599		2.75	2.47	11.4	35.0
Butylbenzene	Ave	1.551	1.840		2.93	2.47	18.7	35.0
Undecane	Ave	0.8863	1.046		2.91	2.47	18.0	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.5267	0.4263		2.00	2.47	-19.1	35.0
1,2,4,5-Tetramethylbenzene	Ave	0.8495	1.694		4.92	2.47	99.4*	35.0
Dodecane	Ave	0.8298	0.9946		2.96	2.47	19.9	35.0
1,2,4-Trichlorobenzene	Ave	0.6453	0.7696		2.94	2.47	19.3	35.0
Naphthalene	Ave	1.434	1.710		2.95	2.47	19.3	35.0
Hexachlorobutadiene	Ave	0.7058	0.7878		2.76	2.47	11.6	35.0
1,2,3-Trichlorobenzene	Ave	0.6529	0.7394		2.80	2.47	13.3	35.0
2-Methylnaphthalene	Ave	0.3527	0.1484		2.38	5.67	-57.9*	50.0
1-Methylnaphthalene	Ave	0.3505	0.1569		2.54	5.68	-55.3*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7584	0.7641		4.03	4.00	0.8	35.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Lab File ID: RBFBC01.D BFB Injection Date: 03/01/2018

Instrument ID: MR BFB Injection Time: 10:28

Analysis Batch No.: 18444

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.0	
75	30.0 - 60.0 % of mass 95	54.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.2	(0.2) 1
174	50.0 - 120.00 % of mass 95	78.6	
175	5.0 - 9.0 % of mass 174	5.6	(7.2) 1
176	95.0 - 101.0 % of mass 174	76.5	(97.2) 1
177	5.0 - 9.0 % of mass 176	5.1	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-18444/2	RCCVC01.D	03/01/2018	10:59
	LCS 140-18444/1002	RCCVC01-LCS.d	03/01/2018	10:59
	MB 140-18444/4	R500BC01.D	03/01/2018	13:19
SV-168-A-24	140-10792-1	RC01P101.D	03/01/2018	14:05
SV-095-A-24	140-10792-2	RC01P102.D	03/01/2018	14:52
SV-075-A-24	140-10792-3	RC01P103.D	03/01/2018	15:39
SV-178-MB-2	140-10792-4	RC01P104.D	03/01/2018	16:26
SV-180-MB-2	140-10792-5	RC01P105.D	03/01/2018	17:13
SV-179-MB-2	140-10792-6	RC01P106.D	03/01/2018	18:00
SV-181-MB-2	140-10792-7	RC01P107.D	03/01/2018	18:46
SV-182-MB-2	140-10792-8	RC01P108.D	03/01/2018	19:33
SV-184-MB-2	140-10792-9	RC01P109.D	03/01/2018	20:20
SV-187-MB-2	140-10792-10	RC01P110.D	03/01/2018	21:08
SV-186-MB-2	140-10792-11	RC01P111.D	03/01/2018	21:55
SV-185-MB-2	140-10792-12	RC01P112D.D	03/01/2018	22:42

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Lab Sample ID: CCVIS 140-18444/2 Calibration Date: 03/01/2018 10:59

Instrument ID: MR Calib Start Date: 06/28/2017 15:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/28/2017 21:58

Lab File ID: RCCVC01.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetaldehyde	Ave	0.3474	0.2588			10.0	-25.5	30.0
2-Methylpentane	Ave	1.822	2.395			2.00	31.4*	30.0
2,3-Dimethylpentane	Ave	0.1274	0.1709			2.00	34.1*	30.0
Thiophene	Ave	0.3433	0.4415			2.00	28.6	30.0
Methylcyclohexane	Ave	0.4439	0.5765			2.00	29.9	30.0
3-Methylthiophene	Ave	0.6908	0.8912			2.00	29.0	30.0
2,3-Dimethylheptane	Ave	0.5998	0.6593			2.00	9.9	30.0
2-Ethylthiophene	Ave	0.9153	1.103			2.00	20.5	30.0
Butylcyclohexane	Ave	0.7978	1.154			2.00	44.6*	30.0
Indane	Ave	1.030	1.364			2.00	32.4*	30.0
Indene	QuaF		0.9760			2.00		30.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		0.0026			2.00		30.0
1,2,3,5-Tetramethylbenzene	Ave	0.9142	1.044			2.00	14.3	30.0
1,2,3,4-Tetramethylbenzene	Ave	1.236	1.370			2.00	10.8	30.0
Benzo(b)thiophene	Ave	0.9147	0.8533			2.00	-6.7	30.0
2-Methylthiophene	Ave	0.6999				2.00		

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Lab Sample ID: CCVIS 140-18444/2 Calibration Date: 03/01/2018 10:59

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RCCVC01.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4879	0.5009		2.05	2.00	2.7	30.0
Propene	Ave	0.9557	0.8743		1.83	2.00	-8.5	30.0
Dichlorodifluoromethane	Ave	3.756	4.118		2.19	2.00	9.7	30.0
Chloromethane	Ave	0.3421	0.3671		2.15	2.00	7.3	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.544	2.855		2.24	2.00	12.2	30.0
Vinyl chloride	Ave	1.049	1.044		1.99	2.00	-0.5	30.0
1,3-Butadiene	Ave	0.6765	0.6916		2.04	2.00	2.2	30.0
Butane	Ave	1.124	1.166		2.08	2.00	3.8	30.0
Bromomethane	Ave	0.9705	1.039		2.14	2.00	7.0	30.0
Chloroethane	Ave	0.4754	0.4875		2.05	2.00	2.5	30.0
Ethanol	Ave	0.2999	0.1883		6.28	10.0	-37.2*	30.0
Vinyl bromide	Ave	0.9514	1.067		2.24	2.00	12.2	30.0
2-Methylbutane	Ave	0.7921	0.7807		1.97	2.00	-1.4	30.0
Acrolein	Ave	0.2209	0.2973		2.69	2.00	34.6*	30.0
Trichlorofluoromethane	Ave	3.567	3.773		2.12	2.00	5.8	30.0
Acetonitrile	Ave	0.2718	0.2523		1.86	2.00	-7.2	30.0
Acetone	Ave	0.4182	0.4309		2.06	2.00	3.0	30.0
Isopropyl alcohol	Ave	1.608	2.046		2.55	2.00	27.3	30.0
Pentane	Ave	0.2789	0.3188		2.29	2.00	14.3	30.0
Ethyl ether	Ave	1.010	0.9905		1.96	2.00	-1.9	30.0
1,1-Dichloroethene	Ave	1.514	1.517		2.00	2.00	0.2	30.0
Acrylonitrile	Ave	0.9563	0.9440		1.97	2.00	-1.3	30.0
tert-Butyl alcohol	Ave	3.014	2.781		1.84	2.00	-7.8	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.239	3.419		2.11	2.00	5.6	30.0
Methylene Chloride	Ave	1.564	1.481		1.89	2.00	-5.3	30.0
3-Chloropropene	Ave	1.257	1.217		1.94	2.00	-3.2	30.0
Carbon disulfide	Ave	4.190	4.242		2.03	2.00	1.3	30.0
trans-1,2-Dichloroethene	Ave	1.537	1.565		2.04	2.00	1.8	30.0
Methyl tert-butyl ether	Ave	4.739	4.802		2.03	2.00	1.3	30.0
1,1-Dichloroethane	Ave	2.927	2.849		1.95	2.00	-2.7	30.0
Vinyl acetate	Ave	2.829	2.956		2.09	2.00	4.5	30.0
2-Butanone (MEK)	Ave	0.7255	0.6686		1.84	2.00	-7.8	30.0
Hexane	Ave	1.173	1.117		1.91	2.00	-4.7	30.0
cis-1,2-Dichloroethene	Ave	1.647	1.650		2.00	2.00	0.1	30.0
Ethyl acetate	Ave	2.540	2.371		1.87	2.00	-6.7	30.0
Chloroform	Ave	3.701	3.703		2.00	2.00	0.0	30.0
Tetrahydrofuran	Ave	1.295	1.178		1.82	2.00	-9.0	30.0
1,1,1-Trichloroethane	Ave	3.888	3.945		2.03	2.00	1.5	30.0
1,2-Dichloroethane	Ave	0.4231	0.4265		2.02	2.00	0.8	30.0
1-Butanol	Ave	0.0506	0.0405		1.60	2.00	-20.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Lab Sample ID: CCVIS 140-18444/2 Calibration Date: 03/01/2018 10:59

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RCCVC01.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzene	Ave	0.7642	0.7838		2.05	2.00	2.6	30.0
Cyclohexane	Ave	0.1227	0.1242		2.02	2.00	1.2	30.0
Carbon tetrachloride	Ave	0.6160	0.6819		2.21	2.00	10.7	30.0
2,2,4-Trimethylpentane	Ave	1.108	1.100		1.99	2.00	-0.7	30.0
1,2-Dichloropropane	Ave	0.2659	0.2588		1.95	2.00	-2.6	30.0
Heptane	Ave	0.2649	0.2669		2.01	2.00	0.7	30.0
Trichloroethene	Ave	0.3611	0.3743		2.07	2.00	3.7	30.0
Dibromomethane	Ave	0.3145	0.3234		2.06	2.00	2.9	30.0
Bromodichloromethane	Ave	0.5634	0.6060		2.15	2.00	7.6	30.0
1,4-Dioxane	Ave	0.1127	0.1048		1.86	2.00	-7.0	30.0
Methyl methacrylate	Ave	0.2509	0.2375		1.89	2.00	-5.3	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4284	0.3996		1.87	2.00	-6.7	30.0
cis-1,3-Dichloropropene	Ave	0.4392	0.4611		2.10	2.00	5.0	30.0
trans-1,3-Dichloropropene	Ave	0.4850	0.5083		2.10	2.00	4.8	30.0
Toluene	Ave	1.102	1.132		2.06	2.00	2.8	30.0
1,1,2-Trichloroethane	Ave	0.3035	0.3096		2.04	2.00	2.0	30.0
2-Hexanone	Ave	0.2628	0.2691		2.05	2.00	2.4	30.0
Dibromochloromethane	Ave	0.5804	0.6800		2.34	2.00	17.1	30.0
Octane	Ave	0.3544	0.3726		2.10	2.00	5.1	30.0
1,2-Dibromoethane (EDB)	Ave	0.5418	0.5790		2.14	2.00	6.9	30.0
Tetrachloroethene	Ave	0.4106	0.4362		2.12	2.00	6.2	30.0
Chlorobenzene	Ave	0.8680	0.9022		2.08	2.00	3.9	30.0
Ethylbenzene	Ave	1.442	1.468		2.04	2.00	1.8	30.0
m-Xylene & p-Xylene	Ave	1.118	1.173		4.20	4.00	4.9	30.0
Bromoform	Ave	0.4993	0.5881		2.36	2.00	17.8	30.0
Styrene	Ave	0.7131	0.7930		2.22	2.00	11.2	30.0
Nonane	Ave	0.6024	0.6125		2.03	2.00	1.7	30.0
o-Xylene	Ave	1.180	1.173		1.99	2.00	-0.6	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7065	0.7456		2.11	2.00	5.5	30.0
1,2,3-Trichloropropane	Ave	0.2557	0.2604		2.04	2.00	1.8	30.0
Isopropylbenzene	Ave	1.579	1.657		2.10	2.00	4.9	30.0
Propylbenzene	Ave	0.4312	0.4863		2.26	2.00	12.8	30.0
2-Chlorotoluene	Ave	0.3988	0.4328		2.17	2.00	8.5	30.0
4-Ethyltoluene	Ave	1.639	1.751		2.14	2.00	6.9	30.0
1,3,5-Trimethylbenzene	Ave	0.6617	0.8408		2.54	2.00	27.1	30.0
Alpha Methyl Styrene	Ave	0.5721	0.6578		2.30	2.00	15.0	30.0
Decane	Ave	0.8188	0.9208		2.25	2.00	12.5	30.0
tert-Butylbenzene	Ave	1.538	1.712		2.23	2.00	11.3	30.0
1,2,4-Trimethylbenzene	Ave	1.379	1.582		2.29	2.00	14.7	30.0
1,3-Dichlorobenzene	Ave	0.8870	1.008		2.27	2.00	13.7	30.0
sec-Butylbenzene	Ave	1.978	2.240		2.26	2.00	13.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Lab Sample ID: CCVIS 140-18444/2 Calibration Date: 03/01/2018 10:59

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RCCVC01.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzyl chloride	Ave	1.037	1.286		2.48	2.00	24.0	30.0
1,4-Dichlorobenzene	Ave	0.8846	1.004		2.27	2.00	13.5	30.0
4-Isopropyltoluene	Ave	1.739	1.995		2.29	2.00	14.7	30.0
1,2,3-Trimethylbenzene	Ave	1.566	1.279		1.63	2.00	-18.4	30.0
1,2-Dichlorobenzene	Ave	0.8615	0.9645		2.24	2.00	12.0	30.0
Butylbenzene	Ave	1.551	1.872		2.41	2.00	20.7	30.0
Undecane	Ave	0.8863	1.017		2.29	2.00	14.7	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.5267	0.4090		1.55	2.00	-22.4	30.0
1,2,4,5-Tetramethylbenzene	Ave	0.8495	1.702		4.01	2.00	100.3*	30.0
Dodecane	Ave	0.8298	0.9474		2.28	2.00	14.2	30.0
1,2,4-Trichlorobenzene	Ave	0.6453	0.7817		2.42	2.00	21.1	30.0
Naphthalene	Ave	1.434	1.686		2.35	2.00	17.5	30.0
Hexachlorobutadiene	Ave	0.7058	0.7822		2.22	2.00	10.8	30.0
1,2,3-Trichlorobenzene	Ave	0.6529	0.7099		2.17	2.00	8.7	30.0
4-Bromofluorobenzene (Surr)	Ave	0.7584	0.7565		3.99	4.00	-0.2	30.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Lab File ID: RBFBC02.D BFB Injection Date: 03/02/2018

Instrument ID: MR BFB Injection Time: 10:01

Analysis Batch No.: 18530

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.0	
75	30.0 - 60.0 % of mass 95	54.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	78.5	
175	5.0 - 9.0 % of mass 174	5.7	(7.3) 1
176	95.0 - 101.0 % of mass 174	75.9	(96.7) 1
177	5.0 - 9.0 % of mass 176	5.0	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-18530/2	RCCVC02.D	03/02/2018	10:33
	LCS 140-18530/1002	RCCVC02-LCS.d	03/02/2018	10:33
	MB 140-18530/4	R500BC02.D	03/02/2018	13:15
SV-181-MB-2 DL	140-10792-7 DL	RC02P116.D	03/03/2018	04:19
SV-182-MB-2 DL	140-10792-8 DL	RC02P201.D	03/03/2018	05:55

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Lab Sample ID: CCVIS 140-18530/2 Calibration Date: 03/02/2018 10:33

Instrument ID: MR Calib Start Date: 06/28/2017 15:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/28/2017 21:58

Lab File ID: RCCVC02.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetaldehyde	Ave	0.3474	0.2841			10.0	-18.2	30.0
2-Methylpentane	Ave	1.822	2.436			2.00	33.7*	30.0
2,3-Dimethylpentane	Ave	0.1274	0.1715			2.00	34.6*	30.0
Thiophene	Ave	0.3433	0.4410			2.00	28.5	30.0
Methylcyclohexane	Ave	0.4439	0.5783			2.00	30.3*	30.0
3-Methylthiophene	Ave	0.6908	0.8823			2.00	27.7	30.0
2,3-Dimethylheptane	Ave	0.5998	0.6714			2.00	11.9	30.0
2-Ethylthiophene	Ave	0.9153	1.091			2.00	19.2	30.0
Butylcyclohexane	Ave	0.7978	1.155			2.00	44.7*	30.0
Indane	Ave	1.030	1.352			2.00	31.3*	30.0
Indene	QuaF		0.9557			2.00		30.0
1,2,3,5-Tetramethylbenzene	Ave	0.9142	1.030			2.00	12.6	30.0
1,2,3,4-Tetramethylbenzene	Ave	1.236	1.350			2.00	9.2	30.0
Benzo(b)thiophene	Ave	0.9147	0.8106			2.00	-11.4	30.0
1,2-Dimethyl-4-Ethylbenzene	QuaF					2.00		
2-Methylthiophene	Ave	0.6999				2.00		

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Lab Sample ID: CCVIS 140-18530/2 Calibration Date: 03/02/2018 10:33

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RCCVC02.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4879	0.5138		2.11	2.00	5.3	30.0
Propene	Ave	0.9557	0.9051		1.89	2.00	-5.3	30.0
Dichlorodifluoromethane	Ave	3.756	4.156		2.21	2.00	10.6	30.0
Chloromethane	Ave	0.3421	0.3870		2.26	2.00	13.1	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.544	2.902		2.28	2.00	14.1	30.0
Vinyl chloride	Ave	1.049	1.121		2.14	2.00	6.8	30.0
1,3-Butadiene	Ave	0.6765	0.7243		2.14	2.00	7.1	30.0
Butane	Ave	1.124	1.223		2.18	2.00	8.8	30.0
Bromomethane	Ave	0.9705	1.080		2.23	2.00	11.3	30.0
Chloroethane	Ave	0.4754	0.5159		2.17	2.00	8.5	30.0
Ethanol	Ave	0.2999	0.1975		6.59	10.0	-34.1*	30.0
Vinyl bromide	Ave	0.9514	1.109		2.33	2.00	16.6	30.0
2-Methylbutane	Ave	0.7921	0.8073		2.04	2.00	1.9	30.0
Acrolein	Ave	0.2209	0.3041		2.75	2.00	37.7*	30.0
Trichlorofluoromethane	Ave	3.567	3.949		2.21	2.00	10.7	30.0
Acetonitrile	Ave	0.2718	0.2423		1.78	2.00	-10.9	30.0
Acetone	Ave	0.4182	0.4550		2.18	2.00	8.8	30.0
Isopropyl alcohol	Ave	1.608	2.086		2.59	2.00	29.7	30.0
Pentane	Ave	0.2789	0.3190		2.29	2.00	14.4	30.0
Ethyl ether	Ave	1.010	1.021		2.02	2.00	1.1	30.0
1,1-Dichloroethene	Ave	1.514	1.502		1.98	2.00	-0.8	30.0
Acrylonitrile	Ave	0.9563	0.9441		1.97	2.00	-1.3	30.0
tert-Butyl alcohol	Ave	3.014	2.752		1.83	2.00	-8.7	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.239	3.425		2.12	2.00	5.8	30.0
Methylene Chloride	Ave	1.564	1.474		1.88	2.00	-5.8	30.0
3-Chloropropene	Ave	1.257	1.266		2.01	2.00	0.7	30.0
Carbon disulfide	Ave	4.190	4.276		2.04	2.00	2.0	30.0
trans-1,2-Dichloroethene	Ave	1.537	1.559		2.03	2.00	1.4	30.0
Methyl tert-butyl ether	Ave	4.739	4.762		2.01	2.00	0.5	30.0
1,1-Dichloroethane	Ave	2.927	2.861		1.96	2.00	-2.2	30.0
Vinyl acetate	Ave	2.829	2.984		2.11	2.00	5.5	30.0
2-Butanone (MEK)	Ave	0.7255	0.6546		1.80	2.00	-9.8	30.0
Hexane	Ave	1.173	1.128		1.92	2.00	-3.8	30.0
cis-1,2-Dichloroethene	Ave	1.647	1.640		1.99	2.00	-0.5	30.0
Ethyl acetate	Ave	2.540	2.377		1.87	2.00	-6.4	30.0
Chloroform	Ave	3.701	3.728		2.01	2.00	0.7	30.0
Tetrahydrofuran	Ave	1.295	1.210		1.87	2.00	-6.5	30.0
1,1,1-Trichloroethane	Ave	3.888	3.951		2.03	2.00	1.6	30.0
1,2-Dichloroethane	Ave	0.4231	0.4344		2.05	2.00	2.7	30.0
1-Butanol	Ave	0.0506	0.0405		1.60	2.00	-19.9	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Lab Sample ID: CCVIS 140-18530/2 Calibration Date: 03/02/2018 10:33

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RCCVC02.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzene	Ave	0.7642	0.7921		2.07	2.00	3.7	30.0
Cyclohexane	Ave	0.1227	0.1244		2.03	2.00	1.3	30.0
Carbon tetrachloride	Ave	0.6160	0.6926		2.25	2.00	12.4	30.0
2,2,4-Trimethylpentane	Ave	1.108	1.112		2.01	2.00	0.3	30.0
1,2-Dichloropropane	Ave	0.2659	0.2623		1.97	2.00	-1.3	30.0
Heptane	Ave	0.2649	0.2663		2.01	2.00	0.5	30.0
Trichloroethene	Ave	0.3611	0.3718		2.06	2.00	3.0	30.0
Dibromomethane	Ave	0.3145	0.3251		2.07	2.00	3.4	30.0
Bromodichloromethane	Ave	0.5634	0.6131		2.18	2.00	8.8	30.0
1,4-Dioxane	Ave	0.1127	0.1052		1.87	2.00	-6.7	30.0
Methyl methacrylate	Ave	0.2509	0.2403		1.92	2.00	-4.2	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4284	0.4160		1.94	2.00	-2.9	30.0
cis-1,3-Dichloropropene	Ave	0.4392	0.4673		2.13	2.00	6.4	30.0
trans-1,3-Dichloropropene	Ave	0.4850	0.5109		2.11	2.00	5.3	30.0
Toluene	Ave	1.102	1.122		2.04	2.00	1.9	30.0
1,1,2-Trichloroethane	Ave	0.3035	0.3090		2.04	2.00	1.8	30.0
2-Hexanone	Ave	0.2628	0.2712		2.06	2.00	3.2	30.0
Dibromochloromethane	Ave	0.5804	0.6782		2.34	2.00	16.8	30.0
Octane	Ave	0.3544	0.3731		2.11	2.00	5.3	30.0
1,2-Dibromoethane (EDB)	Ave	0.5418	0.5772		2.13	2.00	6.5	30.0
Tetrachloroethene	Ave	0.4106	0.4330		2.11	2.00	5.5	30.0
Chlorobenzene	Ave	0.8680	0.8901		2.05	2.00	2.5	30.0
Ethylbenzene	Ave	1.442	1.437		1.99	2.00	-0.3	30.0
m-Xylene & p-Xylene	Ave	1.118	1.155		4.13	4.00	3.3	30.0
Bromoform	Ave	0.4993	0.5740		2.30	2.00	15.0	30.0
Styrene	Ave	0.7131	0.7680		2.15	2.00	7.7	30.0
Nonane	Ave	0.6024	0.6215		2.06	2.00	3.2	30.0
o-Xylene	Ave	1.180	1.143		1.94	2.00	-3.2	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7065	0.7353		2.08	2.00	4.1	30.0
1,2,3-Trichloropropane	Ave	0.2557	0.2546		1.99	2.00	-0.4	30.0
Isopropylbenzene	Ave	1.579	1.614		2.04	2.00	2.2	30.0
Propylbenzene	Ave	0.4312	0.4763		2.21	2.00	10.4	30.0
2-Chlorotoluene	Ave	0.3988	0.4127		2.07	2.00	3.5	30.0
4-Ethyltoluene	Ave	1.639	1.715		2.09	2.00	4.7	30.0
1,3,5-Trimethylbenzene	Ave	0.6617	0.8216		2.48	2.00	24.2	30.0
Alpha Methyl Styrene	Ave	0.5721	0.6477		2.26	2.00	13.2	30.0
Decane	Ave	0.8188	0.9279		2.27	2.00	13.3	30.0
tert-Butylbenzene	Ave	1.538	1.689		2.20	2.00	9.9	30.0
1,2,4-Trimethylbenzene	Ave	1.379	1.564		2.27	2.00	13.4	30.0
1,3-Dichlorobenzene	Ave	0.8870	0.9882		2.23	2.00	11.4	30.0
sec-Butylbenzene	Ave	1.978	2.232		2.26	2.00	12.8	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Lab Sample ID: CCVIS 140-18530/2 Calibration Date: 03/02/2018 10:33

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RCCVC02.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzyl chloride	Ave	1.037	1.269		2.45	2.00	22.3	30.0
1,4-Dichlorobenzene	Ave	0.8846	0.9914		2.24	2.00	12.1	30.0
4-Isopropyltoluene	Ave	1.739	2.050		2.36	2.00	17.9	30.0
1,2,3-Trimethylbenzene	Ave	1.566	1.271		1.62	2.00	-18.9	30.0
1,2-Dichlorobenzene	Ave	0.8615	0.9611		2.23	2.00	11.6	30.0
Butylbenzene	Ave	1.551	1.873		2.42	2.00	20.8	30.0
Undecane	Ave	0.8863	1.027		2.32	2.00	15.8	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.5267	0.3972		1.51	2.00	-24.6	30.0
1,2,4,5-Tetramethylbenzene	Ave	0.8495	1.684		3.96	2.00	98.2*	30.0
Dodecane	Ave	0.8298	0.9406		2.27	2.00	13.4	30.0
1,2,4-Trichlorobenzene	Ave	0.6453	0.7537		2.34	2.00	16.8	30.0
Naphthalene	Ave	1.434	1.627		2.27	2.00	13.5	30.0
Hexachlorobutadiene	Ave	0.7058	0.7754		2.20	2.00	9.9	30.0
1,2,3-Trichlorobenzene	Ave	0.6529	0.6912		2.12	2.00	5.9	30.0
4-Bromofluorobenzene (Surr)	Ave	0.7584	0.7579		4.00	4.00	-0.0	30.0

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Lab File ID: R500BC01.D Lab Sample ID: MB 140-18444/4

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MR Date Analyzed: 03/01/2018 13:19

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-18444/1002	RCCVC01-LCS.d	03/01/2018 10:59
SV-168-A-24	140-10792-1	RC01P101.D	03/01/2018 14:05
SV-095-A-24	140-10792-2	RC01P102.D	03/01/2018 14:52
SV-075-A-24	140-10792-3	RC01P103.D	03/01/2018 15:39
SV-178-MB-2	140-10792-4	RC01P104.D	03/01/2018 16:26
SV-180-MB-2	140-10792-5	RC01P105.D	03/01/2018 17:13
SV-179-MB-2	140-10792-6	RC01P106.D	03/01/2018 18:00
SV-181-MB-2	140-10792-7	RC01P107.D	03/01/2018 18:46
SV-182-MB-2	140-10792-8	RC01P108.D	03/01/2018 19:33
SV-184-MB-2	140-10792-9	RC01P109.D	03/01/2018 20:20
SV-187-MB-2	140-10792-10	RC01P110.D	03/01/2018 21:08
SV-186-MB-2	140-10792-11	RC01P111.D	03/01/2018 21:55
SV-185-MB-2	140-10792-12	RC01P112D.D	03/01/2018 22:42

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-18444/4

Matrix: Air Lab File ID: R500BC01.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 03/01/2018 13:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-18444/4

Matrix: Air Lab File ID: R500BC01.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 03/01/2018 13:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Matrix: Air Level: Low Lab File ID: RCCVC01-LCS.d

Lab ID: LCS 140-18444/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.05	103	70-130	
Carbon tetrachloride	2.00	2.21	111	70-130	
Chlorodifluoromethane	2.00	2.05	103	60-140	
Chloroform	2.00	2.00	100	70-130	
cis-1,2-Dichloroethene	2.00	2.00	100	70-130	
Dichlorodifluoromethane	2.00	2.19	110	60-140	
1,1-Dichloroethane	2.00	1.95	97	70-130	
1,2-Dichloroethane	2.00	2.02	101	70-130	
1,1-Dichloroethene	2.00	2.00	100	70-130	
Ethylbenzene	2.00	2.04	102	70-130	
Methylene Chloride	2.00	1.89	95	70-130	
Methyl tert-butyl ether	2.00	2.03	101	60-140	
Naphthalene	2.00	2.35	118	60-140	
Tetrachloroethene	2.00	2.12	106	70-130	
Toluene	2.00	2.06	103	70-130	
trans-1,2-Dichloroethene	2.00	2.04	102	70-130	
1,2,4-Trichlorobenzene	2.00	2.42	121	60-140	
1,1,1-Trichloroethane	2.00	2.03	101	70-130	
1,1,2-Trichloroethane	2.00	2.04	102	70-130	
Trichloroethene	2.00	2.07	104	70-130	
1,2,3-Trimethylbenzene	2.00	1.63	82	70-130	
1,2,4-Trimethylbenzene	2.00	2.29	115	70-130	
1,3,5-Trimethylbenzene	2.00	2.54	127	70-130	
Vinyl chloride	2.00	1.99	99	70-130	
Xylenes, Total	6.00	6.19	103	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Lab File ID: R500BC02.D Lab Sample ID: MB 140-18530/4

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MR Date Analyzed: 03/02/2018 13:15

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-18530/1002	RCCVC02-LCS.d	03/02/2018 10:33
SV-181-MB-2 DL	140-10792-7 DL	RC02P116.D	03/03/2018 04:19
SV-182-MB-2 DL	140-10792-8 DL	RC02P201.D	03/03/2018 05:55

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-18530/4

Matrix: Air Lab File ID: R500BC02.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 03/02/2018 13:15

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18530 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-18530/4

Matrix: Air Lab File ID: R500BC02.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 03/02/2018 13:15

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18530 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Matrix: Air Level: Low Lab File ID: RCCVC02-LCS.d

Lab ID: LCS 140-18530/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.07	104	70-130	
Carbon tetrachloride	2.00	2.25	112	70-130	
Chlorodifluoromethane	2.00	2.11	105	60-140	
Chloroform	2.00	2.01	101	70-130	
cis-1,2-Dichloroethene	2.00	1.99	100	70-130	
Dichlorodifluoromethane	2.00	2.21	111	60-140	
1,1-Dichloroethane	2.00	1.96	98	70-130	
1,2-Dichloroethane	2.00	2.05	103	70-130	
1,1-Dichloroethene	2.00	1.98	99	70-130	
Ethylbenzene	2.00	1.99	100	70-130	
Methylene Chloride	2.00	1.88	94	70-130	
Methyl tert-butyl ether	2.00	2.01	100	60-140	
Naphthalene	2.00	2.27	113	60-140	
Tetrachloroethene	2.00	2.11	105	70-130	
Toluene	2.00	2.04	102	70-130	
trans-1,2-Dichloroethene	2.00	2.03	101	70-130	
1,2,4-Trichlorobenzene	2.00	2.34	117	60-140	
1,1,1-Trichloroethane	2.00	2.03	102	70-130	
1,1,2-Trichloroethane	2.00	2.04	102	70-130	
Trichloroethene	2.00	2.06	103	70-130	
1,2,3-Trimethylbenzene	2.00	1.62	81	70-130	
1,2,4-Trimethylbenzene	2.00	2.27	113	70-130	
1,3,5-Trimethylbenzene	2.00	2.48	124	70-130	
Vinyl chloride	2.00	2.14	107	70-130	
Xylenes, Total	6.00	6.07	101	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
SV-168-A-24	140-10792-1	101
SV-095-A-24	140-10792-2	105
SV-075-A-24	140-10792-3	102
SV-178-MB-2	140-10792-4	107
SV-180-MB-2	140-10792-5	106
SV-179-MB-2	140-10792-6	107
SV-181-MB-2	140-10792-7	106
SV-181-MB-2 DL	140-10792-7 DL	100
SV-182-MB-2	140-10792-8	109
SV-182-MB-2 DL	140-10792-8 DL	100
SV-184-MB-2	140-10792-9	107
SV-187-MB-2	140-10792-10	107
SV-186-MB-2	140-10792-11	107
SV-185-MB-2	140-10792-12	107
	MB 140-18444/4	102
	MB 140-18530/4	103
	LCS 140-18444/1002	100
	LCS 140-18530/1002	100

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Sample No.: ICIS 140-17762/9 Date Analyzed: 01/30/2018 17:15

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RA30IC07.D Heated Purge: (Y/N) N

Calibration ID: 1371

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		397524	7.71	2418900	9.85	2104378	14.86
UPPER LIMIT		556534	8.04	3386460	10.18	2946129	15.19
LOWER LIMIT		238514	7.38	1451340	9.52	1262627	14.53
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-17762/14		374886	7.72	2292324	9.85	1999070	14.86

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Sample No.: CCVIS 140-18444/2 Date Analyzed: 03/01/2018 10:59

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RCCVC01.D Heated Purge: (Y/N) N

Calibration ID: 1371

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		357240	7.69	2145935	9.83	1828892	14.84
UPPER LIMIT		500136	8.02	3004309	10.16	2560449	15.17
LOWER LIMIT		214344	7.36	1287561	9.50	1097335	14.51
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-18444/1002		357240	7.69	2145935	9.83	1828892	14.84
MB 140-18444/4		365117	7.68	2188191	9.82	1812042	14.84
140-10792-1	SV-168-A-24	345106	7.69	2072824	9.83	1815717	14.84
140-10792-2	SV-095-A-24	358253	7.69	2156103	9.83	1811309	14.84
140-10792-3	SV-075-A-24	364715	7.69	2187163	9.83	1741770	14.84
140-10792-4	SV-178-MB-2	359703	7.68	2147943	9.83	1788913	14.84
140-10792-5	SV-180-MB-2	349284	7.68	2085454	9.82	1747867	14.84
140-10792-6	SV-179-MB-2	360037	7.68	2153156	9.82	1826646	14.84
140-10792-7	SV-181-MB-2	356654	7.70	2146818	9.83	1797695	14.84
140-10792-8	SV-182-MB-2	350297	7.70	2103616	9.83	1739674	14.84
140-10792-9	SV-184-MB-2	355725	7.68	2158392	9.83	1815237	14.84
140-10792-10	SV-187-MB-2	351497	7.69	2130349	9.83	1777224	14.84
140-10792-11	SV-186-MB-2	354190	7.68	2130696	9.82	1791868	14.84
140-10792-12	SV-185-MB-2	351742	7.68	2112374	9.82	1738634	14.84

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Sample No.: CCVIS 140-18530/2 Date Analyzed: 03/02/2018 10:33

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RCCVC02.D Heated Purge: (Y/N) N

Calibration ID: 1371

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		340163	7.69	2030333	9.83	1735713	14.84
UPPER LIMIT		476228	8.02	2842466	10.16	2429998	15.17
LOWER LIMIT		204098	7.36	1218200	9.50	1041428	14.51
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-18530/1002		340163	7.69	2030333	9.83	1735713	14.84
MB 140-18530/4		348815	7.67	2085504	9.82	1705566	14.84
140-10792-7 DL	SV-181-MB-2 DL	383017	7.68	2281330	9.82	2015702	14.84
140-10792-8 DL	SV-182-MB-2 DL	340935	7.68	2061800	9.82	1818436	14.84

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

LMC - MRC

SAMPLE CALCULATION

SAMPLE IDENTIFICATION	**SV-168-A-24**
COMPOUND	TRICHLOROETHENE
COMPOUND AREA	1865523
INTERNAL STANDARD AMOUNT (ppbv)	4
DILUTION FACTOR	1
INTERNAL STANDARD AREA	2072824
AVERAGE RRF	0.3611
SAMPLE VOLUME (mL)	20
FINAL VOLUME (mL)	500

MW= 131.39

GAS CONSTANT = 24.45

	on column		final result	
	9.9694	ppbv	249.24	ppbv
	53.57	µg/m³	1339.4	µg/m³

IS AREA	COMPOUN	IS AMOUNT PPB	COMPOUND AMOUNT	RRF
2324388	4489	4	0.0196	0.3941
2394140	8207	4	0.0392	0.3498
2404366	16817	4	0.0784	0.3569
2397193	32437	4	0.16	0.3383
2352829	80726	4	0.4	0.3431
2422753	216055	4	1	0.3567
2418900	481860	4	2	0.3984
2445825	990611	4	4	0.4050
2463428	1689959	4	8	0.3430
2495007	3246702	4	16	0.3253
			AVERAGE RRF	0.3611
			%RSD	7.74

CCV RRF 03/01/18 **10:59**

IS AREA	COMPOUN	IS AMOUNT (NG)	COMPOUND	RRF
2145935	401572	4	2	0.3743

%D 3.66

Surrogate %R 4-Bromofluorobenzene	SPIKE AMOUNT	Surrogate CONCENTRATION
101	4	4.04

LCS %R	SPIKE AMOUNT	LCS CONCENTRATION
103.5	2	2.07

TUNE % ABDUNDANCE	RAW ABUNDANCE m/z 95	RAW ABUNDANCE m/z	TUNE ON 03/01/18@10:28
18.96	1104896	209472	

LMC - MRC

SAMPLE CALCULATION

SAMPLE IDENTIFICATION	SV-168-A-24		
COMPOUND	TRICHLOROETHENE	MW=	131.39
		GAS CONSTANT =	24.45
COMPOUND AREA	1865523		
INTERNAL STANDARD AMOUNT (ppbv)	4		
DILUTION FACTOR	1		
INTERNAL STANDARD AREA	2072824		
AVERAGE RRF	0.3611		
SAMPLE VOLUME (mL)	20		
FINAL VOLUME (mL)	500		

	on column		final result	
	9.9694	ppbv	249.24	ppbv
	53.57	µg/m³	1339.4	µg/m³

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1
SDG No.:
Client Sample ID: SV-168-A-24 Lab Sample ID: 140-10792-1
Matrix: Air Lab File ID: RC01P101.D
Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:07
Sample wt/vol: 20(mL) Date Analyzed: 03/01/2018 14:05
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 18444 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		2.0	0.58
56-23-5	Carbon tetrachloride	153.81	ND		2.0	0.38
75-45-6	Chlorodifluoromethane	86.47	0.42	J	2.0	0.38
67-66-3	Chloroform	119.38	0.74	J	2.0	0.38
156-59-2	cis-1,2-Dichloroethene	96.94	1.5	J	2.0	0.60
75-71-8	Dichlorodifluoromethane	120.91	0.71	J	2.0	0.68
75-34-3	1,1-Dichloroethane	98.96	0.88	J	2.0	0.25
107-06-2	1,2-Dichloroethane	98.96	ND		2.0	0.48
75-35-4	1,1-Dichloroethene	96.94	130		2.0	0.35
100-41-4	Ethylbenzene	106.17	ND		2.0	0.68
75-09-2	Methylene Chloride	84.93	3.9	J	5.0	3.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		10	1.7
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	3.5		2.0	0.40
108-88-3	Toluene	92.14	ND		3.0	3.0
156-60-5	trans-1,2-Dichloroethene	96.94	ND		2.0	0.50
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		2.0	0.98
71-55-6	1,1,1-Trichloroethane	133.41	1.7	J	2.0	0.30
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.0	0.53
79-01-6	Trichloroethene	131.39	250	✓	1.0	0.35
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.85
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.63
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.65
75-01-4	Vinyl chloride	62.50	ND		1.0	0.73
1330-20-7	Xylenes, Total	106.17	ND		4.0	0.60

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Client Sample ID: SV-168-A-24 Lab Sample ID: 140-10792-1

Matrix: Air Lab File ID: RC01P101.D

Analysis Method: TO 15 LL Date Collected: 02/21/2018 12:07

Sample wt/vol: 20(mL) Date Analyzed: 03/01/2018 14:05

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18444 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		6.4	1.8
56-23-5	Carbon tetrachloride	153.81	ND		13	2.4
75-45-6	Chlorodifluoromethane	86.47	1.5	J	7.1	1.3
67-66-3	Chloroform	119.38	3.6	J	9.8	1.8
156-59-2	cis-1,2-Dichloroethene	96.94	6.1	J	7.9	2.4
75-71-8	Dichlorodifluoromethane	120.91	3.5	J	9.9	3.3
75-34-3	1,1-Dichloroethane	98.96	3.6	J	8.1	1.0
107-06-2	1,2-Dichloroethane	98.96	ND		8.1	1.9
75-35-4	1,1-Dichloroethene	96.94	500		7.9	1.4
100-41-4	Ethylbenzene	106.17	ND		8.7	2.9
75-09-2	Methylene Chloride	84.93	14	J	17	11
1634-04-4	Methyl tert-butyl ether	88.15	ND		36	6.1
91-20-3	Naphthalene	128.17	ND		5.2	5.2
127-18-4	Tetrachloroethene	165.83	23		14	2.7
108-88-3	Toluene	92.14	ND		11	11
156-60-5	trans-1,2-Dichloroethene	96.94	ND		7.9	2.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		15	7.2
71-55-6	1,1,1-Trichloroethane	133.41	9.3	J	11	1.6
79-00-5	1,1,2-Trichloroethane	133.41	ND		11	2.9
79-01-6	Trichloroethene	131.39	1300	✓	5.4	1.9
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		9.8	4.2
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		9.8	3.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		9.8	3.2
75-01-4	Vinyl chloride	62.50	ND		2.6	1.9
1330-20-7	Xylenes, Total	106.17	ND		17	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180226-7505.b\RC01P101.D
Lims ID: 140-10792-A-1
Client ID: SV-168-A-24
Sample Type: Client
Inject. Date: 01-Mar-2018 14:05:30 ALS Bottle#: 1 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007505-005
Misc. Info.: 140-10792-a-1
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20180226-7505.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 01-Mar-2018 14:41:54 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: tajh Date: 01-Mar-2018 14:41:54

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.686	7.686	0.000	79	345106	4.00	
* 2 1,4-Difluorobenzene	114	9.827	9.827	0.000	94	2072824	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.842	14.842	0.000	88	1815717	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.557	16.557	0.000	89	1389662	4.04	
6 Chlorodifluoromethane	67	3.453	3.459	-0.006	43	703	0.0167	
8 Dichlorodifluoromethane	85	3.502	3.507	-0.005	99	9210	0.0284	
27 1,1-Dichloroethene	96	5.190	5.201	-0.010	97	663729	5.08	
31 Methylene Chloride	84	5.481	5.470	0.011	87	21262	0.1576	
37 1,1-Dichloroethane	63	6.522	6.522	0.000	99	8917	0.0353	
41 cis-1,2-Dichloroethene	96	7.401	7.401	0.000	94	8759	0.0616	
43 Chloroform	83	7.713	7.724	-0.011	90	9508	0.0298	
45 1,1,1-Trichloroethane	97	8.679	8.679	0.000	96	22977	0.0685	
56 Trichloroethene	130	10.582	10.588	-0.005	98	1865523	9.97	
65 Toluene	91	12.777	12.777	0.000	93	35217	0.0704	
73 Tetrachloroethene	129	13.990	13.990	0.000	96	25823	0.1385	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
cis-1,2-Dichloroethene	1.9071 1.6125	1.8156 1.6678	1.6641 1.5780	1.6147 1.5302	1.6025 1.4817	Ave		1.6474				7.8		30.0			
Ethyl acetate	+++++ 2.7290	+++++ 2.8405	2.1840 2.6632	2.2813 2.5958	2.5408 2.4854	Ave		2.5400				8.7		30.0			
Chloroform	4.2863 3.7052	3.8694 3.7903	3.7705 3.5491	3.6794 3.4047	3.6984 3.2578	Ave		3.7011				7.5		30.0			
Tetrahydrofuran	+++++ 1.3407	+++++ 1.3730	1.3680 1.2688	1.3174 1.2195	1.3030 1.1665	Ave		1.2946				5.6		30.0			
1,1,1-Trichloroethane	4.1703 3.9689	4.0153 4.0994	3.8140 3.8790	3.6871 3.7835	3.8389 3.6271	Ave		3.8883				4.5		30.0			
1,2-Dichloroethane	0.4598 0.4390	0.4262 0.4435	0.4288 0.4170	0.3913 0.4087	0.4251 0.3915	Ave		0.4231				5.2		30.0			
Benzene	0.8742 0.7844	0.8183 0.7925	0.7957 0.7383	0.7735 0.6873	0.7655 0.6121	Ave		0.7642				9.5		30.0			
1-Butanol	+++++ 0.0491	+++++ 0.0535	+++++ 0.0554	+++++ 0.0549	0.0399 0.0507	Ave		0.0506				11.4		30.0			
Cyclohexane	+++++ 0.1282	0.1302 0.1319	0.1361 0.1198	0.1248 0.1109	0.1254 0.0971	Ave		0.1227				9.8		30.0			
Carbon tetrachloride	0.6377 0.6481	0.5867 0.6494	0.5971 0.6370	0.5827 0.6239	0.6061 0.5914	Ave		0.6160				4.2		30.0			
2,2,4-Trimethylpentane	+++++ 1.1700	+++++ 1.1823	1.1763 1.1037	1.1213 1.0350	1.1405 0.9359	Ave		1.1081				7.6		30.0			
1,2-Dichloropropane	0.2892 0.2749	0.2827 0.2781	0.2783 0.2608	0.2653 0.2439	0.2652 0.2201	Ave		0.2659				7.7		30.0			
Heptane	+++++ 0.2794	0.2806 0.2826	0.2727 0.2668	0.2557 0.2502	0.2719 0.2244	Ave		0.2649				7.1		30.0			
Trichloroethene	0.3941 0.3561	0.3498 0.3989	0.3569 0.4050	0.3383 0.3430	0.3431 0.3253	Ave		0.3611				7.8		30.0			
Dibromomethane	+++++ 0.3180	+++++ 0.3337	0.3335 0.3154	0.3130 0.3075	0.3081 0.2866	Ave		0.3145				4.8		30.0			
Bromodichloromethane	0.5552 0.5927	0.5165 0.6275	0.5155 0.6065	0.5215 0.5926	0.5443 0.5621	Ave		0.5634				7.1		30.0			
1,4-Dioxane	+++++ 0.1244	0.1026 0.1255	0.1107 0.1188	0.1100 0.1111	0.1114 0.0998	Ave		0.1127				7.8		30.0			
Methyl methacrylate	+++++ 0.2534	+++++ 0.2814	+++++ 0.2766	0.1921 0.2732	0.2185 0.2613	Ave		0.2509				13.3		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.4476	+++++ 0.4761	0.4073 0.4607	0.3703 0.4462	0.4067 0.4120	Ave		0.4284				8.2		30.0			
cis-1,3-Dichloropropene	0.4432 0.4616	0.4182 0.4890	0.4016 0.4666	0.4077 0.4542	0.4258 0.4244	Ave		0.4392				6.4		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
cis-1,2-Dichloroethene	1.9071 1.6125	1.8156 1.6678	1.6641 1.5780	1.6147 1.5302	1.6025 1.4817	Ave		1.6474				7.8		30.0			
Ethyl acetate	+++++ 2.7290	+++++ 2.8405	2.1840 2.6632	2.2813 2.5958	2.5408 2.4854	Ave		2.5400				8.7		30.0			
Chloroform	4.2863 3.7052	3.8694 3.7903	3.7705 3.5491	3.6794 3.4047	3.6984 3.2578	Ave		3.7011				7.5		30.0			
Tetrahydrofuran	+++++ 1.3407	+++++ 1.3730	1.3680 1.2688	1.3174 1.2195	1.3030 1.1665	Ave		1.2946				5.6		30.0			
1,1,1-Trichloroethane	4.1703 3.9689	4.0153 4.0994	3.8140 3.8790	3.6871 3.7835	3.8389 3.6271	Ave		3.8883				4.5		30.0			
1,2-Dichloroethane	0.4598 0.4390	0.4262 0.4435	0.4288 0.4170	0.3913 0.4087	0.4251 0.3915	Ave		0.4231				5.2		30.0			
Benzene	0.8742 0.7844	0.8183 0.7925	0.7957 0.7383	0.7735 0.6873	0.7655 0.6121	Ave		0.7642				9.5		30.0			
1-Butanol	+++++ 0.0491	+++++ 0.0535	+++++ 0.0554	+++++ 0.0549	0.0399 0.0507	Ave		0.0506				11.4		30.0			
Cyclohexane	+++++ 0.1282	0.1302 0.1319	0.1361 0.1198	0.1248 0.1109	0.1254 0.0971	Ave		0.1227				9.8		30.0			
Carbon tetrachloride	0.6377 0.6481	0.5867 0.6494	0.5971 0.6370	0.5827 0.6239	0.6061 0.5914	Ave		0.6160				4.2		30.0			
2,2,4-Trimethylpentane	+++++ 1.1700	+++++ 1.1823	1.1763 1.1037	1.1213 1.0350	1.1405 0.9359	Ave		1.1081				7.6		30.0			
1,2-Dichloropropane	0.2892 0.2749	0.2827 0.2781	0.2783 0.2608	0.2653 0.2439	0.2652 0.2201	Ave		0.2659				7.7		30.0			
Heptane	+++++ 0.2794	0.2806 0.2826	0.2727 0.2668	0.2557 0.2502	0.2719 0.2244	Ave		0.2649				7.1		30.0			
Trichloroethene	0.3941 0.3561	0.3498 0.3989	0.3569 0.4050	0.3383 0.3430	0.3431 0.3253	Ave		0.3611				7.8		30.0			
Dibromomethane	+++++ 0.3180	+++++ 0.3337	0.3335 0.3154	0.3130 0.3075	0.3081 0.2866	Ave		0.3145				4.8		30.0			
Bromodichloromethane	0.5552 0.5927	0.5165 0.6275	0.5155 0.6065	0.5215 0.5926	0.5443 0.5621	Ave		0.5634				7.1		30.0			
1,4-Dioxane	+++++ 0.1244	0.1026 0.1255	0.1107 0.1188	0.1100 0.1111	0.1114 0.0998	Ave		0.1127				7.8		30.0			
Methyl methacrylate	+++++ 0.2534	+++++ 0.2814	+++++ 0.2766	0.1921 0.2732	0.2185 0.2613	Ave		0.2509				13.3		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.4476	+++++ 0.4761	0.4073 0.4607	0.3703 0.4462	0.4067 0.4120	Ave		0.4284				8.2		30.0			
cis-1,3-Dichloropropene	0.4432 0.4616	0.4182 0.4890	0.4016 0.4666	0.4077 0.4542	0.4258 0.4244	Ave		0.4392				6.4		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC01.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 30-Jan-2018 12:29:30 ALS Bottle#: 9 Worklist Smp#: 3
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-003
Misc. Info.: 134528
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:02:45 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 30-Jan-2018 13:35:00

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.692	7.710	-0.018	86	376476	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.844	9.852	-0.008	95	2324388	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.858	14.859	-0.001	89	2041864	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.568	16.570	-0.002	86	1562115	4.00	4.04	
6 Chlorodifluoromethane	67	3.475	3.471	0.004	97	1114	0.0196	0.0243	
7 Propene	41	3.481	3.477	0.004	85	2863	0.0196	0.0318	
8 Dichlorodifluoromethane	85	3.518	3.519	-0.001	100	9712	0.0196	0.0275	
9 Chloromethane	52	3.648	3.653	-0.005	98	1546	0.0196	0.0480	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.669	3.675	-0.006	90	5510	0.0196	0.0230	
12 Vinyl chloride	62	3.793	3.789	0.004	41	2301	0.0196	0.0233	
14 Butadiene	54	3.863	3.863	0.000	68	1660	0.0196	0.0261	
15 Bromomethane	94	4.095	4.098	-0.003	95	2402	0.0196	0.0263	
16 Chloroethane	64	4.203	4.208	-0.005	76	1269	0.0196	0.0284	
17 Ethanol	31	4.306	4.313	-0.007	90	4299	0.0980	0.1523	
18 Vinyl bromide	106	4.440	4.441	-0.001	97	2560	0.0196	0.0286	
19 2-Methylbutane	43	4.494	4.498	-0.004	85	1726	0.0196	0.0232	
20 Acrolein	56	4.651	4.656	-0.005	32	2244	0.0196	0.1079	
21 Trichlorofluoromethane	101	4.651	4.659	-0.008	98	7040	0.0196	0.0210	
22 Acetonitrile	40	4.829	4.719	0.110	49	52	0.0196	0.002032	
23 Acetone	58	4.748	4.748	0.000	99	8407	0.0588	0.2136	
24 Isopropyl alcohol	45	4.839	4.843	-0.004	84	11498	0.0588	0.0760	
25 Pentane	72	4.845	4.847	-0.002	79	779	0.0196	0.0297	
26 Ethyl ether	31	4.985	4.975	0.010	84	2420	0.0196	0.0255	
27 1,1-Dichloroethene	96	5.211	5.218	-0.007	95	3363	0.0196	0.0236	
28 Acrylonitrile	53	5.282	5.288	-0.006	88	3069	0.0196	0.0341	
29 2-Methyl-2-propanol	59	5.330	5.325	0.005	94	6634	0.0196	0.0234	
30 1,1,2-Trichloro-1,2,2-trif	101	5.379	5.390	-0.011	94	6795	0.0196	0.0223	
31 Methylene Chloride	84	5.481	5.492	-0.011	90	18478	0.0196	0.1255	
32 3-Chloro-1-propene	39	5.503	5.514	-0.011	93	3037	0.0196	0.0257	
33 Carbon disulfide	76	5.616	5.625	-0.009	99	9012	0.0196	0.0229	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
34 trans-1,2-Dichloroethene	96	6.177	6.192	-0.015	97	3586	0.0196	0.0248	
36 Methyl tert-butyl ether	73	6.333	6.323	0.010	94	10267	0.0196	0.0230	
37 1,1-Dichloroethane	63	6.527	6.545	-0.018	99	6005	0.0196	0.0218	
38 Vinyl acetate	43	6.667	6.662	0.005	100	4484	0.0196	0.0168	
39 2-Butanone (MEK)	72	7.056	7.036	0.020	87	850	0.0196	0.0124	
40 Hexane	56	7.110	7.119	-0.009	83	2733	0.0196	0.0248	
41 cis-1,2-Dichloroethene	96	7.412	7.426	-0.014	94	3518	0.0196	0.0227	
42 Ethyl acetate	43	7.643	7.622	0.021	98	3285	0.0196	0.0137	
43 Chloroform	83	7.719	7.743	-0.024	89	7907	0.0196	0.0227	
44 Tetrahydrofuran	42	8.134	8.108	0.026	87	3253	0.0196	0.0267	
45 1,1,1-Trichloroethane	97	8.695	8.701	-0.006	94	7693	0.0196	0.0210	
46 1,2-Dichloroethane	62	8.754	8.771	-0.017	95	5237	0.0196	0.0213	
47 Benzene	78	9.267	9.274	-0.007	98	9957	0.0196	0.0224	
49 Cyclohexane	69	9.283	9.298	-0.015	94	1690	0.0196	0.0237	
50 Carbon tetrachloride	117	9.304	9.312	-0.008	96	7263	0.0196	0.0203	
53 Isooctane	57	10.140	10.145	-0.005	97	16099	0.0196	0.0250	
54 1,2-Dichloropropane	63	10.539	10.540	-0.001	75	3294	0.0196	0.0213	
55 n-Heptane	71	10.555	10.561	-0.006	78	3571	0.0196	0.0232	
56 Trichloroethene	130	10.593	10.605	-0.012	91	4489	0.0196	0.0214	
57 Dibromomethane	93	10.642	10.648	-0.006	92	5327	0.0196	0.0292	
58 Dichlorobromomethane	83	10.814	10.825	-0.011	96	6323	0.0196	0.0193	
59 1,4-Dioxane	88	10.868	10.851	0.017	37	938	0.0196	0.0143	
60 Methyl methacrylate	41	11.014	10.990	0.024	92	568	0.0196	0.003895	
62 4-Methyl-2-pentanone (MIBK	43	11.903	11.878	0.025	58	3279	0.0196	0.0132	
63 cis-1,3-Dichloropropene	75	11.914	11.915	-0.001	95	5048	0.0196	0.0198	
64 trans-1,3-Dichloropropene	75	12.658	12.660	-0.002	95	5113	0.0196	0.0207	
65 Toluene	91	12.793	12.795	-0.002	94	12831	0.0196	0.0228	
66 1,1,2-Trichloroethane	83	12.847	12.853	-0.006	90	3291	0.0196	0.0212	
69 2-Hexanone	58	13.349	13.313	0.036	1	171	0.0196	0.001275	
70 Chlorodibromomethane	129	13.575	13.580	-0.005	97	5481	0.0196	0.0185	
71 n-Octane	85	13.618	13.618	0.000	84	3715	0.0196	0.0205	
72 Ethylene Dibromide	107	13.872	13.876	-0.004	95	5780	0.0196	0.0209	
73 Tetrachloroethene	129	14.001	14.005	-0.004	94	4512	0.0196	0.0215	
74 Chlorobenzene	112	14.907	14.910	-0.003	91	10116	0.0196	0.0228	
76 Ethylbenzene	91	15.236	15.237	-0.001	98	16601	0.0196	0.0226	
77 m-Xylene & p-Xylene	91	15.408	15.413	-0.005	99	25259	0.0392	0.0443	
79 Bromoform	173	15.807	15.812	-0.005	92	4569	0.0196	0.0179	
80 Styrene	104	15.883	15.884	-0.001	96	6414	0.0196	0.0176	
81 n-Nonane	57	15.926	15.926	0.000	80	6234	0.0196	0.0203	
82 o-Xylene	91	15.948	15.948	0.000	98	13809	0.0196	0.0229	
83 1,1,2,2-Tetrachloroethane	83	16.271	16.269	0.002	96	7575	0.0196	0.0210	
84 1,2,3-Trichloropropane	110	16.422	16.424	-0.002	97	2822	0.0196	0.0216	
85 Isopropylbenzene	105	16.562	16.566	-0.004	46	19387	0.0196	0.0241	
86 N-Propylbenzene	120	17.139	17.144	-0.005	97	4395	0.0196	0.0200	
87 2-Chlorotoluene	126	17.166	17.164	0.002	94	4309	0.0196	0.0212	
88 4-Ethyltoluene	105	17.312	17.312	0.000	99	16730	0.0196	0.0200	
89 1,3,5-Trimethylbenzene	120	17.404	17.400	0.004	92	6890	0.0196	0.0204	
90 Alpha Methyl Styrene	118	17.657	17.652	0.005	84	3968	0.0196	0.0136	
91 n-Decane	57	17.797	17.793	0.004	94	7786	0.0196	0.0186	
92 tert-Butylbenzene	119	17.867	17.868	-0.001	90	16756	0.0196	0.0213	
93 1,2,4-Trimethylbenzene	105	17.884	17.884	0.000	95	14068	0.0196	0.0200	
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	97	9387	0.0196	0.0207	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
95 sec-Butylbenzene	105	18.169	18.170	-0.001	98	21397	0.0196	0.0212	
96 Benzyl chloride	91	18.239	18.237	0.002	97	9181	0.0196	0.0173	
97 1,4-Dichlorobenzene	146	18.250	18.251	-0.001	91	9393	0.0196	0.0208	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	96	17294	0.0196	0.0195	
99 1,2,3-Trimethylbenzene	105	18.390	18.393	-0.003	98	15864	0.0196	0.0198	
101 1,2-Dichlorobenzene	146	18.638	18.638	0.000	91	8947	0.0196	0.0203	
104 n-Butylbenzene	91	18.833	18.832	0.001	98	14299	0.0196	0.0181	
105 Undecane	57	19.232	19.228	0.004	92	7896	0.0196	0.0175	
106 1,2-Dibromo-3-Chloropropan	157	19.286	19.284	0.002	86	3926	0.0196	0.0146	
108 1,2,4,5-Tetramethylbenzene	119	19.641	19.641	0.000	96	7868	0.0196	0.0181	
111 Dodecane	57	20.337	20.340	-0.003	96	3630	0.0196	0.008570	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	93	4733	0.0196	0.0144	
113 Naphthalene	128	20.574	20.574	0.000	98	10453	0.0196	0.0143	
115 Hexachlorobutadiene	225	20.822	20.827	-0.005	93	7050	0.0196	0.0196	
116 1,2,3-Trichlorobenzene	180	20.866	20.864	0.002	93	4640	0.0196	0.0139	
S 119 Xylenes, Total	100				0		0.0588	0.0672	
S 120 1,2-Dichloroethene, Total	1				0		0.0392	0.0475	

Reagents:

40L1-3DNP_00001	Amount Added: 50.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC02.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 30-Jan-2018 13:16:30 ALS Bottle#: 9 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-004
Misc. Info.: 134528
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:02:50 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 30-Jan-2018 13:52:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.703	7.710	-0.007	86	383916	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.849	9.852	-0.003	95	2394140	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.858	14.859	-0.001	89	2080924	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.568	16.570	-0.002	86	1618846	4.00	4.10	
6 Chlorodifluoromethane	67	3.486	3.471	0.015	96	2123	0.0392	0.0453	
7 Propene	41	3.486	3.477	0.009	90	5102	0.0392	0.0556	
8 Dichlorodifluoromethane	85	3.529	3.519	0.010	100	17336	0.0392	0.0481	
9 Chloromethane	52	3.664	3.653	0.011	99	2252	0.0392	0.0686	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.685	3.675	0.010	93	10542	0.0392	0.0432	
12 Vinyl chloride	62	3.799	3.789	0.010	96	4884	0.0392	0.0485	
13 Butane	43	3.869	3.863	0.006	81	5263	0.0392	0.0488	
14 Butadiene	54	3.874	3.863	0.011	68	2949	0.0392	0.0454	
15 Bromomethane	94	4.106	4.098	0.008	95	4220	0.0392	0.0453	
16 Chloroethane	64	4.208	4.208	0.000	96	2193	0.0392	0.0481	
17 Ethanol	31	4.305	4.313	-0.008	90	7445	0.1960	0.2587	
18 Vinyl bromide	106	4.440	4.441	-0.001	97	4302	0.0392	0.0471	
19 2-Methylbutane	43	4.505	4.498	0.007	78	3188	0.0392	0.0419	
20 Acrolein	56	4.667	4.656	0.011	30	3603	0.0392	0.1700	
21 Trichlorofluoromethane	101	4.667	4.659	0.008	99	14659	0.0392	0.0428	
22 Acetonitrile	40	4.694	4.716	-0.022	84	1047	0.0392	0.0401	
23 Acetone	58	4.753	4.748	0.005	99	16017	0.1176	0.3990	
24 Isopropyl alcohol	45	4.845	4.843	0.002	80	23064	0.1176	0.1495	
25 Pentane	72	4.850	4.847	0.003	75	1224	0.0392	0.0457	
26 Ethyl ether	31	4.985	4.975	0.010	81	4487	0.0392	0.0463	
27 1,1-Dichloroethene	96	5.217	5.218	-0.001	94	6378	0.0392	0.0439	
28 Acrylonitrile	53	5.287	5.288	-0.001	91	3947	0.0392	0.0430	
29 2-Methyl-2-propanol	59	5.330	5.325	0.005	93	13003	0.0392	0.0449	
30 1,1,2-Trichloro-1,2,2-trif	101	5.389	5.390	-0.001	95	12506	0.0392	0.0402	
31 Methylene Chloride	84	5.492	5.492	0.000	92	21070	0.0392	0.1403	
32 3-Chloro-1-propene	39	5.513	5.514	-0.001	97	5502	0.0392	0.0456	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.627	5.625	0.002	98	17092	0.0392	0.0425	
34 trans-1,2-Dichloroethene	96	6.187	6.192	-0.005	96	6219	0.0392	0.0422	
36 Methyl tert-butyl ether	73	6.338	6.323	0.015	95	18729	0.0392	0.0412	
37 1,1-Dichloroethane	63	6.538	6.545	-0.007	99	12191	0.0392	0.0434	
38 Vinyl acetate	43	6.667	6.662	0.005	99	8219	0.0392	0.0303	
39 2-Butanone (MEK)	72	7.050	7.036	0.014	97	3926	0.0392	0.0564	
40 Hexane	56	7.120	7.119	0.001	83	5186	0.0392	0.0461	
41 cis-1,2-Dichloroethene	96	7.422	7.426	-0.004	94	6831	0.0392	0.0432	
42 Ethyl acetate	43	7.638	7.622	0.016	97	8705	0.0392	0.0357	
43 Chloroform	83	7.740	7.743	-0.003	92	14558	0.0392	0.0410	
44 Tetrahydrofuran	42	8.129	8.108	0.021	87	6016	0.0392	0.0484	
45 1,1,1-Trichloroethane	97	8.695	8.701	-0.006	95	15107	0.0392	0.0405	
46 1,2-Dichloroethane	62	8.765	8.771	-0.006	97	9999	0.0392	0.0395	
47 Benzene	78	9.266	9.274	-0.008	96	19199	0.0392	0.0420	
49 Cyclohexane	69	9.299	9.298	0.001	93	3056	0.0392	0.0416	
50 Carbon tetrachloride	117	9.310	9.312	-0.002	92	13765	0.0392	0.0373	
53 Isooctane	57	10.145	10.145	0.000	97	29173	0.0392	0.0440	
54 1,2-Dichloropropane	63	10.539	10.540	-0.001	88	6633	0.0392	0.0417	
55 n-Heptane	71	10.561	10.561	0.000	83	6584	0.0392	0.0415	
56 Trichloroethene	130	10.604	10.605	-0.001	93	8207	0.0392	0.0380	
57 Dibromomethane	93	10.641	10.648	-0.007	93	8735	0.0392	0.0464	
58 Dichlorobromomethane	83	10.819	10.825	-0.006	98	12118	0.0392	0.0359	
59 1,4-Dioxane	88	10.868	10.851	0.017	71	2408	0.0392	0.0357	
60 Methyl methacrylate	41	10.997	10.990	0.007	93	3421	0.0392	0.0228	
62 4-Methyl-2-pentanone (MIBK	43	11.898	11.878	0.020	96	8155	0.0392	0.0318	
63 cis-1,3-Dichloropropene	75	11.914	11.915	-0.001	96	9812	0.0392	0.0373	
64 trans-1,3-Dichloropropene	75	12.658	12.660	-0.002	94	9248	0.0392	0.0367	
65 Toluene	91	12.798	12.795	0.003	95	23313	0.0392	0.0407	
66 1,1,2-Trichloroethane	83	12.852	12.853	-0.001	98	6507	0.0392	0.0412	
69 2-Hexanone	58	13.338	13.313	0.025	95	2418	0.0392	0.0177	
70 Chlorodibromomethane	129	13.575	13.580	-0.005	97	9403	0.0392	0.0311	
71 n-Octane	85	13.618	13.618	0.000	83	7181	0.0392	0.0389	
72 Ethylene Dibromide	107	13.877	13.876	0.001	99	9915	0.0392	0.0352	
73 Tetrachloroethene	129	14.006	14.005	0.001	94	8773	0.0392	0.0411	
74 Chlorobenzene	112	14.907	14.910	-0.003	94	18500	0.0392	0.0410	
76 Ethylbenzene	91	15.241	15.237	0.004	99	30045	0.0392	0.0401	
77 m-Xylene & p-Xylene	91	15.414	15.413	0.001	99	46840	0.0784	0.0805	
79 Bromoform	173	15.813	15.812	0.001	94	7987	0.0392	0.0307	
80 Styrene	104	15.883	15.884	-0.001	97	11145	0.0392	0.0300	
81 n-Nonane	57	15.926	15.926	0.000	84	12938	0.0392	0.0413	
82 o-Xylene	91	15.948	15.948	0.000	98	25131	0.0392	0.0409	
83 1,1,2,2-Tetrachloroethane	83	16.271	16.269	0.002	96	13804	0.0392	0.0376	
84 1,2,3-Trichloropropane	110	16.427	16.424	0.003	97	5319	0.0392	0.0400	
85 Isopropylbenzene	105	16.568	16.566	0.002	61	35946	0.0392	0.0438	
86 N-Propylbenzene	120	17.145	17.144	0.001	97	8404	0.0392	0.0375	
87 2-Chlorotoluene	126	17.166	17.164	0.002	95	8403	0.0392	0.0405	
88 4-Ethyltoluene	105	17.312	17.312	0.000	99	32398	0.0392	0.0380	
89 1,3,5-Trimethylbenzene	120	17.398	17.400	-0.002	92	13130	0.0392	0.0381	
90 Alpha Methyl Styrene	118	17.652	17.652	0.000	80	7239	0.0392	0.0243	
91 n-Decane	57	17.792	17.793	-0.001	93	15452	0.0392	0.0363	
92 tert-Butylbenzene	119	17.873	17.868	0.005	90	31873	0.0392	0.0398	
93 1,2,4-Trimethylbenzene	105	17.883	17.884	-0.001	96	27236	0.0392	0.0380	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	96	17259	0.0392	0.0374	
95 sec-Butylbenzene	105	18.169	18.170	-0.001	99	40006	0.0392	0.0389	
96 Benzyl chloride	91	18.239	18.237	0.002	98	17686	0.0392	0.0328	
97 1,4-Dichlorobenzene	146	18.250	18.251	-0.001	91	17625	0.0392	0.0383	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	96	32338	0.0392	0.0357	
99 1,2,3-Trimethylbenzene	105	18.396	18.393	0.003	98	32040	0.0392	0.0393	
101 1,2-Dichlorobenzene	146	18.638	18.638	0.000	90	16621	0.0392	0.0371	
104 n-Butylbenzene	91	18.832	18.832	0.000	97	27670	0.0392	0.0343	
105 Undecane	57	19.232	19.228	0.004	93	15070	0.0392	0.0327	
106 1,2-Dibromo-3-Chloropropan	157	19.285	19.284	0.001	88	7054	0.0392	0.0257	
108 1,2,4,5-Tetramethylbenzene	119	19.641	19.641	0.000	95	14005	0.0392	0.0317	
111 Dodecane	57	20.342	20.340	0.002	97	8120	0.0392	0.0188	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	91	8463	0.0392	0.0252	
113 Naphthalene	128	20.574	20.574	0.000	98	18850	0.0392	0.0253	
115 Hexachlorobutadiene	225	20.828	20.827	0.001	93	12634	0.0392	0.0344	
116 1,2,3-Trichlorobenzene	180	20.865	20.864	0.001	92	8967	0.0392	0.0264	
S 119 Xylenes, Total	100				0		0.1176	0.1215	
S 120 1,2-Dichloroethene, Total	1				0		0.0784	0.0854	

Reagents:

40L1-3DNP_00001	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC03.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 30-Jan-2018 14:04:30 ALS Bottle#: 9 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-005
Misc. Info.: 134528
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:02:54 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 30-Jan-2018 15:38:38

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.697	7.710	-0.013	85	391790	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.844	9.852	-0.008	95	2404366	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.858	14.859	-0.001	89	2084615	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.568	16.570	-0.002	86	1644837	4.00	4.16	
6 Chlorodifluoromethane	67	3.470	3.471	-0.001	95	4119	0.0784	0.0862	
7 Propene	41	3.470	3.477	-0.007	62	9912	0.0784	0.1059	
8 Dichlorodifluoromethane	85	3.513	3.519	-0.006	100	30290	0.0784	0.0823	
9 Chloromethane	52	3.642	3.653	-0.011	99	3537	0.0784	0.1056	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.669	3.675	-0.006	93	20579	0.0784	0.0826	
12 Vinyl chloride	62	3.783	3.789	-0.006	99	7942	0.0784	0.0773	
13 Butane	43	3.858	3.863	-0.005	78	9031	0.0784	0.0820	
14 Butadiene	54	3.853	3.863	-0.010	79	5828	0.0784	0.0880	
15 Bromomethane	94	4.090	4.098	-0.008	97	8417	0.0784	0.0885	
16 Chloroethane	64	4.198	4.208	-0.010	96	4147	0.0784	0.0891	
17 Ethanol	31	4.300	4.313	-0.013	90	14354	0.3920	0.4887	
18 Vinyl bromide	106	4.430	4.441	-0.011	98	7850	0.0784	0.0842	
19 2-Methylbutane	43	4.489	4.498	-0.009	81	6778	0.0784	0.0874	
20 Acrolein	56	4.645	4.656	-0.011	31	5394	0.0784	0.2493	
21 Trichlorofluoromethane	101	4.651	4.659	-0.008	98	28702	0.0784	0.0821	
22 Acetonitrile	40	4.688	4.713	-0.025	97	1986	0.0784	0.0746	
23 Acetone	58	4.742	4.748	-0.006	99	28281	0.2352	0.6904	
24 Isopropyl alcohol	45	4.834	4.843	-0.009	92	44345	0.2352	0.2816	
25 Pentane	72	4.834	4.847	-0.013	82	2351	0.0784	0.0861	
26 Ethyl ether	31	4.974	4.975	-0.001	84	8803	0.0784	0.0890	
27 1,1-Dichloroethene	96	5.206	5.218	-0.012	96	11837	0.0784	0.0798	
28 Acrylonitrile	53	5.276	5.288	-0.012	94	7448	0.0784	0.0795	
29 2-Methyl-2-propanol	59	5.325	5.325	0.000	93	25307	0.0784	0.0857	
30 1,1,2-Trichloro-1,2,2-trif	101	5.384	5.390	-0.006	95	25548	0.0784	0.0805	
31 Methylene Chloride	84	5.476	5.492	-0.016	93	26512	0.0784	0.1730	
32 3-Chloro-1-propene	39	5.503	5.514	-0.011	96	10380	0.0784	0.0843	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.611	5.625	-0.014	98	32885	0.0784	0.0801	
34 trans-1,2-Dichloroethene	96	6.182	6.192	-0.010	96	11930	0.0784	0.0793	
36 Methyl tert-butyl ether	73	6.322	6.323	-0.001	95	36615	0.0784	0.0789	
37 1,1-Dichloroethane	63	6.533	6.545	-0.012	99	23365	0.0784	0.0815	
38 Vinyl acetate	43	6.657	6.662	-0.005	99	18984	0.0784	0.0685	
39 2-Butanone (MEK)	72	7.034	7.036	-0.002	97	9098	0.0784	0.1280	
40 Hexane	56	7.110	7.119	-0.009	83	9498	0.0784	0.0827	
41 cis-1,2-Dichloroethene	96	7.417	7.426	-0.009	96	12779	0.0784	0.0792	
42 Ethyl acetate	43	7.627	7.622	0.005	99	16771	0.0784	0.0674	
43 Chloroform	83	7.730	7.743	-0.013	94	28954	0.0784	0.0799	
44 Tetrahydrofuran	42	8.118	8.108	0.010	86	10505	0.0784	0.0828	
45 1,1,1-Trichloroethane	97	8.690	8.701	-0.011	95	29288	0.0784	0.0769	
46 1,2-Dichloroethane	62	8.765	8.771	-0.006	99	20209	0.0784	0.0795	
47 Benzene	78	9.267	9.274	-0.007	98	37499	0.0784	0.0816	
48 n-Butanol	31	9.358	9.296	0.062	2	490	0.0784	0.0161	
49 Cyclohexane	69	9.288	9.298	-0.010	97	6414	0.0784	0.0870	
50 Carbon tetrachloride	117	9.299	9.312	-0.013	98	28139	0.0784	0.0760	
53 Isooctane	57	10.146	10.145	0.001	98	55433	0.0784	0.0832	
54 1,2-Dichloropropane	63	10.534	10.540	-0.006	87	13116	0.0784	0.0821	
55 n-Heptane	71	10.555	10.561	-0.006	83	12852	0.0784	0.0807	
56 Trichloroethene	130	10.598	10.605	-0.007	92	16817	0.0784	0.0775	
57 Dibromomethane	93	10.642	10.648	-0.006	96	15715	0.0784	0.0831	
58 Dichlorobromomethane	83	10.820	10.825	-0.005	99	24293	0.0784	0.0717	
59 1,4-Dioxane	88	10.868	10.851	0.017	68	5216	0.0784	0.0770	
60 Methyl methacrylate	41	10.998	10.990	0.008	95	9269	0.0784	0.0615	
62 4-Methyl-2-pentanone (MIBK	43	11.882	11.878	0.004	92	19192	0.0784	0.0745	
63 cis-1,3-Dichloropropene	75	11.909	11.915	-0.006	96	18927	0.0784	0.0717	
64 trans-1,3-Dichloropropene	75	12.658	12.660	-0.002	96	18004	0.0784	0.0712	
65 Toluene	91	12.793	12.795	-0.002	92	44415	0.0784	0.0774	
66 1,1,2-Trichloroethane	83	12.853	12.853	-0.001	98	12134	0.0784	0.0767	
69 2-Hexanone	58	13.322	13.313	0.009	97	8080	0.0784	0.0590	
70 Chlorodibromomethane	129	13.580	13.580	0.000	97	20613	0.0784	0.0681	
71 n-Octane	85	13.618	13.618	0.000	83	14847	0.0784	0.0804	
72 Ethylene Dibromide	107	13.872	13.876	-0.004	96	20544	0.0784	0.0728	
73 Tetrachloroethene	129	14.001	14.005	-0.004	95	16736	0.0784	0.0782	
74 Chlorobenzene	112	14.907	14.910	-0.003	93	35874	0.0784	0.0793	
76 Ethylbenzene	91	15.236	15.237	-0.001	99	60028	0.0784	0.0799	
77 m-Xylene & p-Xylene	91	15.414	15.413	0.001	100	95548	0.1568	0.1640	
79 Bromoform	173	15.808	15.812	-0.004	93	15850	0.0784	0.0609	
80 Styrene	104	15.883	15.884	-0.001	99	23411	0.0784	0.0630	
81 n-Nonane	57	15.926	15.926	0.000	83	25340	0.0784	0.0807	
82 o-Xylene	91	15.948	15.948	0.000	97	50674	0.0784	0.0824	
83 1,1,2,2-Tetrachloroethane	83	16.266	16.269	-0.003	97	28370	0.0784	0.0771	
84 1,2,3-Trichloropropane	110	16.422	16.424	-0.002	98	10568	0.0784	0.0793	
85 Isopropylbenzene	105	16.562	16.566	-0.004	89	69379	0.0784	0.0843	
86 N-Propylbenzene	120	17.145	17.144	0.001	99	17429	0.0784	0.0776	
87 2-Chlorotoluene	126	17.161	17.164	-0.003	97	16753	0.0784	0.0806	
88 4-Ethyltoluene	105	17.312	17.312	0.000	99	65633	0.0784	0.0768	
89 1,3,5-Trimethylbenzene	120	17.398	17.400	-0.002	91	26109	0.0784	0.0757	
90 Alpha Methyl Styrene	118	17.652	17.652	0.000	86	15742	0.0784	0.0528	
91 n-Decane	57	17.792	17.793	-0.001	93	32834	0.0784	0.0769	
92 tert-Butylbenzene	119	17.867	17.868	-0.001	95	64192	0.0784	0.0801	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.884	17.884	0.000	96	57678	0.0784	0.0802	
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	98	36114	0.0784	0.0781	
95 sec-Butylbenzene	105	18.169	18.170	-0.001	98	81660	0.0784	0.0792	
96 Benzyl chloride	91	18.239	18.237	0.002	98	35545	0.0784	0.0657	
97 1,4-Dichlorobenzene	146	18.250	18.251	-0.001	92	35715	0.0784	0.0775	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	96	72796	0.0784	0.0803	
99 1,2,3-Trimethylbenzene	105	18.390	18.393	-0.003	98	64016	0.0784	0.0784	
101 1,2-Dichlorobenzene	146	18.639	18.638	0.001	93	35357	0.0784	0.0787	
104 n-Butylbenzene	91	18.833	18.832	0.001	98	59321	0.0784	0.0734	
105 Undecane	57	19.226	19.228	-0.002	93	32417	0.0784	0.0702	
106 1,2-Dibromo-3-Chloropropan	157	19.286	19.284	0.002	89	15056	0.0784	0.0548	
108 1,2,4,5-Tetramethylbenzene	119	19.642	19.641	0.001	96	29468	0.0784	0.0666	
111 Dodecane	57	20.343	20.340	0.002	98	23965	0.0784	0.0554	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	94	19766	0.0784	0.0588	
113 Naphthalene	128	20.574	20.574	0.000	99	46167	0.0784	0.0618	
115 Hexachlorobutadiene	225	20.828	20.827	0.001	95	26912	0.0784	0.0732	
116 1,2,3-Trichlorobenzene	180	20.860	20.864	-0.004	93	20286	0.0784	0.0596	
117 2-Methylnaphthalene	142	21.680	21.680	0.000	98	3036	0.1803	0.0165	
118 1-Methylnaphthalene	142	21.825	21.823	0.002	99	5988	0.1803	0.0328	
S 119 Xylenes, Total	100				0		0.2352	0.2464	
S 120 1,2-Dichloroethene, Total	1				0		0.1568	0.1585	

Reagents:

40L1-3DNP_00001	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC04.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 30-Jan-2018 14:50:30 ALS Bottle#: 10 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-006
Misc. Info.: 134526
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:03:00 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 30-Jan-2018 15:38:15

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.708	7.710	-0.002	85	388675	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.854	9.852	0.002	95	2397193	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.858	14.859	-0.001	89	2097206	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.568	16.570	-0.002	89	1641285	4.00	4.13	
6 Chlorodifluoromethane	67	3.481	3.471	0.010	96	7784	0.1600	0.1642	
7 Propene	41	3.486	3.477	0.009	97	16712	0.1600	0.1800	
8 Dichlorodifluoromethane	85	3.529	3.519	0.010	100	68839	0.1600	0.1886	
9 Chloromethane	52	3.659	3.653	0.006	99	6766	0.1600	0.2036	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.680	3.675	0.005	93	38610	0.1600	0.1562	
12 Vinyl chloride	62	3.799	3.789	0.010	99	16500	0.1600	0.1619	
13 Butane	43	3.869	3.863	0.006	79	18455	0.1600	0.1690	
14 Butadiene	54	3.869	3.863	0.006	71	11132	0.1600	0.1693	
15 Bromomethane	94	4.101	4.098	0.003	98	15024	0.1600	0.1593	
16 Chloroethane	64	4.214	4.208	0.006	98	7784	0.1600	0.1685	
17 Ethanol	31	4.306	4.313	-0.007	91	24919	0.8000	0.8552	
18 Vinyl bromide	106	4.440	4.441	-0.001	97	15440	0.1600	0.1670	
19 2-Methylbutane	43	4.500	4.498	0.002	81	12656	0.1600	0.1644	
20 Acrolein	56	4.661	4.656	0.005	29	3830	0.1600	0.1784	
21 Trichlorofluoromethane	101	4.661	4.659	0.002	100	57868	0.1600	0.1669	
22 Acetonitrile	40	4.699	4.713	-0.014	98	3781	0.1600	0.1431	
23 Acetone	58	4.753	4.748	0.005	99	28378	0.4800	0.6983	
24 Isopropyl alcohol	45	4.834	4.843	-0.009	96	82100	0.4800	0.5256	
25 Pentane	72	4.850	4.847	0.003	98	4428	0.1600	0.1634	
26 Ethyl ether	31	4.985	4.975	0.010	81	16886	0.1600	0.1721	
27 1,1-Dichloroethene	96	5.217	5.218	-0.001	95	22742	0.1600	0.1545	
28 Acrylonitrile	53	5.287	5.288	-0.001	91	15000	0.1600	0.1614	
29 2-Methyl-2-propanol	59	5.325	5.325	0.000	93	47907	0.1600	0.1636	
30 1,1,2-Trichloro-1,2,2-trif	101	5.395	5.390	0.005	95	49793	0.1600	0.1582	
31 Methylene Chloride	84	5.492	5.492	0.000	92	37255	0.1600	0.2451	
32 3-Chloro-1-propene	39	5.513	5.514	-0.001	95	20149	0.1600	0.1650	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.627	5.625	0.002	98	65612	0.1600	0.1612	
34 trans-1,2-Dichloroethene	96	6.188	6.192	-0.004	97	24021	0.1600	0.1609	
36 Methyl tert-butyl ether	73	6.328	6.323	0.005	95	72140	0.1600	0.1567	
37 1,1-Dichloroethane	63	6.543	6.545	-0.002	100	45273	0.1600	0.1592	
38 Vinyl acetate	43	6.662	6.662	0.000	99	38225	0.1600	0.1391	
39 2-Butanone (MEK)	72	7.040	7.036	0.004	97	11032	0.1600	0.1565	
40 Hexane	56	7.126	7.119	0.007	85	18222	0.1600	0.1599	
41 cis-1,2-Dichloroethene	96	7.422	7.426	-0.004	96	25103	0.1600	0.1568	
42 Ethyl acetate	43	7.627	7.622	0.005	99	35467	0.1600	0.1437	
43 Chloroform	83	7.746	7.743	0.003	88	57203	0.1600	0.1591	
44 Tetrahydrofuran	42	8.118	8.108	0.010	87	20481	0.1600	0.1628	
45 1,1,1-Trichloroethane	97	8.700	8.701	-0.001	96	57324	0.1600	0.1517	
46 1,2-Dichloroethane	62	8.770	8.771	-0.001	99	37522	0.1600	0.1480	
47 Benzene	78	9.272	9.274	-0.002	97	74171	0.1600	0.1620	
48 n-Butanol	31	9.337	9.296	0.041	56	2654	0.1600	0.0876	
49 Cyclohexane	69	9.304	9.298	0.006	95	11967	0.1600	0.1627	
50 Carbon tetrachloride	117	9.315	9.312	0.003	98	55870	0.1600	0.1513	
53 Isooctane	57	10.146	10.145	0.001	98	107521	0.1600	0.1619	
54 1,2-Dichloropropane	63	10.539	10.540	-0.001	87	25436	0.1600	0.1596	
55 n-Heptane	71	10.566	10.561	0.005	85	24522	0.1600	0.1545	
56 Trichloroethene	130	10.604	10.605	-0.001	95	32437	0.1600	0.1499	
57 Dibromomethane	93	10.647	10.648	-0.001	95	30017	0.1600	0.1593	
58 Dichlorobromomethane	83	10.825	10.825	0.000	99	50003	0.1600	0.1481	
59 1,4-Dioxane	88	10.852	10.851	0.001	86	10547	0.1600	0.1562	
60 Methyl methacrylate	41	10.992	10.990	0.002	97	18423	0.1600	0.1225	
62 4-Methyl-2-pentanone (MIBK	43	11.882	11.878	0.004	93	35511	0.1600	0.1383	
63 cis-1,3-Dichloropropene	75	11.914	11.915	-0.001	96	39090	0.1600	0.1485	
64 trans-1,3-Dichloropropene	75	12.664	12.660	0.004	96	37170	0.1600	0.1462	
65 Toluene	91	12.793	12.795	-0.002	94	88464	0.1600	0.1532	
66 1,1,2-Trichloroethane	83	12.853	12.853	-0.001	98	24240	0.1600	0.1523	
69 2-Hexanone	58	13.322	13.313	0.009	98	15426	0.1600	0.1120	
70 Chlorodibromomethane	129	13.580	13.580	0.000	98	40122	0.1600	0.1318	
71 n-Octane	85	13.618	13.618	0.000	85	28115	0.1600	0.1513	
72 Ethylene Dibromide	107	13.877	13.876	0.001	97	42246	0.1600	0.1487	
73 Tetrachloroethene	129	14.006	14.005	0.001	94	32954	0.1600	0.1531	
74 Chlorobenzene	112	14.912	14.910	0.002	93	69433	0.1600	0.1526	
76 Ethylbenzene	91	15.236	15.237	-0.001	99	115987	0.1600	0.1534	
77 m-Xylene & p-Xylene	91	15.414	15.413	0.001	100	183320	0.3200	0.3127	
79 Bromoform	173	15.813	15.812	0.001	94	31906	0.1600	0.1219	
80 Styrene	104	15.888	15.884	0.004	98	46940	0.1600	0.1255	
81 n-Nonane	57	15.926	15.926	0.000	86	49466	0.1600	0.1566	
82 o-Xylene	91	15.948	15.948	0.000	97	97828	0.1600	0.1581	
83 1,1,2,2-Tetrachloroethane	83	16.271	16.269	0.002	97	58220	0.1600	0.1572	
84 1,2,3-Trichloropropane	110	16.428	16.424	0.004	98	20539	0.1600	0.1532	
85 Isopropylbenzene	105	16.568	16.566	0.002	90	131986	0.1600	0.1594	
86 N-Propylbenzene	120	17.145	17.144	0.001	98	33714	0.1600	0.1491	
87 2-Chlorotoluene	126	17.166	17.164	0.002	93	32718	0.1600	0.1565	
88 4-Ethyltoluene	105	17.312	17.312	0.000	99	130522	0.1600	0.1519	
89 1,3,5-Trimethylbenzene	120	17.398	17.400	-0.002	91	52246	0.1600	0.1506	
90 Alpha Methyl Styrene	118	17.652	17.652	0.000	87	32438	0.1600	0.1081	
91 n-Decane	57	17.792	17.793	-0.001	93	65857	0.1600	0.1534	
92 tert-Butylbenzene	119	17.867	17.868	-0.001	91	127195	0.1600	0.1578	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.884	17.884	0.000	96	113107	0.1600	0.1564	
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	98	70364	0.1600	0.1513	
95 sec-Butylbenzene	105	18.169	18.170	-0.001	98	162720	0.1600	0.1569	
96 Benzyl chloride	91	18.234	18.237	-0.003	97	70710	0.1600	0.1300	
97 1,4-Dichlorobenzene	146	18.250	18.251	-0.001	92	70131	0.1600	0.1512	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	97	137773	0.1600	0.1511	
99 1,2,3-Trimethylbenzene	105	18.396	18.393	0.003	97	124983	0.1600	0.1522	
101 1,2-Dichlorobenzene	146	18.639	18.638	0.001	93	67149	0.1600	0.1487	
104 n-Butylbenzene	91	18.833	18.832	0.001	97	118568	0.1600	0.1458	
105 Undecane	57	19.232	19.228	0.004	92	67912	0.1600	0.1461	
106 1,2-Dibromo-3-Chloropropan	157	19.286	19.284	0.002	90	31369	0.1600	0.1136	
108 1,2,4,5-Tetramethylbenzene	119	19.642	19.641	0.001	96	58187	0.1600	0.1306	
111 Dodecane	57	20.343	20.340	0.002	98	51872	0.1600	0.1192	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	94	38197	0.1600	0.1129	
113 Naphthalene	128	20.574	20.574	0.000	99	94589	0.1600	0.1258	
115 Hexachlorobutadiene	225	20.828	20.827	0.001	94	50435	0.1600	0.1363	
116 1,2,3-Trichlorobenzene	180	20.866	20.864	0.002	95	40272	0.1600	0.1177	
117 2-Methylnaphthalene	142	21.680	21.680	0.000	99	25770	0.3680	0.1393	
118 1-Methylnaphthalene	142	21.825	21.823	0.002	99	44657	0.3680	0.2430	
S 119 Xylenes, Total	100				0		0.4800	0.4708	
S 120 1,2-Dichloroethene, Total	1				0		0.3200	0.3177	

Reagents:

40L5DNP_00016	Amount Added: 80.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC05.D
Lims ID: IC L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 30-Jan-2018 15:39:30 ALS Bottle#: 10 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-007
Misc. Info.: 134526
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:03:09 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 30-Jan-2018 17:18:19

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.708	7.710	-0.002	85	383206	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.849	9.852	-0.003	95	2352829	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.858	14.859	-0.001	89	2056588	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.573	16.570	0.003	88	1633174	4.00	4.19	
6 Chlorodifluoromethane	67	3.475	3.471	0.004	96	19042	0.4000	0.4073	
7 Propene	41	3.481	3.477	0.004	98	39604	0.4000	0.4326	
8 Dichlorodifluoromethane	85	3.524	3.519	0.005	100	147314	0.4000	0.4094	
9 Chloromethane	52	3.653	3.653	0.000	99	14731	0.4000	0.4495	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.675	3.675	0.000	97	96019	0.4000	0.3939	
12 Vinyl chloride	62	3.788	3.789	-0.001	99	38877	0.4000	0.3869	
13 Butane	43	3.863	3.863	0.000	90	43962	0.4000	0.4083	
14 Butadiene	54	3.863	3.863	0.000	95	25683	0.4000	0.3963	
15 Bromomethane	94	4.095	4.098	-0.003	98	37574	0.4000	0.4041	
16 Chloroethane	64	4.209	4.208	0.000	97	18456	0.4000	0.4053	
17 Ethanol	31	4.306	4.313	-0.007	91	59239	2.00	2.06	
18 Vinyl bromide	106	4.440	4.441	-0.001	97	36894	0.4000	0.4048	
19 2-Methylbutane	43	4.494	4.498	-0.004	83	30876	0.4000	0.4069	
20 Acrolein	56	4.651	4.656	-0.005	29	10635	0.4000	0.5026	
21 Trichlorofluoromethane	101	4.656	4.659	-0.003	99	138405	0.4000	0.4050	
22 Acetonitrile	40	4.694	4.713	-0.019	98	11541	0.4000	0.4432	
23 Acetone	58	4.748	4.748	0.000	100	66025	1.20	1.65	
24 Isopropyl alcohol	45	4.834	4.843	-0.009	97	196181	1.20	1.27	
25 Pentane	72	4.845	4.847	-0.002	98	10720	0.4000	0.4012	
26 Ethyl ether	31	4.974	4.975	-0.001	81	40771	0.4000	0.4215	
27 1,1-Dichloroethene	96	5.217	5.218	-0.001	95	56370	0.4000	0.3885	
28 Acrylonitrile	53	5.287	5.288	-0.001	93	35688	0.4000	0.3895	
29 2-Methyl-2-propanol	59	5.319	5.325	-0.006	93	117307	0.4000	0.4062	
30 1,1,2-Trichloro-1,2,2-trif	101	5.389	5.390	-0.001	95	126008	0.4000	0.4061	
31 Methylene Chloride	84	5.486	5.492	-0.006	92	67350	0.4000	0.4494	
32 3-Chloro-1-propene	39	5.513	5.514	-0.001	98	47897	0.4000	0.3977	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.621	5.625	-0.004	98	160500	0.4000	0.3999	
34 trans-1,2-Dichloroethene	96	6.188	6.192	-0.004	96	57527	0.4000	0.3908	
36 Methyl tert-butyl ether	73	6.322	6.323	-0.001	95	182444	0.4000	0.4019	
37 1,1-Dichloroethane	63	6.543	6.545	-0.002	100	112441	0.4000	0.4010	
38 Vinyl acetate	43	6.657	6.662	-0.005	99	104997	0.4000	0.3874	
39 2-Butanone (MEK)	72	7.034	7.036	-0.002	98	29985	0.4000	0.4314	
40 Hexane	56	7.120	7.119	0.001	85	45099	0.4000	0.4013	
41 cis-1,2-Dichloroethene	96	7.422	7.426	-0.004	96	61408	0.4000	0.3891	
42 Ethyl acetate	43	7.622	7.622	0.000	99	97364	0.4000	0.4001	
43 Chloroform	83	7.741	7.743	-0.003	96	141724	0.4000	0.3997	
44 Tetrahydrofuran	42	8.107	8.108	-0.001	85	49933	0.4000	0.4026	
45 1,1,1-Trichloroethane	97	8.700	8.701	-0.001	95	147109	0.4000	0.3949	
46 1,2-Dichloroethane	62	8.776	8.771	0.005	98	100014	0.4000	0.4019	
47 Benzene	78	9.272	9.274	-0.002	98	180099	0.4000	0.4007	
48 n-Butanol	31	9.299	9.296	0.003	61	9384	0.4000	0.3154	
49 Cyclohexane	69	9.299	9.298	0.001	95	29509	0.4000	0.4088	
50 Carbon tetrachloride	117	9.310	9.312	-0.002	99	142596	0.4000	0.3935	
53 Isooctane	57	10.146	10.145	0.001	98	268337	0.4000	0.4117	
54 1,2-Dichloropropane	63	10.539	10.540	-0.001	85	62400	0.4000	0.3990	
55 n-Heptane	71	10.561	10.561	0.000	83	63962	0.4000	0.4105	
56 Trichloroethene	130	10.604	10.605	-0.001	93	80726	0.4000	0.3801	
57 Dibromomethane	93	10.647	10.648	-0.001	95	72482	0.4000	0.3918	
58 Dichlorobromomethane	83	10.825	10.825	0.000	99	128060	0.4000	0.3864	
59 1,4-Dioxane	88	10.852	10.851	0.001	85	26213	0.4000	0.3955	
60 Methyl methacrylate	41	10.987	10.990	-0.003	97	51419	0.4000	0.3484	
62 4-Methyl-2-pentanone (MIBK	43	11.876	11.878	-0.002	93	95687	0.4000	0.3798	
63 cis-1,3-Dichloropropene	75	11.914	11.915	-0.001	92	100184	0.4000	0.3878	
64 trans-1,3-Dichloropropene	75	12.658	12.660	-0.002	96	93053	0.4000	0.3732	
65 Toluene	91	12.793	12.795	-0.002	93	222095	0.4000	0.3921	
66 1,1,2-Trichloroethane	83	12.852	12.853	-0.001	99	62032	0.4000	0.3975	
69 2-Hexanone	58	13.305	13.313	-0.008	97	49161	0.4000	0.3639	
70 Chlorodibromomethane	129	13.580	13.580	0.000	98	107735	0.4000	0.3610	
71 n-Octane	85	13.618	13.618	0.000	85	73235	0.4000	0.4019	
72 Ethylene Dibromide	107	13.877	13.876	0.001	98	107221	0.4000	0.3849	
73 Tetrachloroethene	129	14.006	14.005	0.001	95	82386	0.4000	0.3902	
74 Chlorobenzene	112	14.912	14.910	0.002	93	174562	0.4000	0.3912	
76 Ethylbenzene	91	15.236	15.237	-0.001	99	293553	0.4000	0.3960	
77 m-Xylene & p-Xylene	91	15.414	15.413	0.001	100	464738	0.8000	0.8085	
79 Bromoform	173	15.813	15.812	0.001	95	87253	0.4000	0.3399	
80 Styrene	104	15.883	15.884	-0.001	98	131824	0.4000	0.3595	
81 n-Nonane	57	15.926	15.926	0.000	84	130349	0.4000	0.4209	
82 o-Xylene	91	15.948	15.948	0.000	98	244961	0.4000	0.4036	
83 1,1,2,2-Tetrachloroethane	83	16.271	16.269	0.002	98	152141	0.4000	0.4188	
84 1,2,3-Trichloropropane	110	16.422	16.424	-0.002	98	52066	0.4000	0.3960	
85 Isopropylbenzene	105	16.568	16.566	0.002	97	333169	0.4000	0.4104	
86 N-Propylbenzene	120	17.145	17.144	0.001	99	89517	0.4000	0.4037	
87 2-Chlorotoluene	126	17.161	17.164	-0.003	93	83842	0.4000	0.4089	
88 4-Ethyltoluene	105	17.312	17.312	0.000	99	343391	0.4000	0.4076	
89 1,3,5-Trimethylbenzene	120	17.398	17.400	-0.002	92	135393	0.4000	0.3980	
90 Alpha Methyl Styrene	118	17.652	17.652	0.000	86	95659	0.4000	0.3252	
91 n-Decane	57	17.792	17.793	-0.001	93	175546	0.4000	0.4170	
92 tert-Butylbenzene	119	17.867	17.868	-0.001	91	320875	0.4000	0.4059	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.884	17.884	0.000	96	296062	0.4000	0.4175	
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	98	183533	0.4000	0.4024	
95 sec-Butylbenzene	105	18.169	18.170	-0.001	98	422045	0.4000	0.4149	
96 Benzyl chloride	91	18.239	18.237	0.002	97	210797	0.4000	0.3952	
97 1,4-Dichlorobenzene	146	18.250	18.251	-0.001	92	181180	0.4000	0.3983	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	96	359958	0.4000	0.4026	
99 1,2,3-Trimethylbenzene	105	18.390	18.393	-0.003	98	332416	0.4000	0.4128	
101 1,2-Dichlorobenzene	146	18.638	18.638	0.000	93	178966	0.4000	0.4040	
104 n-Butylbenzene	91	18.833	18.832	0.001	98	322145	0.4000	0.4040	
105 Undecane	57	19.226	19.228	-0.002	93	181085	0.4000	0.3974	
106 1,2-Dibromo-3-Chloropropan	157	19.286	19.284	0.002	94	90207	0.4000	0.3331	
108 1,2,4,5-Tetramethylbenzene	119	19.641	19.641	0.000	96	152347	0.4000	0.3488	
111 Dodecane	57	20.337	20.340	-0.003	98	137913	0.4000	0.3233	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	93	103182	0.4000	0.3110	
113 Naphthalene	128	20.574	20.574	0.000	99	262605	0.4000	0.3562	
115 Hexachlorobutadiene	225	20.828	20.827	0.001	95	125133	0.4000	0.3448	
116 1,2,3-Trichlorobenzene	180	20.866	20.864	0.002	94	101572	0.4000	0.3026	
117 2-Methylnaphthalene	142	21.680	21.680	0.000	100	63395	0.9200	0.3496	
118 1-Methylnaphthalene	142	21.825	21.823	0.002	100	79264	0.9200	0.4398	
S 119 Xylenes, Total	100				0		1.20	1.21	
S 120 1,2-Dichloroethene, Total	1				0		0.8000	0.7799	

Reagents:

40L5DNP_00016	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC06.D
Lims ID: IC L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 30-Jan-2018 16:27:30 ALS Bottle#: 11 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-008
Misc. Info.: 134525
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:03:16 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 30-Jan-2018 17:22:47

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.714	7.710	0.004	84	399358	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.854	9.852	0.002	95	2422753	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.858	14.859	-0.001	89	2095606	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.573	16.570	0.003	89	1634670	4.00	4.11	
6 Chlorodifluoromethane	67	3.470	3.471	-0.001	96	49960	1.00	1.03	
7 Propene	41	3.475	3.477	-0.002	97	101480	1.00	1.06	
8 Dichlorodifluoromethane	85	3.518	3.519	-0.001	100	385761	1.00	1.03	
9 Chloromethane	52	3.653	3.653	0.000	100	33564	1.00	0.9828	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.675	3.675	0.000	93	252275	1.00	0.99	
12 Vinyl chloride	62	3.788	3.789	-0.001	99	100495	1.00	0.9596	
13 Butane	43	3.863	3.863	0.000	89	117697	1.00	1.05	
14 Butadiene	54	3.863	3.863	0.000	93	67588	1.00	1.00	
15 Bromomethane	94	4.095	4.098	-0.003	98	97562	1.00	1.01	
16 Chloroethane	64	4.208	4.208	0.000	98	47978	1.00	1.01	
17 Ethanol	31	4.311	4.313	-0.002	91	156896	5.01	5.24	
18 Vinyl bromide	106	4.440	4.441	-0.001	97	97338	1.00	1.02	
19 2-Methylbutane	43	4.500	4.498	0.002	81	79273	1.00	1.00	
20 Acrolein	56	4.651	4.656	-0.005	95	21312	1.00	0.9664	
21 Trichlorofluoromethane	101	4.661	4.659	0.002	99	362096	1.00	1.02	
22 Acetonitrile	40	4.699	4.713	-0.014	97	27104	1.00	1.00	
23 Acetone	58	4.742	4.748	-0.006	99	133362	3.01	3.19	
24 Isopropyl alcohol	45	4.839	4.843	-0.004	97	528496	3.01	3.29	
25 Pentane	72	4.845	4.847	-0.002	97	28211	1.00	1.01	
26 Ethyl ether	31	4.969	4.975	-0.006	79	105952	1.00	1.05	
27 1,1-Dichloroethene	96	5.217	5.218	-0.001	95	147316	1.00	0.9743	
28 Acrylonitrile	53	5.287	5.288	-0.001	94	97550	1.00	1.02	
29 2-Methyl-2-propanol	59	5.319	5.325	-0.006	93	309191	1.00	1.03	
30 1,1,2-Trichloro-1,2,2-trif	101	5.389	5.390	-0.001	95	330843	1.00	1.02	
31 Methylene Chloride	84	5.492	5.492	0.000	92	152260	1.00	0.9750	
32 3-Chloro-1-propene	39	5.513	5.514	-0.001	97	129123	1.00	1.03	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.621	5.625	-0.004	98	430092	1.00	1.03	
34 trans-1,2-Dichloroethene	96	6.193	6.192	0.001	97	156625	1.00	1.02	
36 Methyl tert-butyl ether	73	6.317	6.323	-0.006	95	488775	1.00	1.03	
37 1,1-Dichloroethane	63	6.549	6.545	0.004	100	295826	1.00	1.01	
38 Vinyl acetate	43	6.657	6.662	-0.005	99	304213	1.00	1.08	
39 2-Butanone (MEK)	72	7.029	7.036	-0.007	98	72547	1.00	1.00	
40 Hexane	56	7.120	7.119	0.001	85	120502	1.00	1.03	
41 cis-1,2-Dichloroethene	96	7.428	7.426	0.002	96	161247	1.00	0.9804	
42 Ethyl acetate	43	7.611	7.622	-0.011	99	272902	1.00	1.08	
43 Chloroform	83	7.746	7.743	0.003	96	370515	1.00	1.00	
44 Tetrahydrofuran	42	8.096	8.108	-0.012	87	134069	1.00	1.04	
45 1,1,1-Trichloroethane	97	8.706	8.701	0.005	95	396883	1.00	1.02	
46 1,2-Dichloroethane	62	8.770	8.771	-0.001	98	266293	1.00	1.04	
47 Benzene	78	9.277	9.274	0.003	97	475845	1.00	1.03	
48 n-Butanol	31	9.283	9.296	-0.013	62	29797	1.00	0.9727	
49 Cyclohexane	69	9.299	9.298	0.001	96	77754	1.00	1.05	
50 Carbon tetrachloride	117	9.315	9.312	0.003	97	393178	1.00	1.05	
53 Isooctane	57	10.145	10.145	0.000	98	709763	1.00	1.06	
54 1,2-Dichloropropane	63	10.539	10.540	-0.001	90	166795	1.00	1.04	
55 n-Heptane	71	10.561	10.561	0.000	83	169496	1.00	1.06	
56 Trichloroethene	130	10.604	10.605	-0.001	94	216055	1.00	0.9880	
57 Dibromomethane	93	10.647	10.648	-0.001	95	192925	1.00	1.01	
58 Dichlorobromomethane	83	10.825	10.825	0.000	98	359583	1.00	1.05	
59 1,4-Dioxane	88	10.841	10.851	-0.010	83	75444	1.00	1.11	
60 Methyl methacrylate	41	10.981	10.990	-0.009	97	153737	1.00	1.01	
62 4-Methyl-2-pentanone (MIBK	43	11.871	11.878	-0.007	94	271515	1.00	1.05	
63 cis-1,3-Dichloropropene	75	11.914	11.915	-0.001	92	280020	1.00	1.05	
64 trans-1,3-Dichloropropene	75	12.658	12.660	-0.002	96	264281	1.00	1.04	
65 Toluene	91	12.793	12.795	-0.002	94	594266	1.00	1.03	
66 1,1,2-Trichloroethane	83	12.852	12.853	-0.001	99	165862	1.00	1.04	
69 2-Hexanone	58	13.300	13.313	-0.013	98	149844	1.00	1.09	
70 Chlorodibromomethane	129	13.580	13.580	0.000	97	326299	1.00	1.07	
71 n-Octane	85	13.618	13.618	0.000	85	197364	1.00	1.06	
72 Ethylene Dibromide	107	13.877	13.876	0.001	98	299269	1.00	1.05	
73 Tetrachloroethene	129	14.006	14.005	0.001	95	221546	1.00	1.03	
74 Chlorobenzene	112	14.912	14.910	0.002	92	462209	1.00	1.02	
76 Ethylbenzene	91	15.236	15.237	-0.001	99	784804	1.00	1.04	
77 m-Xylene & p-Xylene	91	15.414	15.413	0.001	100	1258868	2.00	2.15	
79 Bromoform	173	15.813	15.812	0.001	95	280201	1.00	1.07	
80 Styrene	104	15.883	15.884	-0.001	99	404492	1.00	1.08	
81 n-Nonane	57	15.926	15.926	0.000	83	354142	1.00	1.12	
82 o-Xylene	91	15.948	15.948	0.000	98	651529	1.00	1.05	
83 1,1,2,2-Tetrachloroethane	83	16.266	16.269	-0.003	99	419698	1.00	1.13	
84 1,2,3-Trichloropropane	110	16.422	16.424	-0.002	98	140977	1.00	1.05	
85 Isopropylbenzene	105	16.568	16.566	0.002	98	884009	1.00	1.07	
86 N-Propylbenzene	120	17.145	17.144	0.001	99	251895	1.00	1.11	
87 2-Chlorotoluene	126	17.161	17.164	-0.003	93	226074	1.00	1.08	
88 4-Ethyltoluene	105	17.312	17.312	0.000	99	974862	1.00	1.14	
89 1,3,5-Trimethylbenzene	120	17.398	17.400	-0.002	92	386617	1.00	1.12	
90 Alpha Methyl Styrene	118	17.652	17.652	0.000	87	312791	1.00	1.04	
91 n-Decane	57	17.792	17.793	-0.001	93	504552	1.00	1.18	
92 tert-Butylbenzene	119	17.867	17.868	-0.001	90	894018	1.00	1.11	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.884	17.884	0.000	96	838081	1.00	1.16	
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	99	516305	1.00	1.11	
95 sec-Butylbenzene	105	18.169	18.170	-0.001	98	1180727	1.00	1.14	
96 Benzyl chloride	91	18.234	18.237	-0.003	98	644403	1.00	1.19	
97 1,4-Dichlorobenzene	146	18.250	18.251	-0.001	93	518691	1.00	1.12	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	96	1047342	1.00	1.15	
99 1,2,3-Trimethylbenzene	105	18.390	18.393	-0.003	97	941539	1.00	1.15	
101 1,2-Dichlorobenzene	146	18.638	18.638	0.000	93	504861	1.00	1.12	
104 n-Butylbenzene	91	18.833	18.832	0.001	98	967842	1.00	1.19	
105 Undecane	57	19.226	19.228	-0.002	93	562815	1.00	1.21	
106 1,2-Dibromo-3-Chloropropan	157	19.286	19.284	0.002	97	313235	1.00	1.14	
108 1,2,4,5-Tetramethylbenzene	119	19.641	19.641	0.000	96	482300	1.00	1.08	
111 Dodecane	57	20.342	20.340	0.002	99	520941	1.00	1.20	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	94	375125	1.00	1.11	
113 Naphthalene	128	20.574	20.574	0.000	99	876926	1.00	1.17	
115 Hexachlorobutadiene	225	20.828	20.827	0.001	95	406766	1.00	1.10	
116 1,2,3-Trichlorobenzene	180	20.866	20.864	0.002	94	354574	1.00	1.04	
117 2-Methylnaphthalene	142	21.680	21.680	0.000	99	300143	2.30	1.62	
118 1-Methylnaphthalene	142	21.820	21.823	-0.003	99	327721	2.30	1.78	
S 119 Xylenes, Total	100				0		3.00	3.20	
S 120 1,2-Dichloroethene, Total	1				0		2.00	2.00	

Reagents:

40L6DNP_00017	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC07.D
Lims ID: ICIS L7
Client ID:
Sample Type: ICIS Calib Level: 7
Inject. Date: 30-Jan-2018 17:15:30 ALS Bottle#: 12 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-009
Misc. Info.: 134523
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:03:23 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 30-Jan-2018 18:02:14

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.714	7.710	0.004	85	397524	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.849	9.852	-0.003	95	2418900	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.859	14.859	-0.001	88	2104378	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.568	16.570	-0.002	90	1611533	4.00	4.04	
6 Chlorodifluoromethane	67	3.464	3.471	-0.007	96	99602	2.00	2.05	
7 Propene	41	3.475	3.477	-0.002	97	201013	2.00	2.12	
8 Dichlorodifluoromethane	85	3.513	3.519	-0.006	100	768499	2.00	2.06	
9 Chloromethane	52	3.648	3.653	-0.005	99	69549	2.00	2.05	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.669	3.675	-0.006	93	513872	2.00	2.03	
12 Vinyl chloride	62	3.783	3.789	-0.006	99	201144	2.00	1.93	
13 Butane	43	3.858	3.863	-0.005	89	229678	2.00	2.06	
14 Butadiene	54	3.858	3.863	-0.005	94	136978	2.00	2.04	
15 Bromomethane	94	4.095	4.098	-0.003	97	194501	2.00	2.02	
16 Chloroethane	64	4.203	4.208	-0.005	99	92980	2.00	1.97	
17 Ethanol	31	4.311	4.313	-0.002	91	309152	9.99	10.4	
18 Vinyl bromide	106	4.435	4.441	-0.006	97	190610	2.00	2.02	
19 2-Methylbutane	43	4.494	4.498	-0.004	82	156213	2.00	1.98	
20 Acrolein	56	4.651	4.656	-0.005	93	40157	2.00	1.83	
21 Trichlorofluoromethane	101	4.656	4.659	-0.003	99	708040	2.00	2.00	
22 Acetonitrile	40	4.699	4.713	-0.014	98	55420	2.00	2.05	
23 Acetone	58	4.742	4.748	-0.006	99	255969	5.99	6.16	
24 Isopropyl alcohol	45	4.839	4.843	-0.004	94	1027986	5.99	6.43	
25 Pentane	72	4.845	4.847	-0.002	96	56821	2.00	2.05	
26 Ethyl ether	31	4.964	4.975	-0.011	78	210233	2.00	2.10	
27 1,1-Dichloroethene	96	5.217	5.218	-0.001	96	302733	2.00	2.01	
28 Acrylonitrile	53	5.287	5.288	-0.001	93	201452	2.00	2.12	
29 2-Methyl-2-propanol	59	5.319	5.325	-0.006	93	628551	2.00	2.10	
30 1,1,2-Trichloro-1,2,2-trif	101	5.390	5.390	0.000	96	667885	2.00	2.08	
31 Methylene Chloride	84	5.492	5.492	0.000	90	294696	2.00	1.90	
32 3-Chloro-1-propene	39	5.514	5.514	0.000	97	251667	2.00	2.01	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.621	5.625	-0.004	98	863361	2.00	2.07	
34 trans-1,2-Dichloroethene	96	6.193	6.192	0.001	97	318661	2.00	2.09	
36 Methyl tert-butyl ether	73	6.312	6.323	-0.011	95	993401	2.00	2.11	
37 1,1-Dichloroethane	63	6.543	6.545	-0.002	100	594968	2.00	2.05	
38 Vinyl acetate	43	6.657	6.662	-0.005	99	605079	2.00	2.15	
39 2-Butanone (MEK)	72	7.023	7.036	-0.013	97	157076	2.00	2.18	
40 Hexane	56	7.115	7.119	-0.004	85	241914	2.00	2.08	
41 cis-1,2-Dichloroethene	96	7.422	7.426	-0.004	95	331061	2.00	2.02	
42 Ethyl acetate	43	7.606	7.622	-0.016	99	563824	2.00	2.23	
43 Chloroform	83	7.746	7.743	0.003	97	752364	2.00	2.05	
44 Tetrahydrofuran	42	8.091	8.108	-0.017	85	272546	2.00	2.12	
45 1,1,1-Trichloroethane	97	8.700	8.701	-0.001	96	813727	2.00	2.11	
46 1,2-Dichloroethane	62	8.771	8.771	0.000	99	535650	2.00	2.09	
47 Benzene	78	9.272	9.274	-0.002	97	957247	2.00	2.07	
48 n-Butanol	31	9.272	9.296	-0.024	60	64569	2.00	2.11	
49 Cyclohexane	69	9.299	9.298	0.001	96	159306	2.00	2.15	
50 Carbon tetrachloride	117	9.310	9.312	-0.002	98	784365	2.00	2.11	
53 Isooctane	57	10.140	10.145	-0.005	97	1428084	2.00	2.13	
54 1,2-Dichloropropane	63	10.539	10.540	-0.001	86	335945	2.00	2.09	
55 n-Heptane	71	10.561	10.561	0.000	83	341354	2.00	2.13	
56 Trichloroethene	130	10.604	10.605	-0.001	94	481860	2.00	2.21	
57 Dibromomethane	93	10.647	10.648	-0.001	95	403081	2.00	2.12	
58 Dichlorobromomethane	83	10.825	10.825	0.000	98	757973	2.00	2.22	
59 1,4-Dioxane	88	10.836	10.851	-0.015	83	151582	2.00	2.22	
60 Methyl methacrylate	41	10.981	10.990	-0.009	97	339847	2.00	2.24	
62 4-Methyl-2-pentanone (MIBK	43	11.866	11.878	-0.012	93	575108	2.00	2.22	
63 cis-1,3-Dichloropropene	75	11.914	11.915	-0.001	92	590578	2.00	2.22	
64 trans-1,3-Dichloropropene	75	12.658	12.660	-0.002	96	552390	2.00	2.16	
65 Toluene	91	12.793	12.795	-0.002	93	1214847	2.00	2.10	
66 1,1,2-Trichloroethane	83	12.853	12.853	0.000	99	338126	2.00	2.12	
69 2-Hexanone	58	13.300	13.313	-0.013	98	322256	2.00	2.33	
70 Chlorodibromomethane	129	13.581	13.580	0.001	98	710033	2.00	2.33	
71 n-Octane	85	13.613	13.618	-0.005	85	401741	2.00	2.15	
72 Ethylene Dibromide	107	13.872	13.876	-0.004	99	623528	2.00	2.19	
73 Tetrachloroethene	129	14.001	14.005	-0.004	95	451735	2.00	2.09	
74 Chlorobenzene	112	14.907	14.910	-0.003	93	943722	2.00	2.07	
76 Ethylbenzene	91	15.236	15.237	-0.001	99	1604021	2.00	2.11	
77 m-Xylene & p-Xylene	91	15.409	15.413	-0.004	100	2526057	3.99	4.29	
79 Bromoform	173	15.813	15.812	0.001	96	617419	2.00	2.35	
80 Styrene	104	15.883	15.884	-0.001	99	877726	2.00	2.34	
81 n-Nonane	57	15.926	15.926	0.000	83	698726	2.00	2.20	
82 o-Xylene	91	15.942	15.948	-0.006	98	1293453	2.00	2.08	
83 1,1,2,2-Tetrachloroethane	83	16.266	16.269	-0.003	99	774984	2.00	2.09	
84 1,2,3-Trichloropropane	110	16.422	16.424	-0.002	98	283509	2.00	2.11	
85 Isopropylbenzene	105	16.562	16.566	-0.004	97	1751008	2.00	2.11	
86 N-Propylbenzene	120	17.139	17.144	-0.005	99	510087	2.00	2.25	
87 2-Chlorotoluene	126	17.161	17.164	-0.003	94	444172	2.00	2.12	
88 4-Ethyltoluene	105	17.312	17.312	0.000	99	1942649	2.00	2.25	
89 1,3,5-Trimethylbenzene	120	17.398	17.400	-0.002	92	775132	2.00	2.23	
90 Alpha Methyl Styrene	118	17.652	17.652	0.000	87	715672	2.00	2.38	
91 n-Decane	57	17.792	17.793	-0.001	93	1016420	2.00	2.36	
92 tert-Butylbenzene	119	17.867	17.868	-0.001	91	1772333	2.00	2.19	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.884	17.884	0.000	96	1649904	2.00	2.27	
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	99	1044130	2.00	2.24	
95 sec-Butylbenzene	105	18.169	18.170	-0.001	98	2346383	2.00	2.25	
96 Benzyl chloride	91	18.234	18.237	-0.003	98	1420806	2.00	2.60	
97 1,4-Dichlorobenzene	146	18.250	18.251	-0.001	93	1046250	2.00	2.25	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	97	2122805	2.00	2.32	
99 1,2,3-Trimethylbenzene	105	18.391	18.393	-0.003	98	1870714	2.00	2.27	
101 1,2-Dichlorobenzene	146	18.639	18.638	0.001	94	1016927	2.00	2.24	
104 n-Butylbenzene	91	18.827	18.832	-0.005	99	1985514	2.00	2.43	
105 Undecane	57	19.226	19.228	-0.002	92	1166396	2.00	2.50	
106 1,2-Dibromo-3-Chloropropan	157	19.280	19.284	-0.004	97	698408	2.00	2.52	
108 1,2,4,5-Tetramethylbenzene	119	19.642	19.641	0.001	96	1035933	2.00	2.32	
111 Dodecane	57	20.337	20.340	-0.003	98	1185570	2.00	2.72	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	94	867227	2.00	2.55	
113 Naphthalene	128	20.569	20.574	-0.005	99	2004705	2.00	2.66	
115 Hexachlorobutadiene	225	20.828	20.827	0.001	96	875521	2.00	2.36	
116 1,2,3-Trichlorobenzene	180	20.860	20.864	-0.004	94	835689	2.00	2.43	
117 2-Methylnaphthalene	142	21.680	21.680	0.000	100	1121735	4.59	6.04	
118 1-Methylnaphthalene	142	21.820	21.823	-0.003	99	1213833	4.59	6.58	
S 119 Xylenes, Total	100				0		5.99	6.38	
S 120 1,2-Dichloroethene, Total	1				0		3.99	4.11	

Reagents:

40L7DNP_00016	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC08.D
Lims ID: IC L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 30-Jan-2018 18:03:30 ALS Bottle#: 13 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-010
Misc. Info.: 134524
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:03:29 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 30-Jan-2018 18:45:29

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.713	7.710	0.003	83	403296	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.854	9.852	0.002	95	2445825	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.858	14.859	-0.001	88	2122398	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.573	16.570	0.003	90	1560168	4.00	3.88	
6 Chlorodifluoromethane	67	3.470	3.471	-0.001	95	192008	4.00	3.90	
7 Propene	41	3.475	3.477	-0.002	97	373101	4.00	3.87	
8 Dichlorodifluoromethane	85	3.518	3.519	-0.001	100	1380786	4.00	3.65	
9 Chloromethane	52	3.653	3.653	0.000	99	127494	4.00	3.70	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.675	3.675	0.000	92	975595	4.00	3.80	
12 Vinyl chloride	62	3.788	3.789	-0.001	99	392525	4.00	3.71	
13 Butane	43	3.863	3.863	0.000	90	443357	4.00	3.91	
14 Butadiene	54	3.863	3.863	0.000	95	265156	4.00	3.89	
15 Bromomethane	94	4.101	4.098	0.003	98	381835	4.00	3.90	
16 Chloroethane	64	4.208	4.208	0.000	99	183236	4.00	3.82	
17 Ethanol	31	4.322	4.313	0.009	90	599728	20.0	19.8	
18 Vinyl bromide	106	4.446	4.441	0.005	97	373599	4.00	3.89	
19 2-Methylbutane	43	4.500	4.498	0.002	82	305420	4.00	3.82	
20 Acrolein	56	4.656	4.656	0.000	95	69130	4.00	3.10	
21 Trichlorofluoromethane	101	4.661	4.659	0.002	100	1366159	4.00	3.80	
22 Acetonitrile	40	4.705	4.713	-0.008	97	108488	4.00	3.96	
23 Acetone	58	4.748	4.748	0.000	99	451316	12.0	10.7	
24 Isopropyl alcohol	45	4.845	4.843	0.002	94	1940134	12.0	12.0	
25 Pentane	72	4.850	4.847	0.003	97	109148	4.00	3.88	
26 Ethyl ether	31	4.969	4.975	-0.006	76	385484	4.00	3.79	
27 1,1-Dichloroethene	96	5.222	5.218	0.004	96	580273	4.00	3.80	
28 Acrylonitrile	53	5.292	5.288	0.004	93	380336	4.00	3.94	
29 2-Methyl-2-propanol	59	5.319	5.325	-0.006	93	1185900	4.00	3.90	
30 1,1,2-Trichloro-1,2,2-trif	101	5.395	5.390	0.005	97	1265800	4.00	3.88	
31 Methylene Chloride	84	5.497	5.492	0.005	90	539025	4.00	3.42	
32 3-Chloro-1-propene	39	5.519	5.514	0.005	96	453252	4.00	3.58	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.632	5.625	0.007	98	1649806	4.00	3.91	
34 trans-1,2-Dichloroethene	96	6.198	6.192	0.006	98	609026	4.00	3.93	
36 Methyl tert-butyl ether	73	6.317	6.323	-0.006	94	1909019	4.00	4.00	
37 1,1-Dichloroethane	63	6.554	6.545	0.009	100	1118272	4.00	3.79	
38 Vinyl acetate	43	6.662	6.662	0.000	99	1147099	4.00	4.02	
39 2-Butanone (MEK)	72	7.029	7.036	-0.007	97	284611	4.00	3.89	
40 Hexane	56	7.120	7.119	0.001	85	451862	4.00	3.82	
41 cis-1,2-Dichloroethene	96	7.433	7.426	0.007	95	636383	4.00	3.83	
42 Ethyl acetate	43	7.611	7.622	-0.011	99	1074075	4.00	4.19	
43 Chloroform	83	7.751	7.743	0.008	97	1431329	4.00	3.84	
44 Tetrahydrofuran	42	8.096	8.108	-0.012	85	511682	4.00	3.92	
45 1,1,1-Trichloroethane	97	8.706	8.701	0.005	95	1564396	4.00	3.99	
46 1,2-Dichloroethane	62	8.776	8.771	0.005	99	1019982	4.00	3.94	
47 Benzene	78	9.277	9.274	0.003	97	1805776	4.00	3.86	
48 n-Butanol	31	9.272	9.296	-0.024	61	135506	4.00	4.38	
49 Cyclohexane	69	9.304	9.298	0.006	95	293021	4.00	3.91	
50 Carbon tetrachloride	117	9.315	9.312	0.003	97	1557932	4.00	4.14	
53 Isooctane	57	10.145	10.145	0.000	97	2699507	4.00	3.98	
54 1,2-Dichloropropane	63	10.539	10.540	-0.001	87	637774	4.00	3.92	
55 n-Heptane	71	10.561	10.561	0.000	81	652666	4.00	4.03	
56 Trichloroethene	130	10.609	10.605	0.004	95	990611	4.00	4.49	
57 Dibromomethane	93	10.652	10.648	0.004	95	771427	4.00	4.01	
58 Dichlorobromomethane	83	10.830	10.825	0.005	98	1483398	4.00	4.31	
59 1,4-Dioxane	88	10.836	10.851	-0.015	82	290497	4.00	4.22	
60 Methyl methacrylate	41	10.981	10.990	-0.009	97	676432	4.00	4.41	
62 4-Methyl-2-pentanone (MIBK	43	11.866	11.878	-0.012	93	1126777	4.00	4.30	
63 cis-1,3-Dichloropropene	75	11.914	11.915	-0.001	92	1141143	4.00	4.25	
64 trans-1,3-Dichloropropene	75	12.658	12.660	-0.002	96	1089547	4.00	4.23	
65 Toluene	91	12.798	12.795	0.003	93	2321715	4.00	3.97	
66 1,1,2-Trichloroethane	83	12.852	12.853	-0.001	99	646119	4.00	4.01	
69 2-Hexanone	58	13.300	13.313	-0.013	98	664344	4.00	4.76	
70 Chlorodibromomethane	129	13.580	13.580	0.000	98	1429129	4.00	4.64	
71 n-Octane	85	13.618	13.618	0.000	84	761888	4.00	4.05	
72 Ethylene Dibromide	107	13.877	13.876	0.001	98	1225652	4.00	4.26	
73 Tetrachloroethene	129	14.006	14.005	0.001	96	873561	4.00	4.01	
74 Chlorobenzene	112	14.912	14.910	0.002	93	1821596	4.00	3.96	
76 Ethylbenzene	91	15.236	15.237	-0.001	99	3061101	4.00	4.00	
77 m-Xylene & p-Xylene	91	15.414	15.413	0.001	99	4717005	8.00	7.95	
79 Bromoform	173	15.813	15.812	0.001	96	1265260	4.00	4.78	
80 Styrene	104	15.883	15.884	-0.001	98	1722436	4.00	4.55	
81 n-Nonane	57	15.926	15.926	0.000	82	1266112	4.00	3.96	
82 o-Xylene	91	15.948	15.948	0.000	98	2421285	4.00	3.87	
83 1,1,2,2-Tetrachloroethane	83	16.266	16.269	-0.003	99	1361818	4.00	3.63	
84 1,2,3-Trichloropropane	110	16.422	16.424	-0.002	98	537694	4.00	3.96	
85 Isopropylbenzene	105	16.568	16.566	0.002	97	3271189	4.00	3.90	
86 N-Propylbenzene	120	17.145	17.144	0.001	99	953864	4.00	4.17	
87 2-Chlorotoluene	126	17.161	17.164	-0.003	93	837183	4.00	3.96	
88 4-Ethyltoluene	105	17.312	17.312	0.000	99	3621190	4.00	4.16	
89 1,3,5-Trimethylbenzene	120	17.398	17.400	-0.002	92	1454797	4.00	4.14	
90 Alpha Methyl Styrene	118	17.652	17.652	0.000	87	1426907	4.00	4.70	
91 n-Decane	57	17.792	17.793	-0.001	94	1860379	4.00	4.28	
92 tert-Butylbenzene	119	17.867	17.868	-0.001	91	3259179	4.00	3.99	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.883	17.884	-0.001	96	2988133	4.00	4.08	
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	99	1945670	4.00	4.13	
95 sec-Butylbenzene	105	18.169	18.170	-0.001	98	4304932	4.00	4.10	
96 Benzyl chloride	91	18.234	18.237	-0.003	98	2678333	4.00	4.87	
97 1,4-Dichlorobenzene	146	18.250	18.251	-0.001	92	1937249	4.00	4.13	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	96	3937880	4.00	4.27	
99 1,2,3-Trimethylbenzene	105	18.396	18.393	0.003	97	3399572	4.00	4.09	
101 1,2-Dichlorobenzene	146	18.638	18.638	0.000	94	1905685	4.00	4.17	
104 n-Butylbenzene	91	18.833	18.832	0.001	99	3720801	4.00	4.52	
105 Undecane	57	19.226	19.228	-0.002	92	2179717	4.00	4.64	
106 1,2-Dibromo-3-Chloropropan	157	19.280	19.284	-0.004	98	1308310	4.00	4.68	
108 1,2,4,5-Tetramethylbenzene	119	19.641	19.641	0.000	96	2053724	4.00	4.56	
111 Dodecane	57	20.337	20.340	-0.003	98	2170914	4.00	4.93	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	94	1765909	4.00	5.16	
113 Naphthalene	128	20.574	20.574	0.000	99	4017474	4.00	5.28	
115 Hexachlorobutadiene	225	20.828	20.827	0.001	96	1713702	4.00	4.58	
116 1,2,3-Trichlorobenzene	180	20.865	20.864	0.001	94	1650977	4.00	4.77	
117 2-Methylnaphthalene	142	21.680	21.680	0.000	99	2230513	9.20	11.9	
118 1-Methylnaphthalene	142	21.820	21.823	-0.003	99	2273024	9.20	12.2	
S 119 Xylenes, Total	100				0		12.0	11.8	
S 120 1,2-Dichloroethene, Total	1				0		8.00	7.76	

Reagents:

40L8DNP_00016	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC09.D
Lims ID: IC L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 30-Jan-2018 18:50:30 ALS Bottle#: 14 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-011
Misc. Info.: 134508
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:03:33 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 30-Jan-2018 19:34:59

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.724	7.710	0.014	81	409398	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.860	9.852	0.008	95	2463428	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.864	14.859	0.005	88	2133724	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.573	16.570	0.003	88	1531137	4.00	3.78	
6 Chlorodifluoromethane	67	3.470	3.471	-0.001	95	373011	8.00	7.47	
7 Propene	41	3.475	3.477	-0.002	97	698857	8.00	7.14	
8 Dichlorodifluoromethane	85	3.518	3.519	-0.001	100	2777340	8.00	7.23	
9 Chloromethane	52	3.658	3.653	0.005	99	239224	8.00	6.83	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.680	3.675	0.005	92	1877362	8.00	7.21	
12 Vinyl chloride	62	3.793	3.789	0.004	99	789520	8.00	7.35	
13 Butane	43	3.869	3.863	0.006	90	873129	8.00	7.59	
14 Butadiene	54	3.869	3.863	0.006	93	526420	8.00	7.60	
15 Bromomethane	94	4.106	4.098	0.008	98	764670	8.00	7.70	
16 Chloroethane	64	4.219	4.208	0.011	98	369095	8.00	7.59	
17 Ethanol	31	4.327	4.313	0.014	91	1162228	40.0	37.9	
18 Vinyl bromide	106	4.451	4.441	0.010	97	739337	8.00	7.59	
19 2-Methylbutane	43	4.505	4.498	0.007	82	602150	8.00	7.43	
20 Acrolein	56	4.661	4.656	0.005	96	193944	8.00	8.58	
21 Trichlorofluoromethane	101	4.667	4.659	0.008	99	2671794	8.00	7.32	
22 Acetonitrile	40	4.710	4.713	-0.003	97	212047	8.00	7.62	
23 Acetone	58	4.753	4.748	0.005	99	874182	24.0	20.4	
24 Isopropyl alcohol	45	4.856	4.843	0.013	81	3554966	24.0	21.6	
25 Pentane	72	4.856	4.847	0.009	75	205846	8.00	7.21	
26 Ethyl ether	31	4.974	4.975	-0.001	76	726094	8.00	7.03	
27 1,1-Dichloroethene	96	5.233	5.218	0.015	97	1133673	8.00	7.31	
28 Acrylonitrile	53	5.298	5.288	0.010	94	735807	8.00	7.52	
29 2-Methyl-2-propanol	59	5.330	5.325	0.005	93	2316983	8.00	7.51	
30 1,1,2-Trichloro-1,2,2-trif	101	5.400	5.390	0.010	97	2438487	8.00	7.36	
31 Methylene Chloride	84	5.508	5.492	0.016	89	1033868	8.00	6.46	
32 3-Chloro-1-propene	39	5.524	5.514	0.010	95	964101	8.00	7.49	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.637	5.625	0.012	98	3227149	8.00	7.53	
34 trans-1,2-Dichloroethene	96	6.209	6.192	0.017	98	1206934	8.00	7.67	
36 Methyl tert-butyl ether	73	6.322	6.323	-0.001	94	3723922	8.00	7.68	
37 1,1-Dichloroethane	63	6.560	6.545	0.015	100	2160451	8.00	7.21	
38 Vinyl acetate	43	6.667	6.662	0.005	99	2517397	8.00	8.69	
39 2-Butanone (MEK)	72	7.029	7.036	-0.007	97	573697	8.00	7.73	
40 Hexane	56	7.126	7.119	0.007	84	869891	8.00	7.25	
41 cis-1,2-Dichloroethene	96	7.439	7.426	0.013	95	1252882	8.00	7.43	
42 Ethyl acetate	43	7.616	7.622	-0.006	99	2125431	8.00	8.18	
43 Chloroform	83	7.757	7.743	0.014	96	2787766	8.00	7.36	
44 Tetrahydrofuran	42	8.096	8.108	-0.012	84	998545	8.00	7.54	
45 1,1,1-Trichloroethane	97	8.711	8.701	0.010	95	3097922	8.00	7.78	
46 1,2-Dichloroethane	62	8.781	8.771	0.010	99	2013816	8.00	7.73	
47 Benzene	78	9.283	9.274	0.009	97	3386082	8.00	7.19	
48 n-Butanol	31	9.272	9.296	-0.024	56	270253	8.00	8.68	
49 Cyclohexane	69	9.304	9.298	0.006	94	546616	8.00	7.23	
50 Carbon tetrachloride	117	9.320	9.312	0.008	97	3073958	8.00	8.10	
53 Isooctane	57	10.151	10.145	0.006	97	5099511	8.00	7.47	
54 1,2-Dichloropropane	63	10.545	10.540	0.005	86	1201630	8.00	7.34	
55 n-Heptane	71	10.566	10.561	0.005	81	1232469	8.00	7.55	
56 Trichloroethene	130	10.615	10.605	0.010	94	1689959	8.00	7.60	
57 Dibromomethane	93	10.658	10.648	0.010	94	1514919	8.00	7.82	
58 Dichlorobromomethane	83	10.836	10.825	0.011	99	2919706	8.00	8.41	
59 1,4-Dioxane	88	10.841	10.851	-0.010	81	547334	8.00	7.89	
60 Methyl methacrylate	41	10.987	10.990	-0.003	96	1346179	8.00	8.71	
62 4-Methyl-2-pentanone (MIBK	43	11.866	11.878	-0.012	93	2198186	8.00	8.33	
63 cis-1,3-Dichloropropene	75	11.920	11.915	0.005	92	2237825	8.00	8.27	
64 trans-1,3-Dichloropropene	75	12.664	12.660	0.004	96	2203158	8.00	8.52	
65 Toluene	91	12.799	12.795	0.004	94	4431626	8.00	7.54	
66 1,1,2-Trichloroethane	83	12.858	12.853	0.005	98	1239731	8.00	7.66	
69 2-Hexanone	58	13.300	13.313	-0.013	98	1277875	8.00	9.12	
70 Chlorodibromomethane	129	13.586	13.580	0.006	97	2886064	8.00	9.32	
71 n-Octane	85	13.618	13.618	0.000	83	1455739	8.00	7.70	
72 Ethylene Dibromide	107	13.877	13.876	0.001	98	2401387	8.00	8.31	
73 Tetrachloroethene	129	14.006	14.005	0.001	96	1680400	8.00	7.67	
74 Chlorobenzene	112	14.912	14.910	0.002	93	3488920	8.00	7.54	
76 Ethylbenzene	91	15.241	15.237	0.004	99	5752584	8.00	7.48	
77 m-Xylene & p-Xylene	91	15.414	15.413	0.001	99	8622122	16.0	14.5	
79 Bromoform	173	15.813	15.812	0.001	96	2664358	8.00	10.0	
80 Styrene	104	15.883	15.884	-0.001	98	3357063	8.00	8.83	
81 n-Nonane	57	15.926	15.926	0.000	83	2276291	8.00	7.08	
82 o-Xylene	91	15.948	15.948	0.000	98	4507688	8.00	7.16	
83 1,1,2,2-Tetrachloroethane	83	16.271	16.269	0.002	99	2991028	8.00	7.94	
84 1,2,3-Trichloropropane	110	16.428	16.424	0.004	98	1028585	8.00	7.54	
85 Isopropylbenzene	105	16.568	16.566	0.002	98	6052009	8.00	7.19	
86 N-Propylbenzene	120	17.145	17.144	0.001	98	1764153	8.00	7.67	
87 2-Chlorotoluene	126	17.166	17.164	0.002	95	1556290	8.00	7.32	
88 4-Ethyltoluene	105	17.312	17.312	0.000	98	6577901	8.00	7.52	
89 1,3,5-Trimethylbenzene	120	17.404	17.400	0.004	92	2700808	8.00	7.65	
90 Alpha Methyl Styrene	118	17.652	17.652	0.000	87	2696582	8.00	8.84	
91 n-Decane	57	17.797	17.793	0.004	94	3283161	8.00	7.52	
92 tert-Butylbenzene	119	17.867	17.868	-0.001	91	5901403	8.00	7.19	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.884	17.884	0.000	96	5281375	8.00	7.18	
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	99	3580637	8.00	7.57	
95 sec-Butylbenzene	105	18.175	18.170	0.005	97	7478024	8.00	7.09	
96 Benzyl chloride	91	18.239	18.237	0.002	98	4696324	8.00	8.49	
97 1,4-Dichlorobenzene	146	18.250	18.251	-0.001	95	3530827	8.00	7.48	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	96	7094422	8.00	7.65	
99 1,2,3-Trimethylbenzene	105	18.396	18.393	0.003	98	6090386	8.00	7.29	
101 1,2-Dichlorobenzene	146	18.638	18.638	0.000	94	3481297	8.00	7.58	
104 n-Butylbenzene	91	18.833	18.832	0.001	98	6600625	8.00	7.98	
105 Undecane	57	19.226	19.228	-0.002	91	3897040	8.00	8.24	
106 1,2-Dibromo-3-Chloropropan	157	19.286	19.284	0.002	98	2624159	8.00	9.34	
108 1,2,4,5-Tetramethylbenzene	119	19.641	19.641	0.000	97	3986557	8.00	8.80	
111 Dodecane	57	20.342	20.340	0.002	97	3963852	8.00	8.96	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	94	3591958	8.00	10.4	
113 Naphthalene	128	20.574	20.574	0.000	98	7879181	8.00	10.3	
115 Hexachlorobutadiene	225	20.828	20.827	0.001	96	3312283	8.00	8.80	
116 1,2,3-Trichlorobenzene	180	20.866	20.864	0.002	95	3409456	8.00	9.79	
117 2-Methylnaphthalene	142	21.680	21.680	0.000	99	4666996	18.4	24.8	
118 1-Methylnaphthalene	142	21.825	21.823	0.002	99	4705374	18.4	25.2	
S 119 Xylenes, Total	100				0		24.0	21.6	
S 120 1,2-Dichloroethene, Total	1				0		16.0	15.1	

Reagents:

40L9DNP_00019	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
Lims ID: IC L10
Client ID:
Sample Type: IC Calib Level: 10
Inject. Date: 30-Jan-2018 19:38:30 ALS Bottle#: 15 Worklist Smp#: 12
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-012
Misc. Info.: 134507
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:03:37 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 31-Jan-2018 16:10:49

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.724	7.710	0.014	91	412046	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.860	9.852	0.008	94	2495007	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.864	14.859	0.005	87	2168094	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.573	16.570	0.003	93	1466410	4.00	3.57	
6 Chlorodifluoromethane	67	3.453	3.471	-0.018	97	719553	16.0	14.3	
7 Propene	41	3.464	3.477	-0.013	96	1277376	16.0	13.0	
8 Dichlorodifluoromethane	85	3.507	3.519	-0.012	100	5412793	16.0	14.0	
9 Chloromethane	52	3.648	3.653	-0.005	99	462204	16.0	13.1	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.669	3.675	-0.006	91	3561275	16.0	13.6	
12 Vinyl chloride	62	3.782	3.789	-0.007	99	1447608	16.0	13.4	
13 Butane	43	3.858	3.863	-0.005	78	1618667	16.0	14.0	
14 Butadiene	54	3.858	3.863	-0.005	79	990068	16.0	14.2	
15 Bromomethane	94	4.095	4.098	-0.003	98	1458793	16.0	14.6	
16 Chloroethane	64	4.214	4.208	0.006	99	704038	16.0	14.4	
17 Ethanol	31	4.332	4.313	0.019	91	2165410	80.0	70.1	
18 Vinyl bromide	106	4.446	4.441	0.005	97	1433559	16.0	14.6	
19 2-Methylbutane	43	4.500	4.498	0.002	81	1164068	16.0	14.3	
20 Acrolein	56	4.661	4.656	0.005	96	327310	16.0	14.4	
21 Trichlorofluoromethane	101	4.661	4.659	0.002	99	5028632	16.0	13.7	
22 Acetonitrile	40	4.710	4.713	-0.003	96	414724	16.0	14.8	
23 Acetone	58	4.753	4.748	0.005	99	1641135	48.0	38.1	
24 Isopropyl alcohol	45	4.861	4.843	0.018	93	6176210	48.0	37.3	
25 Pentane	72	4.850	4.847	0.003	96	368799	16.0	12.8	
26 Ethyl ether	31	4.974	4.975	-0.001	75	1351034	16.0	13.0	
27 1,1-Dichloroethene	96	5.228	5.218	0.010	97	2191529	16.0	14.0	
28 Acrylonitrile	53	5.298	5.288	0.010	93	1416916	16.0	14.4	
29 2-Methyl-2-propanol	59	5.335	5.325	0.010	92	4364855	16.0	14.1	
30 1,1,2-Trichloro-1,2,2-trif	101	5.395	5.390	0.005	96	4568598	16.0	13.7	
31 Methylene Chloride	84	5.503	5.492	0.011	89	1959635	16.0	12.2	
32 3-Chloro-1-propene	39	5.524	5.514	0.010	95	1802055	16.0	13.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.632	5.625	0.007	98	6249903	16.0	14.5	
34 trans-1,2-Dichloroethene	96	6.209	6.192	0.017	99	2342499	16.0	14.8	
36 Methyl tert-butyl ether	73	6.317	6.323	-0.006	94	7130125	16.0	14.6	
37 1,1-Dichloroethane	63	6.560	6.545	0.015	100	4150884	16.0	13.8	
38 Vinyl acetate	43	6.667	6.662	0.005	99	4862704	16.0	16.7	
39 2-Butanone (MEK)	72	7.034	7.036	-0.002	97	1092853	16.0	14.6	
40 Hexane	56	7.126	7.119	0.007	84	1626366	16.0	13.5	
41 cis-1,2-Dichloroethene	96	7.438	7.426	0.012	94	2442184	16.0	14.4	
42 Ethyl acetate	43	7.616	7.622	-0.006	99	4096409	16.0	15.7	
43 Chloroform	83	7.757	7.743	0.014	97	5369459	16.0	14.1	
44 Tetrahydrofuran	42	8.096	8.108	-0.012	83	1922640	16.0	14.4	
45 1,1,1-Trichloroethane	97	8.711	8.701	0.010	96	5978105	16.0	14.9	
46 1,2-Dichloroethane	62	8.781	8.771	0.010	99	3907140	16.0	14.8	
47 Benzene	78	9.283	9.274	0.009	97	6108554	16.0	12.8	
48 n-Butanol	31	9.272	9.296	-0.024	65	506348	16.0	16.1	
49 Cyclohexane	69	9.304	9.298	0.006	92	968821	16.0	12.7	
50 Carbon tetrachloride	117	9.320	9.312	0.008	98	5902097	16.0	15.4	
53 Isooctane	57	10.151	10.145	0.006	97	9340512	16.0	13.5	
54 1,2-Dichloropropane	63	10.544	10.540	0.004	85	2196910	16.0	13.2	
55 n-Heptane	71	10.566	10.561	0.005	79	2239236	16.0	13.6	
56 Trichloroethene	130	10.615	10.605	0.010	96	3246702	16.0	14.4	
57 Dibromomethane	93	10.658	10.648	0.010	94	2859943	16.0	14.6	
58 Dichlorobromomethane	83	10.836	10.825	0.011	99	5610234	16.0	16.0	
59 1,4-Dioxane	88	10.846	10.851	-0.005	81	995848	16.0	14.2	
60 Methyl methacrylate	41	10.987	10.990	-0.003	96	2607373	16.0	16.7	
62 4-Methyl-2-pentanone (MIBK	43	11.871	11.878	-0.007	92	4112261	16.0	15.4	
63 cis-1,3-Dichloropropene	75	11.920	11.915	0.005	92	4235998	16.0	15.5	
64 trans-1,3-Dichloropropene	75	12.664	12.660	0.004	97	4251750	16.0	16.2	
65 Toluene	91	12.798	12.795	0.003	94	8226314	16.0	13.8	
66 1,1,2-Trichloroethane	83	12.858	12.853	0.005	98	2316335	16.0	14.1	
69 2-Hexanone	58	13.300	13.313	-0.013	98	2400790	16.0	16.9	
70 Chlorodibromomethane	129	13.586	13.580	0.006	97	5563126	16.0	17.7	
71 n-Octane	85	13.624	13.618	0.006	81	2665696	16.0	13.9	
72 Ethylene Dibromide	107	13.882	13.876	0.006	98	4533785	16.0	15.4	
73 Tetrachloroethene	129	14.012	14.005	0.007	96	3162320	16.0	14.2	
74 Chlorobenzene	112	14.912	14.910	0.002	92	6524458	16.0	13.9	
76 Ethylbenzene	91	15.241	15.237	0.004	98	10356375	16.0	13.3	
77 m-Xylene & p-Xylene	91	15.419	15.413	0.006	97	14832360	32.0	24.5	
79 Bromoform	173	15.813	15.812	0.001	96	5289308	16.0	19.5	
80 Styrene	104	15.888	15.884	0.004	98	6305273	16.0	16.3	
81 n-Nonane	57	15.926	15.926	0.000	81	3925374	16.0	12.0	
82 o-Xylene	91	15.953	15.948	0.005	98	8018750	16.0	12.5	
83 1,1,2,2-Tetrachloroethane	83	16.271	16.269	0.002	98	5403129	16.0	14.1	
84 1,2,3-Trichloropropane	110	16.428	16.424	0.004	97	1952171	16.0	14.1	
85 Isopropylbenzene	105	16.568	16.566	0.002	98	10798333	16.0	12.6	
86 N-Propylbenzene	120	17.145	17.144	0.001	98	3199258	16.0	13.7	
87 2-Chlorotoluene	126	17.166	17.164	0.002	95	2818704	16.0	13.0	
88 4-Ethyltoluene	105	17.312	17.312	0.000	97	11626420	16.0	13.1	
89 1,3,5-Trimethylbenzene	120	17.404	17.400	0.004	93	4953675	16.0	13.8	
90 Alpha Methyl Styrene	118	17.652	17.652	0.000	89	4958200	16.0	16.0	
91 n-Decane	57	17.797	17.793	0.004	95	5508017	16.0	12.4	
92 tert-Butylbenzene	119	17.873	17.868	0.005	89	10252438	16.0	12.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.889	17.884	0.005	96	9006683	16.0	12.0	
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	98	6390995	16.0	13.3	
95 sec-Butylbenzene	105	18.175	18.170	0.005	98	12393102	16.0	11.6	
96 Benzyl chloride	91	18.239	18.237	0.002	98	7883232	16.0	14.0	
97 1,4-Dichlorobenzene	146	18.256	18.251	0.005	93	6311344	16.0	13.2	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	95	11859110	16.0	12.6	
99 1,2,3-Trimethylbenzene	105	18.396	18.393	0.003	97	10662003	16.0	12.6	
101 1,2-Dichlorobenzene	146	18.638	18.638	0.000	93	6299641	16.0	13.5	
104 n-Butylbenzene	91	18.833	18.832	0.001	98	10895604	16.0	13.0	
105 Undecane	57	19.232	19.228	0.004	88	6317836	16.0	13.2	
106 1,2-Dibromo-3-Chloropropan	157	19.285	19.284	0.001	98	4681454	16.0	16.4	
108 1,2,4,5-Tetramethylbenzene	119	19.641	19.641	0.000	97	7226247	16.0	15.7	
111 Dodecane	57	20.342	20.340	0.002	94	5984092	16.0	13.3	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	94	6399037	16.0	18.3	
113 Naphthalene	128	20.574	20.574	0.000	97	13166564	16.0	16.9	
115 Hexachlorobutadiene	225	20.828	20.827	0.001	96	5838950	16.0	15.3	
116 1,2,3-Trichlorobenzene	180	20.865	20.864	0.001	94	6110654	16.0	17.3	
117 2-Methylnaphthalene	142	21.680	21.680	0.000	99	6724954	36.8	35.2	
118 1-Methylnaphthalene	142	21.825	21.823	0.002	98	6700143	36.8	35.3	
S 119 Xylenes, Total	100				0		48.0	37.0	
S 120 1,2-Dichloroethene, Total	1				0		32.0	29.2	

Reagents:

40L10DNP_00001	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Lab Sample ID: CCVIS 140-18444/2 Calibration Date: 03/01/2018 10:59

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RCCVC01.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4879	0.5009		2.05	2.00	2.7	30.0
Propene	Ave	0.9557	0.8743		1.83	2.00	-8.5	30.0
Dichlorodifluoromethane	Ave	3.756	4.118		2.19	2.00	9.7	30.0
Chloromethane	Ave	0.3421	0.3671		2.15	2.00	7.3	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.544	2.855		2.24	2.00	12.2	30.0
Vinyl chloride	Ave	1.049	1.044		1.99	2.00	-0.5	30.0
1,3-Butadiene	Ave	0.6765	0.6916		2.04	2.00	2.2	30.0
Butane	Ave	1.124	1.166		2.08	2.00	3.8	30.0
Bromomethane	Ave	0.9705	1.039		2.14	2.00	7.0	30.0
Chloroethane	Ave	0.4754	0.4875		2.05	2.00	2.5	30.0
Ethanol	Ave	0.2999	0.1883		6.28	10.0	-37.2*	30.0
Vinyl bromide	Ave	0.9514	1.067		2.24	2.00	12.2	30.0
2-Methylbutane	Ave	0.7921	0.7807		1.97	2.00	-1.4	30.0
Acrolein	Ave	0.2209	0.2973		2.69	2.00	34.6*	30.0
Trichlorofluoromethane	Ave	3.567	3.773		2.12	2.00	5.8	30.0
Acetonitrile	Ave	0.2718	0.2523		1.86	2.00	-7.2	30.0
Acetone	Ave	0.4182	0.4309		2.06	2.00	3.0	30.0
Isopropyl alcohol	Ave	1.608	2.046		2.55	2.00	27.3	30.0
Pentane	Ave	0.2789	0.3188		2.29	2.00	14.3	30.0
Ethyl ether	Ave	1.010	0.9905		1.96	2.00	-1.9	30.0
1,1-Dichloroethene	Ave	1.514	1.517		2.00	2.00	0.2	30.0
Acrylonitrile	Ave	0.9563	0.9440		1.97	2.00	-1.3	30.0
tert-Butyl alcohol	Ave	3.014	2.781		1.84	2.00	-7.8	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.239	3.419		2.11	2.00	5.6	30.0
Methylene Chloride	Ave	1.564	1.481		1.89	2.00	-5.3	30.0
3-Chloropropene	Ave	1.257	1.217		1.94	2.00	-3.2	30.0
Carbon disulfide	Ave	4.190	4.242		2.03	2.00	1.3	30.0
trans-1,2-Dichloroethene	Ave	1.537	1.565		2.04	2.00	1.8	30.0
Methyl tert-butyl ether	Ave	4.739	4.802		2.03	2.00	1.3	30.0
1,1-Dichloroethane	Ave	2.927	2.849		1.95	2.00	-2.7	30.0
Vinyl acetate	Ave	2.829	2.956		2.09	2.00	4.5	30.0
2-Butanone (MEK)	Ave	0.7255	0.6686		1.84	2.00	-7.8	30.0
Hexane	Ave	1.173	1.117		1.91	2.00	-4.7	30.0
cis-1,2-Dichloroethene	Ave	1.647	1.650		2.00	2.00	0.1	30.0
Ethyl acetate	Ave	2.540	2.371		1.87	2.00	-6.7	30.0
Chloroform	Ave	3.701	3.703		2.00	2.00	0.0	30.0
Tetrahydrofuran	Ave	1.295	1.178		1.82	2.00	-9.0	30.0
1,1,1-Trichloroethane	Ave	3.888	3.945		2.03	2.00	1.5	30.0
1,2-Dichloroethane	Ave	0.4231	0.4265		2.02	2.00	0.8	30.0
1-Butanol	Ave	0.0506	0.0405		1.60	2.00	-20.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Lab Sample ID: CCVIS 140-18444/2 Calibration Date: 03/01/2018 10:59

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RCCVC01.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzene	Ave	0.7642	0.7838		2.05	2.00	2.6	30.0
Cyclohexane	Ave	0.1227	0.1242		2.02	2.00	1.2	30.0
Carbon tetrachloride	Ave	0.6160	0.6819		2.21	2.00	10.7	30.0
2,2,4-Trimethylpentane	Ave	1.108	1.100		1.99	2.00	-0.7	30.0
1,2-Dichloropropane	Ave	0.2659	0.2588		1.95	2.00	-2.6	30.0
Heptane	Ave	0.2649	0.2669		2.01	2.00	0.7	30.0
Trichloroethene	Ave	0.3611	0.3743		2.07	2.00	3.7	30.0
Dibromomethane	Ave	0.3145	0.3234		2.06	2.00	2.9	30.0
Bromodichloromethane	Ave	0.5634	0.6060		2.15	2.00	7.6	30.0
1,4-Dioxane	Ave	0.1127	0.1048		1.86	2.00	-7.0	30.0
Methyl methacrylate	Ave	0.2509	0.2375		1.89	2.00	-5.3	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4284	0.3996		1.87	2.00	-6.7	30.0
cis-1,3-Dichloropropene	Ave	0.4392	0.4611		2.10	2.00	5.0	30.0
trans-1,3-Dichloropropene	Ave	0.4850	0.5083		2.10	2.00	4.8	30.0
Toluene	Ave	1.102	1.132		2.06	2.00	2.8	30.0
1,1,2-Trichloroethane	Ave	0.3035	0.3096		2.04	2.00	2.0	30.0
2-Hexanone	Ave	0.2628	0.2691		2.05	2.00	2.4	30.0
Dibromochloromethane	Ave	0.5804	0.6800		2.34	2.00	17.1	30.0
Octane	Ave	0.3544	0.3726		2.10	2.00	5.1	30.0
1,2-Dibromoethane (EDB)	Ave	0.5418	0.5790		2.14	2.00	6.9	30.0
Tetrachloroethene	Ave	0.4106	0.4362		2.12	2.00	6.2	30.0
Chlorobenzene	Ave	0.8680	0.9022		2.08	2.00	3.9	30.0
Ethylbenzene	Ave	1.442	1.468		2.04	2.00	1.8	30.0
m-Xylene & p-Xylene	Ave	1.118	1.173		4.20	4.00	4.9	30.0
Bromoform	Ave	0.4993	0.5881		2.36	2.00	17.8	30.0
Styrene	Ave	0.7131	0.7930		2.22	2.00	11.2	30.0
Nonane	Ave	0.6024	0.6125		2.03	2.00	1.7	30.0
o-Xylene	Ave	1.180	1.173		1.99	2.00	-0.6	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7065	0.7456		2.11	2.00	5.5	30.0
1,2,3-Trichloropropane	Ave	0.2557	0.2604		2.04	2.00	1.8	30.0
Isopropylbenzene	Ave	1.579	1.657		2.10	2.00	4.9	30.0
Propylbenzene	Ave	0.4312	0.4863		2.26	2.00	12.8	30.0
2-Chlorotoluene	Ave	0.3988	0.4328		2.17	2.00	8.5	30.0
4-Ethyltoluene	Ave	1.639	1.751		2.14	2.00	6.9	30.0
1,3,5-Trimethylbenzene	Ave	0.6617	0.8408		2.54	2.00	27.1	30.0
Alpha Methyl Styrene	Ave	0.5721	0.6578		2.30	2.00	15.0	30.0
Decane	Ave	0.8188	0.9208		2.25	2.00	12.5	30.0
tert-Butylbenzene	Ave	1.538	1.712		2.23	2.00	11.3	30.0
1,2,4-Trimethylbenzene	Ave	1.379	1.582		2.29	2.00	14.7	30.0
1,3-Dichlorobenzene	Ave	0.8870	1.008		2.27	2.00	13.7	30.0
sec-Butylbenzene	Ave	1.978	2.240		2.26	2.00	13.2	30.0

FORM VII TO 15 LL

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Lab Sample ID: CCVIS 140-18444/2 Calibration Date: 03/01/2018 10:59

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RCCVC01.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzyl chloride	Ave	1.037	1.286		2.48	2.00	24.0	30.0
1,4-Dichlorobenzene	Ave	0.8846	1.004		2.27	2.00	13.5	30.0
4-Isopropyltoluene	Ave	1.739	1.995		2.29	2.00	14.7	30.0
1,2,3-Trimethylbenzene	Ave	1.566	1.279		1.63	2.00	-18.4	30.0
1,2-Dichlorobenzene	Ave	0.8615	0.9645		2.24	2.00	12.0	30.0
Butylbenzene	Ave	1.551	1.872		2.41	2.00	20.7	30.0
Undecane	Ave	0.8863	1.017		2.29	2.00	14.7	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.5267	0.4090		1.55	2.00	-22.4	30.0
1,2,4,5-Tetramethylbenzene	Ave	0.8495	1.702		4.01	2.00	100.3*	30.0
Dodecane	Ave	0.8298	0.9474		2.28	2.00	14.2	30.0
1,2,4-Trichlorobenzene	Ave	0.6453	0.7817		2.42	2.00	21.1	30.0
Naphthalene	Ave	1.434	1.686		2.35	2.00	17.5	30.0
Hexachlorobutadiene	Ave	0.7058	0.7822		2.22	2.00	10.8	30.0
1,2,3-Trichlorobenzene	Ave	0.6529	0.7099		2.17	2.00	8.7	30.0
4-Bromofluorobenzene (Surr)	Ave	0.7584	0.7565		3.99	4.00	-0.2	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180226-7505.b\RCCVC01.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 01-Mar-2018 10:59:30 ALS Bottle#: 15 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007505-002
Misc. Info.: 140760
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub17

Method: \\ChromNA\Knoxville\ChromData\MR\20180226-7505.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 01-Mar-2018 14:42:04 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: tajh Date: 01-Mar-2018 14:13:59

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.686	7.686	0.000	78	357240	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.827	9.827	0.000	94	2145935	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.842	14.842	0.000	87	1828892	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.557	16.557	0.000	91	1383617	4.00	3.99	
6 Chlorodifluoromethane	67	3.459	3.459	0.000	95	89478	2.00	2.05	
7 Propene	41	3.464	3.464	0.000	97	156159	2.00	1.83	
8 Dichlorodifluoromethane	85	3.507	3.507	0.000	100	735612	2.00	2.19	
9 Chloromethane	52	3.642	3.642	0.000	99	65567	2.00	2.15	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.664	3.664	0.000	93	509955	2.00	2.24	
11 Acetaldehyde	44	3.766	3.766	0.000	99	231116	NC	NC	
12 Vinyl chloride	62	3.777	3.777	0.000	99	186400	2.00	1.99	
13 Butane	43	3.847	3.847	0.000	88	208343	2.00	2.08	
14 Butadiene	54	3.847	3.847	0.000	94	123541	2.00	2.04	
15 Bromomethane	94	4.079	4.079	0.000	98	185561	2.00	2.14	
16 Chloroethane	64	4.192	4.192	0.000	97	87069	2.00	2.05	
17 Ethanol	31	4.289	4.289	0.000	89	168178	10.0	6.28	
18 Vinyl bromide	106	4.424	4.424	0.000	98	190665	2.00	2.24	
19 2-Methylbutane	43	4.478	4.478	0.000	80	139452	2.00	1.97	
20 Acrolein	56	4.634	4.634	0.000	93	53095	2.00	2.69	
21 Trichlorofluoromethane	101	4.645	4.645	0.000	99	673895	2.00	2.12	
22 Acetonitrile	40	4.677	4.677	0.000	98	45064	2.00	1.86	
23 Acetone	58	4.726	4.726	0.000	99	76975	2.00	2.06	
24 Isopropyl alcohol	45	4.818	4.818	0.000	94	365452	2.00	2.55	
25 Pentane	72	4.823	4.823	0.000	99	56951	2.00	2.29	
26 Ethyl ether	31	4.947	4.947	0.000	76	176928	2.00	1.96	
27 1,1-Dichloroethene	96	5.200	5.200	0.000	96	271006	2.00	2.00	
28 Acrylonitrile	53	5.260	5.260	0.000	93	168625	2.00	1.97	
29 2-Methyl-2-propanol	59	5.292	5.292	0.000	93	496697	2.00	1.84	
30 1,1,2-Trichloro-1,2,2-trif	101	5.368	5.368	0.000	97	610661	2.00	2.11	
31 Methylene Chloride	84	5.470	5.470	0.000	88	264585	2.00	1.89	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.492	5.492	0.000	95	217466	2.00	1.94	
33 Carbon disulfide	76	5.605	5.605	0.000	98	757764	2.00	2.03	
34 trans-1,2-Dichloroethene	96	6.171	6.171	0.000	98	279460	2.00	2.04	
35 2-Methylpentane	43	6.220	6.220	0.000	89	427774	NC	NC	
36 Methyl tert-butyl ether	73	6.290	6.290	0.000	94	857704	2.00	2.03	
37 1,1-Dichloroethane	63	6.522	6.522	0.000	100	508804	2.00	1.95	
38 Vinyl acetate	43	6.629	6.629	0.000	99	528005	2.00	2.09	
39 2-Butanone (MEK)	72	7.002	7.002	0.000	97	119425	2.00	1.84	
40 Hexane	56	7.093	7.093	0.000	85	199600	2.00	1.91	
41 cis-1,2-Dichloroethene	96	7.401	7.401	0.000	95	294675	2.00	2.00	
42 Ethyl acetate	43	7.584	7.584	0.000	99	423466	2.00	1.87	
43 Chloroform	83	7.724	7.724	0.000	95	661391	2.00	2.00	
44 Tetrahydrofuran	42	8.064	8.064	0.000	83	210334	2.00	1.82	
45 1,1,1-Trichloroethane	97	8.679	8.679	0.000	95	704704	2.00	2.03	
46 1,2-Dichloroethane	62	8.749	8.749	0.000	99	457568	2.00	2.02	
48 n-Butanol	31	9.250	9.250	0.000	59	43418	2.00	1.60	
47 Benzene	78	9.250	9.250	0.000	96	841023	2.00	2.05	
49 Cyclohexane	69	9.277	9.277	0.000	95	133256	2.00	2.02	
50 Carbon tetrachloride	117	9.288	9.288	0.000	97	731675	2.00	2.21	
51 2,3-Dimethylpentane	71	9.439	9.439	0.000	87	183331	NC	NC	
52 Thiophene	84	9.509	9.509	0.000	93	473721	NC	NC	
53 Isooctane	57	10.124	10.124	0.000	97	1180600	2.00	1.99	
54 1,2-Dichloropropane	63	10.517	10.517	0.000	89	277722	2.00	1.95	
55 n-Heptane	71	10.539	10.539	0.000	82	286355	2.00	2.01	
56 Trichloroethene	130	10.587	10.587	0.000	94	401572	2.00	2.07	
57 Dibromomethane	93	10.625	10.625	0.000	96	347039	2.00	2.06	
58 Dichlorobromomethane	83	10.803	10.803	0.000	99	650248	2.00	2.15	
59 1,4-Dioxane	88	10.814	10.814	0.000	82	112453	2.00	1.86	
60 Methyl methacrylate	41	10.960	10.960	0.000	95	254850	2.00	1.89	
61 Methylcyclohexane	83	11.429	11.429	0.000	94	618550	NC	NC	
62 4-Methyl-2-pentanone (MIBK	43	11.844	11.844	0.000	93	428788	2.00	1.87	
63 cis-1,3-Dichloropropene	75	11.892	11.892	0.000	92	494786	2.00	2.10	
64 trans-1,3-Dichloropropene	75	12.637	12.637	0.000	96	464794	2.00	2.10	
65 Toluene	91	12.777	12.777	0.000	94	1035135	2.00	2.06	
66 1,1,2-Trichloroethane	83	12.836	12.836	0.000	98	283063	2.00	2.04	
68 3-Methylthiophene	97	13.138	13.138	0.000	0	814962	NC	NC	
69 2-Hexanone	58	13.284	13.284	0.000	98	246074	2.00	2.05	
70 Chlorodibromomethane	129	13.564	13.564	0.000	97	621774	2.00	2.34	
71 n-Octane	85	13.602	13.602	0.000	83	340735	2.00	2.10	
72 Ethylene Dibromide	107	13.855	13.855	0.000	99	529490	2.00	2.14	
73 Tetrachloroethene	129	13.990	13.990	0.000	97	398905	2.00	2.12	
74 Chlorobenzene	112	14.891	14.891	0.000	94	825035	2.00	2.08	
75 2,3-Dimethylheptane	43	15.015	15.015	0.000	83	602850	NC	NC	
76 Ethylbenzene	91	15.220	15.220	0.000	98	1342568	2.00	2.04	
78 2-Ethylthiophene	97	15.322	15.322	0.000	0	1008484	NC	NC	
77 m-Xylene & p-Xylene	91	15.397	15.397	0.000	99	2145615	4.00	4.20	
79 Bromoform	173	15.797	15.797	0.000	96	537774	2.00	2.36	
80 Styrene	104	15.867	15.867	0.000	98	725157	2.00	2.22	
81 n-Nonane	57	15.915	15.915	0.000	85	560077	2.00	2.03	
82 o-Xylene	91	15.931	15.931	0.000	98	1072649	2.00	1.99	
83 1,1,2,2-Tetrachloroethane	83	16.255	16.255	0.000	99	681793	2.00	2.11	
84 1,2,3-Trichloropropane	110	16.411	16.411	0.000	98	238073	2.00	2.04	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.551	16.551	0.000	97	1515139	2.00	2.10	
86 N-Propylbenzene	120	17.128	17.128	0.000	99	444659	2.00	2.26	
87 2-Chlorotoluene	126	17.150	17.150	0.000	94	395795	2.00	2.17	
88 4-Ethyltoluene	105	17.296	17.296	0.000	99	1601235	2.00	2.14	
89 1,3,5-Trimethylbenzene	120	17.387	17.387	0.000	92	768900	2.00	2.54	
90 Alpha Methyl Styrene	118	17.641	17.641	0.000	87	601546	2.00	2.30	
91 n-Decane	57	17.781	17.781	0.000	93	842042	2.00	2.25	
92 tert-Butylbenzene	119	17.856	17.856	0.000	94	1565322	2.00	2.23	
93 1,2,4-Trimethylbenzene	105	17.873	17.873	0.000	96	1446209	2.00	2.29	
94 1,3-Dichlorobenzene	146	18.137	18.137	0.000	99	922080	2.00	2.27	
95 sec-Butylbenzene	105	18.158	18.158	0.000	98	2047935	2.00	2.26	
96 Benzyl chloride	91	18.223	18.223	0.000	98	1176315	2.00	2.48	
97 1,4-Dichlorobenzene	146	18.239	18.239	0.000	94	918408	2.00	2.27	
98 4-Isopropyltoluene	119	18.347	18.347	0.000	97	1823960	2.00	2.29	
99 1,2,3-Trimethylbenzene	105	18.379	18.379	0.000	99	1169265	2.00	1.63	
100 Butylcyclohexane	83	18.477	18.477	0.000	95	1055006	NC	NC	
101 1,2-Dichlorobenzene	146	18.628	18.628	0.000	93	882017	2.00	2.24	
102 2,3-Dihydroindene	117	18.638	18.638	0.000	94	1247217	NC	NC	
103 Indene	116	18.773	18.773	0.000	91	892464	NC	NC	
104 n-Butylbenzene	91	18.822	18.822	0.000	98	1712135	2.00	2.41	
105 Undecane	57	19.221	19.221	0.000	84	929990	2.00	2.29	
106 1,2-Dibromo-3-Chloropropan	157	19.275	19.275	0.000	97	373979	2.00	1.55	
107 1,2-Dimethyl-4-Ethylbenzen	119	19.345	19.345	0.000	0	2336	NC	NC	
108 1,2,4,5-Tetramethylbenzene	119	19.630	19.630	0.000	96	1555990	2.00	4.01	
109 1,2,3,5-Tetramethylbenzene	119	19.690	19.690	0.000	95	955125	NC	NC	
110 1,2,3,4-Tetramethylbenzene	119	20.094	20.094	0.000	96	1252752	NC	NC	
111 Dodecane	57	20.331	20.331	0.000	98	866335	2.00	2.28	
112 1,2,4-Trichlorobenzene	180	20.434	20.434	0.000	94	714848	2.00	2.42	
113 Naphthalene	128	20.563	20.563	0.000	99	1541400	2.00	2.35	
114 Benzo(b)thiophene	134	20.660	20.660	0.000	0	780310	NC	NC	
115 Hexachlorobutadiene	225	20.817	20.817	0.000	96	715317	2.00	2.22	
116 1,2,3-Trichlorobenzene	180	20.855	20.855	0.000	95	649125	2.00	2.17	
S 119 Xylenes, Total	100				0		6.00	6.18	
S 120 1,2-Dichloroethene, Total	1				0		4.00	4.04	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV10CNtst_00001	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
SV-168-A-24	140-10792-1	101
SV-095-A-24	140-10792-2	105
SV-075-A-24	140-10792-3	102
SV-178-MB-2	140-10792-4	107
SV-180-MB-2	140-10792-5	106
SV-179-MB-2	140-10792-6	107
SV-181-MB-2	140-10792-7	106
SV-181-MB-2 DL	140-10792-7 DL	100
SV-182-MB-2	140-10792-8	109
SV-182-MB-2 DL	140-10792-8 DL	100
SV-184-MB-2	140-10792-9	107
SV-187-MB-2	140-10792-10	107
SV-186-MB-2	140-10792-11	107
SV-185-MB-2	140-10792-12	107
	MB 140-18444/4	102
	MB 140-18530/4	103
	LCS 140-18444/1002	100
	LCS 140-18530/1002	100

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Matrix: Air Level: Low Lab File ID: RCCVC01-LCS.d

Lab ID: LCS 140-18444/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.05	103	70-130	
Carbon tetrachloride	2.00	2.21	111	70-130	
Chlorodifluoromethane	2.00	2.05	103	60-140	
Chloroform	2.00	2.00	100	70-130	
cis-1,2-Dichloroethene	2.00	2.00	100	70-130	
Dichlorodifluoromethane	2.00	2.19	110	60-140	
1,1-Dichloroethane	2.00	1.95	97	70-130	
1,2-Dichloroethane	2.00	2.02	101	70-130	
1,1-Dichloroethene	2.00	2.00	100	70-130	
Ethylbenzene	2.00	2.04	102	70-130	
Methylene Chloride	2.00	1.89	95	70-130	
Methyl tert-butyl ether	2.00	2.03	101	60-140	
Naphthalene	2.00	2.35	118	60-140	
Tetrachloroethene	2.00	2.12	106	70-130	
Toluene	2.00	2.06	103	70-130	
trans-1,2-Dichloroethene	2.00	2.04	102	70-130	
1,2,4-Trichlorobenzene	2.00	2.42	121	60-140	
1,1,1-Trichloroethane	2.00	2.03	101	70-130	
1,1,2-Trichloroethane	2.00	2.04	102	70-130	
Trichloroethene	2.00	2.07	104	70-130	
1,2,3-Trimethylbenzene	2.00	1.63	82	70-130	
1,2,4-Trimethylbenzene	2.00	2.29	115	70-130	
1,3,5-Trimethylbenzene	2.00	2.54	127	70-130	
Vinyl chloride	2.00	1.99	99	70-130	
Xylenes, Total	6.00	6.19	103	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-10792-1

SDG No.:

Lab File ID: RBFBC01.D BFB Injection Date: 03/01/2018

Instrument ID: MR BFB Injection Time: 10:28

Analysis Batch No.: 18444

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.0	
75	30.0 - 60.0 % of mass 95	54.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.2	(0.2) 1
174	50.0 - 120.00 % of mass 95	78.6	
175	5.0 - 9.0 % of mass 174	5.6	(7.2) 1
176	95.0 - 101.0 % of mass 174	76.5	(97.2) 1
177	5.0 - 9.0 % of mass 176	5.1	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-18444/2	RCCVC01.D	03/01/2018	10:59
	LCS 140-18444/1002	RCCVC01-LCS.d	03/01/2018	10:59
	MB 140-18444/4	R500BC01.D	03/01/2018	13:19
SV-168-A-24	140-10792-1	RC01P101.D	03/01/2018	14:05
SV-095-A-24	140-10792-2	RC01P102.D	03/01/2018	14:52
SV-075-A-24	140-10792-3	RC01P103.D	03/01/2018	15:39
SV-178-MB-2	140-10792-4	RC01P104.D	03/01/2018	16:26
SV-180-MB-2	140-10792-5	RC01P105.D	03/01/2018	17:13
SV-179-MB-2	140-10792-6	RC01P106.D	03/01/2018	18:00
SV-181-MB-2	140-10792-7	RC01P107.D	03/01/2018	18:46
SV-182-MB-2	140-10792-8	RC01P108.D	03/01/2018	19:33
SV-184-MB-2	140-10792-9	RC01P109.D	03/01/2018	20:20
SV-187-MB-2	140-10792-10	RC01P110.D	03/01/2018	21:08
SV-186-MB-2	140-10792-11	RC01P111.D	03/01/2018	21:55
SV-185-MB-2	140-10792-12	RC01P112D.D	03/01/2018	22:42

Data File: \\ChromNA\Knoxville\ChromData\MR\20180226-7505.b\RBFBC01.D\MR_TO15.rslt\spectra.d
Injection Date: 01-Mar-2018 10:28:30
Spectrum: Tune Spec :Average 256-258(4.32-4.33) Bgrd 240(4.27)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 157

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	335	69.00	122280	116.00	3914	156.00	228
30.00	88	70.00	9398	117.00	6218	157.00	2251
31.00	20528	71.00	268	118.00	4263	158.00	182
32.00	997	72.00	5716	119.00	5769	159.00	1204
33.00	5249	73.00	48992	120.00	370	160.00	182
34.00	22	74.00	202880	121.00	86	161.00	1318
35.00	50	75.00	606080	122.00	114	163.00	39
36.00	7574	76.00	50272	123.00	355	166.00	61
37.00	41816	77.00	5669	124.00	735	167.00	87
38.00	37312	78.00	2036	125.00	332	168.00	48
39.00	15378	79.00	31712	126.00	591	169.00	34
40.00	570	80.00	10903	127.00	269	171.00	168
41.00	211	81.00	32312	128.00	4017	172.00	2007
42.00	44	82.00	8255	129.00	2241	173.00	2031
43.00	461	83.00	712	130.00	3918	174.00	868672
44.00	5239	84.00	133	131.00	1714	175.00	62344
45.00	7791	86.00	871	132.00	240	176.00	844736
46.00	849	87.00	30192	133.00	2	177.00	55888
47.00	6468	88.00	28808	134.00	216	178.00	1603
48.00	6373	90.00	60	135.00	1879	181.00	55
49.00	42128	91.00	3627	136.00	348	182.00	43
50.00	209472	92.00	33600	137.00	1862	191.00	88
51.00	62192	93.00	50392	138.00	79	193.00	3
52.00	2776	94.00	131072	139.00	408	198.00	42
53.00	410	95.00	1104896	140.00	918	201.00	75
54.00	198	96.00	76392	141.00	11447	203.00	42
55.00	2747	97.00	2330	142.00	1335	204.00	39
56.00	15643	103.00	442	143.00	12564	207.00	64
57.00	29920	104.00	4618	144.00	714	210.00	64
58.00	1258	105.00	1594	145.00	1095	217.00	80
59.00	97	106.00	4646	146.00	1376	218.00	95
60.00	9640	107.00	1051	147.00	510	219.00	106
61.00	52776	108.00	249	148.00	2786	235.00	49

Report Date: 01-Mar-2018 14:42:02 Chrom Revision: 2.2 08-Feb-2018 13:38:42
Data File: \\ChromNA\Knoxville\ChromData\MR\20180226-7505.b\RBFBC01.D\MR_TO15.rslt\spectra.d
Injection Date: 01-Mar-2018 10:28:30
Spectrum: Tune Spec :Average 256-258(4.32-4.33) Bgrd 240(4.27)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 157

m/z	Y	m/z	Y	m/z	Y	m/z	Y
62.00	51912	109.00	205	149.00	708	250.00	136
63.00	41856	110.00	758	150.00	1133	251.00	34
64.00	4199	111.00	902	151.00	166	253.00	66
65.00	1912	112.00	902	152.00	529	254.00	43
66.00	454	113.00	880	153.00	674		
67.00	2882	114.00	52	154.00	575		
68.00	120576	115.00	1105	155.00	2964		

TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180226-7505.b\RC01P101.D				
Lims ID:	140-10792-A-1				
Client ID:	SV-168-A-24				
Sample Type:	Client				
Inject. Date:	01-Mar-2018 14:05:30	ALS Bottle#:	1	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007505-005				
Misc. Info.:	140-10792-a-1				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180226-7505.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	01-Mar-2018 14:41:54	Calib Date:	30-Jan-2018 19:38:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK007				
First Level Reviewer: tajh		Date:	01-Mar-2018 14:41:54		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.04	100.92

APPENDIX E—*REMEDIAL ACTION PROGRESS REPORT #31: OCTOBER 1, 2017 THROUGH MARCH 31, 2018, SUB-SLAB-DEPRESSURIZATION SYSTEMS, BUILDINGS A AND C, LOCKHEED MARTIN MIDDLE RIVER COMPLEX*

REMEDIAL ACTION PROGRESS REPORT #31
OCTOBER 1, 2017—MARCH 31, 2018
SUB-SLAB DEPRESSURIZATION SYSTEMS
BUILDINGS A AND C
LOCKHEED MARTIN MIDDLE RIVER COMPLEX
2323 EASTERN BOULEVARD
MIDDLE RIVER, MARYLAND

Prepared for:
Lockheed Martin Corporation

Prepared by:
Tetra Tech, Inc.

April 2018

Revision: 0

Michael Martin, P. G.
Regional Manager

Peter Rich, P.E.
Project Manager

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Appendix A—Biweekly and Quarterly System Check Forms
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ACRONYMS AND ABBREVIATIONS

%	Percent
°F	degrees Fahrenheit
µg/m^3	micrograms per cubic meter
GAC	granular activated-carbon
HEPA	high-efficiency particulate air
lbs/day	pounds per day
MDE	Maryland Department of the Environment
OM&M	operation, maintenance, and monitoring
PPZ	potassium permanganate-impregnated zeolite
SCFM	standard cubic feet per minute
S&S	S&S Technologies, Inc.
SSD	sub-slab depressurization
TestAmerica	TestAmerica Laboratories, Inc.
TO-15	Toxic Organic Method 15
TCE	Trichloroethene
VMP	vapor monitoring point
VOC	volatile organic compound
WC	water column

SECTION 1
INTRODUCTION

1.1 SITE LOCATION AND BACKGROUND INFORMATION

This report documents the monitoring activities completed from October 1, 2017 to March 31, 2018 [the 39th and 40th quarters of operation] for the sub-slab depressurization systems operating in the Building A lay-up room (former plating shop), eastern area, and basement, and the Building C basement of the Lockheed Martin Corporation Middle River Complex in Middle River, Maryland. The locations of the systems' influence are shown on Figure 1. These remedial systems control (by creating a vacuum) and remove volatile organic compounds from sub-slab vapor, thus preventing their migration into indoor air. The systems are operated in accordance with the operation, maintenance, and monitoring manuals for the Building A and Building C systems (Tetra Tech, Inc., 2017a and 2014, respectively).

1.2 DESCRIPTION OF SUB-SLAB DEPRESSURIZATION SYSTEMS

1.2.1 Building A System

The sub-slab depressurization system in Building A includes the following soil vapor extraction points (Figure 2):

- Two (2) horizontal soil vapor extraction laterals in the lay-up room (North and South)
- Two (2) laterals in the basement (Basement North and Basement South)
- Six (6) vertical soil vapor extraction points (SSD-34-A, SSD-35-A, SSD-36-A, SSD-37-A, SSD-38-A, and SSD-39-A)
- Extraction piping connected to basement sump HRS-5

The soil vapor extraction points serve as conduits for drawing vapor from beneath the building slab and from a covered sump in the basement, thus mitigating vapor intrusion into indoor air. Sub-slab vapors are pulled through the extraction points, vapor-extraction manifold, and

"pre-blower" moisture separator using a single 10-horsepower regenerative blower. The blower is mounted on a skid along with the pre-blower moisture separator, a heat exchanger, filters, and vacuum, pressure, temperature, and flow gauges (collectively referred to as the "blower skid"). The extracted vapors are cooled as they are pushed through the heat exchanger. Following the heat exchanger, the vapors enter the post-blower moisture separator where entrained condensate droplets are removed to reduce saturation and pressure buildup in the vapor-phase carbon drums. The extracted vapors are then filtered to remove volatile organic compounds using four 400-pound granular activated-carbon drums, in two-by-two configuration (two parallel trains of two drums in series)1. Vapors are discharged to the atmosphere via an exhaust stack that extends above the roof of the building. Figure 3 shows the process and instrumentation diagram for the Building A sub-slab depressurization system.

The Building A system is also equipped with one drain for each of the granular activated-carbon drums and three pipe sumps (PS-1-A [near SSD-37-A], PS-2-A [near SSD-34-A], and PS-3-A [in the basement]) and one exhaust stack sump. The pipe sumps are installed at low points to allow accumulation and manual drainage of condensation in the pipe. In addition, two freestanding drain stacks located adjacent to the south side of the system's equipment skid are available for use in winter months to drain condensate in the vapor entering the two trains of granular activated-carbon drums.

Six IQAir® GC™ Series-GC VOC indoor-air filters also operate in the basement of Building A near vapor monitoring points (VMPs) 093-A, 093 A-X, and 138-A, in response to elevated trichloroethene (TCE) concentrations in the indoor air. The filters were installed south of the sub-slab depressurization system extraction laterals in January 2015 (designated AF-N, AF-M, and AF-S) and May 2017 (designated AF-NX, AF-MX, and AF-SX), and are continuously operated to filter 300 standard cubic feet per minute (SCFM) of air. Each filter consists of a high-efficiency particulate air pre-filter, a granular activated-carbon filter, and a post-filter sleeve (collectively referred to as "filter elements"). The pre-filter (GC™ HyperHEPA® Pre-Filter H11 [S]) weighs three pounds; it removes coarse, fine, and ultra-fine dust particles and protects subsequent filters.

1 Originally, vapor treatment consisted of one train of two 400-pound carbon drums; the two-by-two configuration was completed in February 2017 to decrease pressure, increase flow of the system, and better capture VOCs; details are in Section 2.4.

The granular activated-carbon filter (GC VOC filter cartridge set) removes volatile organic compounds from indoor air; it is comprised of four granular activated-carbon cartridges, collectively weighing nine pounds. The post-filter sleeve (GC™ post-filter sleeve set) is placed over the granular activated-carbon cartridges, and removes any remaining fine and ultra-fine particulate matter.

1.2.2 Building C System

The sub-slab depressurization system in the Building C basement consists of 11 vertical soil vapor extraction points: two in the southern-basement area (SSD-21-C and SSD-23-C) and nine in the mid-basement area (SSD-26-C, SSD-27-C, SSD-28-C, SSD-29-C, SSD-30-C, SSD-31-C, SSD-32-C, SSD-33-C, and SSD-34-C); see Figure 4. These extraction points serve as conduits for drawing vapor from beneath the building slab, thus creating a vacuum under the floor slab preventing vapor intrusion into indoor air. The vapors are pulled through the extraction points using a single 7.5-horsepower regenerative blower that is mounted on a skid along with a moisture separator, heat exchanger, filters, and vacuum, pressure, temperature, and flow gauges (collectively referred to as the "blower skid"). Following extraction, the vapors enter the first moisture separator (MS-1) where entrained condensate droplets are removed to reduce fouling of the vapor lines and saturation of the granular activated-carbon. The extracted vapors are cooled as they are pushed through the heat exchanger; any remaining extracted condensate droplets are removed via a second moisture separator (MS-2) [separate from the blower skid] before being treated. The vapors are treated by passing through two 400-pound granular activated-carbon drums and one 600-pound potassium permanganate-impregnated zeolite drum (to remove residual vinyl chloride), in-series, before being discharged to the atmosphere via an exhaust stack that extends above the roof of the building (Figure 5).

The Building C system is also equipped with one drain for each granular activated-carbon and potassium permanganate-impregnated zeolite drum, five pipe sumps (PS-1 [near SSD-25-C and column N26], PS-2 [near SSD-30-C and column N26], PS-3 [near SSD-27-C and column O20], PS-4 [near SSD-32-C and column R19], and PS-5 [near SSD-29-C and column V12]), and one exhaust stack sump. The sumps are installed at low points to allow drainage of condensation in the pipe.

Sound generated by the blower and heat exchanger is controlled by a sound-deadening enclosure that surrounds the blower skid of the Building C system. This enclosure has overlapping soundproof curtains supported on a wooden frame; its plywood roof is lined with one-inch-thick foam board. A vent on the side of the enclosure and a duct extending from the heat exchanger to the ceiling of the enclosure facilitate airflow and prevent the system from overheating.

SECTION 2
SITE ACTIVITIES

2.1 BIWEEKLY SYSTEM CHECKS

Biweekly system checks were conducted to monitor the performance of the sub-slab depressurization (SSD) systems and to make necessary adjustments to optimize effectiveness. System checks were conducted between October 1, 2017 and March 31, 2018 (the 39th and 40th quarters of operation) on the dates listed below.

- October 5, 2017
- October 18, 2017
- November 1, 2017
- November 17, 2017
- December 12, 2017
- December 28, 2017
- January 8, 2018
- January 23, 2018
- February 8, 2018
- February 23, 2018
- March 8, 2018
- March 20, 2018

Biweekly system checks were conducted in accordance with the latest operation, maintenance, and monitoring (OM&M) manuals (Tetra Tech, Inc. [Tetra Tech], 2017a and 2014), and included general system monitoring vacuum influence monitoring, and any necessary adjustments to extraction laterals and wells. Biweekly system checks forms are in Appendix A.

2.1.1 General System Monitoring

Gauge readings on the blower skid were checked, and the vacuum and velocity at each extraction lateral/well were measured during each general system monitoring check. The condition of system components was also checked, and moisture separators/sumps were emptied as necessary. The following specific tasks were performed during general system monitoring:

1. Recorded:
    a. vacuum at pre-air filter

b. vacuum at post-air filter
c. pressure at post-blower
d. temperature at post-blower
e. temperature at post-heat exchanger
f. system flow
g. time counter display
h. vacuum from each extraction lateral/well
i. velocity from each extraction lateral/well
j. vacuum from each vapor monitoring point (VMP)

2. Checked the following for damage, leaks, and/or signs of heat stress:
    a. system components
    b. granular activated-carbon (GAC) drums
    c. potassium permanganate-impregnated zeolite (PPZ) drum (Building C only)
    d. GAC and PPZ fittings and flexible hoses

3. Checked the following for condensate, and drained, as necessary:
    a. moisture separators
    b. pipe sumps
    c. exhaust stack sumps
    d. GAC and PPZ drains

4. Confirmed that zip-ties on the GAC- and PPZ-drum cam locks were present and secure

5. Confirmed that the ambient air valve was closed

6. Confirmed that the vacuum relief valve was closed

7. Noted any adjustments to extraction laterals/wells

8. Checked that flow, pressure, and vacuum gauges fell to zero, and that temperature gauges fell, when systems were turned off

9. Checked each of the Building A IQAir® GC™ Series-GC indoor air filters to:
    a. verify filter was on
    b. verify fan was running
    c. check control panel for filter-life status
    d. document any signs of tampering

Approximately 465 gallons of water were drained from the Building A system during the reporting period. To accommodate the volume of water removed from Building A, ten additional visits were performed to drain the system of water during this reporting period. Approximately two gallons of

water were drained from the Building C exhaust stack sump during the reporting period.

2.1.2 Vacuum Influence Monitoring

The objective for the SSD systems is to maintain a vacuum of at least 0.01 inches water column (WC) in the targeted areas. The vacuum influence (differential sub-slab vapor vacuum versus indoor air) at sub-slab VMPs was monitored using a dual-port2 manometer (Fieldpiece Instruments, Inc. model SDMN5). This instrument was used to identify sub-slab-air short-circuiting or other problems (indicated by a significant drop in vacuum at one or more VMPs), and to determine each system's area of influence. Short-circuiting was not identified at the Building A or Building C SSD systems during this reporting period. Figures 6 to 9 show induced vacuum over time; Figures 10 to 13 show induced vacuum influence contours on plan views using induced vacuum readings from March 20, 2018.

Vacuum influence in the Building A target areas consistently3 exceeded the vacuum influence objective (0.01 inches WC) during the reporting period in the following monitoring points:

- At seven of eight VMPs in the layup room (SSD-12-A-X, SSD-11-A-X, SSD-13-A-X, SSD-2-A-X, 015-A-X, SSD-16-A-X, and SSD-3-A-X) with vacuums ranging from 0.16 to 3.94 inches WC (see Figure 10)
- At all four VMPs in the Building A basement (SSD-19-A, SSD-20-A, SSD-21-A, and SSD-22-A) with vacuums ranging from 0.01 to 0.80 inches WC (see Figure 10)
- At one of two VMPs in the western area of Building A (168-A) with vacuums ranging from 0.56 to 0.84 inches WC (see Figure 10)
- At nine of 17 VMPs in the eastern area of Building A (165-A, 166-A, 167-A, 117-A, 164-A, 136-A-S, 136-A, 161-A, and 160-A) with vacuums ranging from 0.01 to 3.74 inches WC (see Figure 11)

Negative vacuum (pressure) readings were measured at VMP 163-A in the eastern area of Building A during most biweekly system checks, indicating higher pressure in the sub-slab than in the indoor air. Induced vacuum has not been observed at 079-A, 119-A, 121-B, 162-A, 136-A-N,

2 Only one port is used for monitoring vacuum influence; the second port is used to measure static pressure.

3 Exceeded vacuum monitoring objective of 0.01 inches water column at more than half of the biweekly system checks.

188-A. This could possibly be due to the greater distance to the nearest extraction point for 119-A and 121-B. The reason for the lack of vacuum influence at 079-A, 162-A, 136-A-N, 163-A, and 188-A is not clear but could be related to subsurface preferential pathways and heterogeneity.

Vacuum influence in the Building C target areas consistently exceeded the vacuum influence objective (0.01 inches WC) during the reporting period in the following monitoring points:

- At six of seven VMPs in the southern-basement area (001-C, SSD-2-C, SSD-3-C, SSD-25-C, SSD-24-C, and SSD-22-C) with vacuums ranging from 0.01 to 1.10 inches WC (see Figure 12)
- At 13 of 20 VMPs in the mid-basement area (159-C, 135-C, 113-C, 156-C, 151-C, 149-C, 127-C, 152-C, 155-C, 133-C, 154-C, 158-C, and 153-C) with vacuums ranging from 0.01 to 3.62 inches WC (see Figure 13)

Negative vacuum4 (pressure) readings were measured during some of the monitoring events at SSD-2-C, SSD-25-C, and 141-C. VMP SSD-4-C could not be accessed for monitoring as it was covered by equipment moved to that area for storage in late September 2016.

Vacuum Summary

Induced vacuum measurements indicate that the systems are performing as designed, except near extraction point SSD-36-A in the eastern area of Building A and near extraction points SSD-29-C and SSD-34-C, as seen by the lack of vacuum influence at VMP 126-C, in the northern end of the Building C mid-basement area. The sub-slab vapor extraction laterals in the Building A lay-up room induce a vacuum influence over an approximately 5,900-square foot area, and consistently encompass five of six VMPs that had elevated volatile organic compound (VOC) concentrations before system start-up. The extraction laterals in the Building A basement induce a vacuum influence over an approximately 2,500-square foot area, and consistently encompass all four VMPs that measure the system's induced vacuum in the basement (Figure 10). The vertical extraction points in the northern and eastern areas of Building A induce a vacuum influence over an approximately 7,100-square foot area, and consistently encompass nine of 17 VMPs (Figure 11). The extraction point SSD-39A in the western area of Building A is inducing vacuum

4 Negative vacuum readings indicate higher pressure in the sub-slab than in the indoor air, which may be related to subsurface heterogeneity or preferential pathways.

at one of two nearby VMPs; the area of induced vacuum is approximately 1,100-square feet (Figure 10).

In Building C, the sub-slab vapor extraction points in the southern-basement area induce a vacuum influence over an approximately 4,900-square foot area, with six of seven VMPs showing consistent influence (Figure 12). Extraction points in the mid-basement area induce a vacuum influence over an approximately 31,000-square foot area, with 13 of 20 VMPs showing consistent influence (Figure 13). Vacuum influence at the northern end of the mid-basement area has not been apparent during monitoring; possible reasons include high groundwater levels, subsurface preferential pathways, short-circuiting, and/or blockages. However, VOC concentrations at VMP 126-C, at the northern end, have decreased by approximately 89 percent (%) since the system was expanded in May 2013.

2.1.3 Adjustments to Extraction Points

Vapor flow from the sub-slab soil vapor extraction points was adjusted during the reporting period as follows:

- December 14, 2017: After high pressure alarm from Building-C, extraction point SSD-31-C was closed to 20% to lower system pressure.
- January 6, 2018: After high pressure alarm from Building-C, extraction point SSD-29-C was closed to 40% to lower system pressure.

2.2 VAPOR SAMPLING

Grab vapor samples were collected monthly at Building A and every other month at Building C during the reporting period. Samples were collected from each SSD system at the influent, mid-GAC (between lead and lag vessels), and effluent positions of the treatment drums. Samples were collected from the Building A SSD system on October 4, November 8, and December 4, 2017 and January 9, February 9, and March 8, 2018. Samples were collected from the Building C SSD system on November 8, 2017 and January 9 and March 8, 2018. Samples were collected directly from each sampling port using the following steps:

- A piece of Teflon® tubing was connected to the sampling port.

- A clean, one-liter Summa® canister under vacuum was connected to the tubing, and the canister valve was opened until the canister gauge reached zero or stopped falling (approximately one minute).

Samples were labeled A-INFLUENT, A-MID-GAC, A-EFFLUENT, C-INFLUENT, C-MID-GAC, and C-EFFLUENT and shipped to TestAmerica Laboratories, Inc. (TestAmerica) in Knoxville, Tennessee. TestAmerica is accredited through the National Environmental Laboratory Accreditation Program and United States Department of Defense Environmental Laboratory Accreditation Program for VOC analysis by United States Environmental Protection Agency Toxic Organic Method 15 (TO-15).

Laboratory results are summarized in Tables 1 through 6; analytical reports are in Appendix B. During this reporting period, total influent VOC concentrations in Building A ranged from 1,207 micrograms per cubic meter (µg/m^3) (October 2017) to 1,902 µg/m^3 (March 2018), while VOC influent concentrations in Building C ranged from 74 µg/m^3 (November 2017) to 80 µg/m^3 (March 2018). Average influent VOC concentrations in Building A were approximately 3% higher than those observed during the previous reporting period (April 1, 2017 through September 30, 2017); average influent concentrations for the Building C system were approximately 7% lower.

2.3 QUARTERLY SYSTEM CHECKS

Quarterly system checks were completed on December 12, 2017 and March 28, 2018. Quarterly system checks included the following tasks:

1. Inspected the condition of the:
    a. system components
    b. system piping
    c. pre-blower air filter and intake (ambient) air filter; replacing filter(s) as necessary
    d. GAC and PPZ drums
    e. GAC and PPZ drum sample ports
    f. VMP well lids, bolts, and sample tubing
2. Checked that the Building A system shuts down, the control panel alarm lights illuminate, and the auto-dialer activates upon alarms for:
    a. high temperature – post-blower
    b. high temperature – post-heat exchanger

c. high-water level – moisture separator
d. high pressure
e. low vacuum

3. Checked that the Building C system shuts down, the control panel alarm lights illuminate, and the auto-dialer activates upon alarms for:
    a. high temperature – post-blower
    b. high temperature – post-heat exchanger
    c. high-water level – MS-1
    d. high-water level – MS-2
    e. high pressure
    f. low vacuum
4. Checked vacuum relief valves for proper operation
5. Recorded amperage draw on blowers
6. Checked that auto-dialers activate when power is turned off
7. Checked auto-dialer batteries and replaced, as necessary
8. Confirmed that a fire extinguisher is next to each system
9. Vacuumed the underside of the heat exchanger
10. Cleaned the systems and areas around the systems

No issues were identified for Building A or Building C during the quarterly system checks except those indicated in Section 2.4. Both systems are running within the normal operating parameters. Quarterly system checks forms are in Appendix A.

2.4 NON-ROUTINE SYSTEM MAINTENANCE

The following non-routine system maintenance was completed during the reporting period:

- December 4, 2017: The polyvinyl chloride pipe connecting SSD-38-A to its trench was damaged by facility activities. Tetra Tech was notified of the damage and the pipe was repaired the same day.

- February 8, 2018: Building C experienced a blown fuse and shorted blower motor wiring. The blown fuse was replaced the same day, and the burned wiring was replaced the following day. A voltage monitor was installed on February 23, 2018 to monitor power to the system.

- Condensate was drained from Building A on ten occasions in addition to the routine biweekly site visits over the winter months.

2.5 GAC AND PPZ CHANGE-OUTS

GAC change-outs were conducted for Building A and Building C on November 8, 2017. The change-outs were conducted by removing the lead GAC drum (the spent drum) from the system (two lead GAC drums for the Building A system), moving the lag GAC drum into the lead GAC position, and adding a new GAC drum to the lag GAC position. The spent GAC was returned to the vendor for regeneration. The Building C PPZ drum was not changed out during the reporting period.

2.6 SYSTEM SHUTDOWNS

2.6.1 Operator-Controlled Shutdowns

Both systems were briefly turned off during each biweekly system check to: (1) confirm that flow, pressure, temperature, and vacuum gauges fall to zero (thereby indicating proper operation), and (2) check and drain (as necessary) condensate accumulation in the moisture separators and sumps. Both systems were also briefly turned off during the quarterly system checks to test proper operation of the fail-safe alarms. In addition, the Building A and Building C SSD systems were shut down on the following days for semi-annual sub-slab vapor and indoor air sampling events:

- February 19-23, 2018: The Building C system was shutdown for an estimated 96 hours for the semi-annual sub-slab vapor and indoor air sampling event.
- February 20-21, 2018: The Building A system was shut down for an estimated 36 hours for a sub-slab and indoor air sampling event in the basement.

2.6.2 Alarms and Other Shutdowns

The following alarms and other shutdowns occurred during the reporting period:

- Building A:
  - November 8, 2017: The Building A SSD system was down for approximately two hours for a lead GAC changeout.
  - November 24, 2017: The Building A SSD system was down for approximately seven hours due to a high water alarm.
  - December 4, 2017: The Building A SSD system was down for approximately one hour for SSD-38-A pipe repair.

- January 5, 2018: The Building A SSD system was down for approximately five hours due to a high water alarm.
- January 9, 2018: The Building A SSD system was down for approximately 170 hours due to operator error in not restarting the system at conclusion of operation and maintenance activities.

- Building C:
  - November 8, 2017: The Building C SSD system was down for approximately one hour for a lead GAC changeout.
  - November 13, 2017: The Building C SSD system was down for approximately 45 hours due to a control panel fuse blowing requiring order and installation of new fuse.
  - December 13, 2017: The Building C SSD system was down for approximately 14 hours due to a high pressure alarm.
  - January 5, 2018: The Building C SSD system was down for approximately 12 hours due to a high pressure alarm.
  - February 8, 2018: The Building C SSD system was down for approximately 23 hours due to a control panel fuse blowing and wiring to the blower shorting out and requiring repair.

2.6.3 System Uptime

During this reporting period, the Building A and Building C SSD systems were operational for approximately 4,143 hours (94.8%) and 4,175 hours (95.6%), respectively. Downtime does not include the brief shutdown periods for biweekly and quarterly system checks.

2.7 REMEDIATION SUMMARY

2.7.1 Building A System

Continuous operation of the SSD system in the Building A lay-up room (former plating shop) began on March 31, 2008; the SSD system was expanded on October 22, 2010 to include the basement and on April 13, 2016 to include select areas on the eastern side of the building. A third-phase expansion was completed on July 6, 2017 to address areas along the western side of Building A (near VMP168-A) and basement sump HRS-5 near column D26. On February 7, 2017 the GAC drums were modified to add a second parallel treatment train (with two 400-pound GAC drums in series) to increase flow and decrease pressure on the new blower. Building A extraction points are

open to allow a combined airflow rate of approximately 360 SCFM. Each extraction point operates at an airflow rate of 7–85 SCFM; the system vacuum and flows are adjusted to maintain a vacuum of 0.01 inches water column (WC) or greater at each vapor monitoring point within areas where elevated concentrations of volatile organic compounds (VOCs) are in sub-slab soil.

Since system startup on March 31, 2008, total influent VOC concentrations have decreased more than 98%, from 94,310 µg/m^3 to 1,902 µg/m^3 (March 2018). The addition of the basement extraction laterals in October 2010 did not appear to change influent concentrations. The system expansion in April 2016 including a higher-flow blower and five new vertical extraction points resulted in an increase in Building A influent system concentration for approximately one month. The system expansion in July 2017 resulted in a slight increase in the result for the sample collected on July 6, 2017 immediately following the expansion. The two main chemicals of concern in Building A are 1,1,1-trichloroethane and trichloroethene (see Table 1). VOC trends for the Building A system are shown in Tables 1 through 3 and on Figure 14.

VOC mass removal rates (based on influent concentrations) in Building A ranged from 0.04 to 0.06 pounds per day (lbs/day) during this reporting period. The total VOC mass removed was approximately nine pounds; total VOC removal since system startup in March 2008 is approximately 170 pounds. VOC mass removal rates are lower than the levels (20 lbs/day VOCs) that require Maryland Department of Environment (MDE) permitting.

2.7.2 Building C System

Continuous operation of the SSD system in the southern-basement area of Building C began on March 31, 2008; the system was expanded to the mid-basement area in May 2013. Extraction points were installed at locations that maximized vacuum influence (based on startup tests). The total flow rate of the Building C system is approximately 180 SCFM. Extraction well SSD-23-C in the southern-basement area was shut off after the expansion to promote higher flow rates from the new wells installed in the mid-basement area. Vacuum influence in the southern-basement area was maintained by the operation of well SSD-21-C only until February 21, 2017 when SSD-23-C was reopened and SSD-21-C was closed. Vacuum influence and flow rates in the mid-basement area have increased and stabilized since system expansion. On November 7, 2013, mid-basement wells SSD-27-C and SSD-32-C flow rates were reduced to promote higher flow rates from other

extraction wells in the mid-basement area. In April 2016, flows at mid-basement extraction points SSD-26-C and SSD-30-C were also reduced to promote high flows from other extraction points. These efforts have been done in an attempt to improve vacuum influence and VOC mass removal in the northern extraction points.

From system startup on March 31, 2008 to April 8, 2013, and before the system expansion, total influent VOCs had decreased by 99%, from 31,170 µg/m^3 to 117 µg/m^3. VOC concentrations increased to 3,100 µg/m^3 after the system was expanded, but have since decreased to 80 µg/m^3 (March 2018) (97% decrease). Trichloroethene is the primary chemical of concern in Building C (see Table 4). VOC trends for the Building C system are shown in Tables 4 through 6 and on Figure 15.

Mass removal rates for VOCs in Building C during this reporting period were around 0.001 pounds per day, for a total mass of approximately 0.23 pounds. Total VOC removal since system startup in March 2008 is approximately 11.8 pounds. Building C VOC removal rates are lower than levels requiring MDE permitting (20 lbs/day VOCs, 20 pounds per year vinyl chloride).

2.7.3 Indoor Air Filters in Building A

Six (6) IQAir® GC™ Series-GC indoor air filters operate in the basement of Building A near VMPs 093-A, 093-A-X, and 138-A (south of the SSD system extraction trenches). While in operation, the filters were inspected every two weeks. The high-efficiency particulate air (HEPA) pre-filters, GAC cartridges, and post-filter sleeves were replaced on January 9 and March 28, 2018. The spent filter elements were placed in a dedicated 55–gallon drum in the designated drum storage area at the Building C SSD system pending proper off-site disposal. This waste drum was inspected during the biweekly system checks to ensure it was properly labeled and in good condition. Surface Water Flow and Sampling

SECTION 3
CONCLUSIONS AND RECOMMENDATIONS

3.1 SYSTEM PERFORMANCE

Induced vacuum measurements indicate that the sub-slab depressurization systems are performing as designed, except near extraction point SSD-36-A in the eastern area of Building A and near extraction points SSD-29-C and SSD-34-C in the northern end of the Building C mid-basement area. Soil vapor extraction points in the Building A lay-up room induce a vacuum influence over an approximately 5,900-square foot area, and consistently encompass all five vapor monitoring points that had elevated volatile organic compound concentrations before system startup. In the Building A basement the soil vapor extraction points induce a vacuum influence over an approximately 2,500-square foot area that encompasses all four vapor monitoring points installed to measure the system-induced vacuum in the basement (Figure 10). The soil vapor extraction points in the northern and eastern areas of Building A induce a vacuum influence over an approximately 7,100-square foot area, and consistently encompass nine of 17 VMPs used to measure the system-induced vacuum in that area (Figure 11). The extraction point SSD-39A in the western area of Building A is inducing vacuum at one of two nearby VMPs; the area of induced vacuum is approximately 1,100-square feet (Figure 10). In the southern-basement area of Building C the soil vapor extraction points induce a vacuum influence over an approximately 4,900-square foot area, with six of seven vapor monitoring points showing influence (Figure 12). The soil vapor extraction points in the mid-basement area of Building C induce a vacuum influence over an estimated 31,000-square foot area, with 13 of 20 vapor monitoring points showing influence (Figure 13).

The sub-slab depressurization systems have removed volatile organic compound mass, and have treated emissions with granular activated-carbon (both buildings) and potassium permanganate-impregnated zeolite (Building C only). A summary of the granular activated-carbon drums used during the lifespan of each system follows:

	Number of granular-activated-carbon drums used	
	200-pound drums	400-pound drums
Building A	23	17
Building C	17	5

The 600-pound potassium permanganate-impregnated zeolite drum in Building C has not been changed out since its installation in April 2013. The drum counts listed above do not include the granular activated-carbon drums currently attached to each system, or the potassium permanganate-impregnated zeolite drum currently attached to the Building C system.

The Building A system has used approximately 67 pounds of granular activated-carbon per pound of volatiles removed, while the Building C system has used approximately 457 pounds of granular activated-carbon per pound of volatiles removed. Note that the removal efficiency of granular activated-carbon is reduced as vapor concentrations decrease. Although influent concentrations of volatile organic compound for both systems have decreased significantly since startup (March 31, 2008), concentration fluctuations have occurred over time (see Figures 14 and 15).

3.2 CONTINUED MONITORING

The Building A and Building C systems will continue to operate during the next semi-annual reporting period (October 1, 2017 through March 31, 2018) so that the vapor migration barrier in both buildings is maintained. Operation, maintenance, and monitoring activities conducted during the next reporting period will include biweekly system checks, quarterly system checks, system maintenance, monthly vapor sampling in Building A, and bimonthly (every other month) vapor sampling in Building C. Granular activated-carbon change-outs will occur when the concentration of the sample collected following the lead granular activated-carbon vessel(s) reaches 50 percent of the influent concentration, or as determined based on change-out history and laboratory result trends especially TCE adsorption effectiveness trends. Change-out of the potassium permanganate-impregnated zeolite drum is not expected during the next reporting period. The next remedial action progress report will be issued in October 2018.

3.3 FUTURE PLANS

We will continue to analyze vacuum influence and concentrations to optimize operation of the Building A and Building C SSD systems. We are not planning on additional changes to the

systems in the remainder of 2018. We may potentially add extraction of vapor from another sump (e.g. SP-1) or extraction point in the Building A basement depending upon the results of additional indoor air monitoring and studies.

SECTION 4
REFERENCES

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Tetra Tech, Inc. (Tetra Tech), 2017b. Construction Report Sub-Slab Depressurization-System Third-Phase Expansion—Building A, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard, Middle River, Maryland. August.

FIGURES

Figure 1 SSD System Locations

Figure 2 Building A SSD System Layout

Figure 3 Building A SSD System Layout Process and Instrumentation Diagram

Figure 4 Building C SSD System Layout

Figure 5 Building C SSD System Layout Process and Instrumentation Diagram

Figure 6 Induced Vacuum March 2016 to March 2018
Building A SSD System — Lay-Up Room and Basement

Figure 7 Induced Vacuum March 2017 to March 2018
Building A SSD System — Eastern Area

Figure 8 Induced Vacuum March 2016 to March 2018
Building C SSD System — Southern Basement Area

Figure 9 Induced Vacuum March 2016 to March 2018
Building C SSD System — Mid-Basement Area

Figure 10 Influence of Soil Vapor Extractions Points Building A Lay-Up Room and Basement

Figure 11 Influence of Soil Vapor Extractions Points Building A Eastern Area

Figure 12 Influence of Soil Vapor Extractions Points Building C — Southern Basement Area

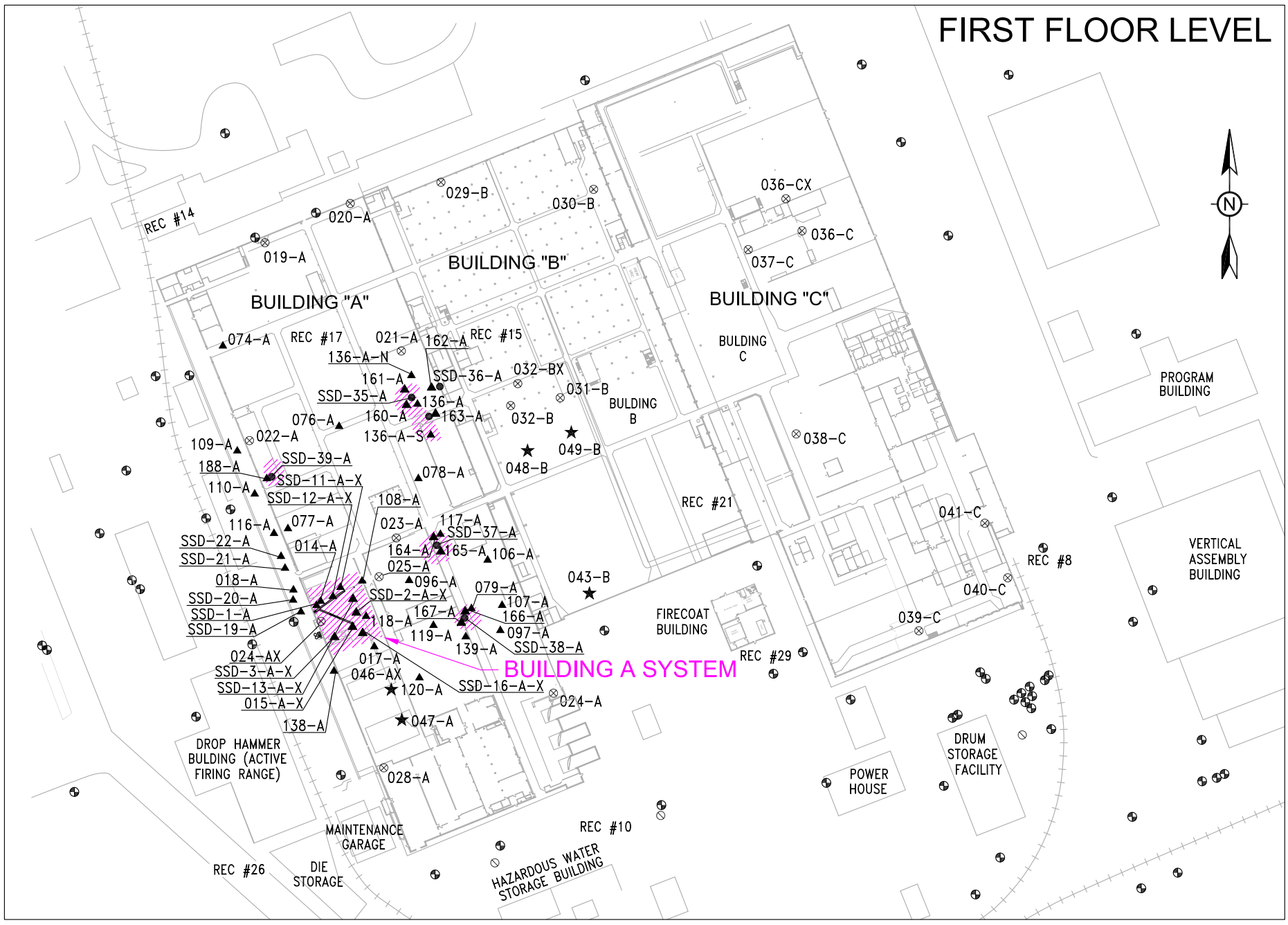
Figure 13 Influence of Soil Vapor Extractions Points Building C — Mid-Basement Area

Figure 14 Building A Influent VOC Concentrations

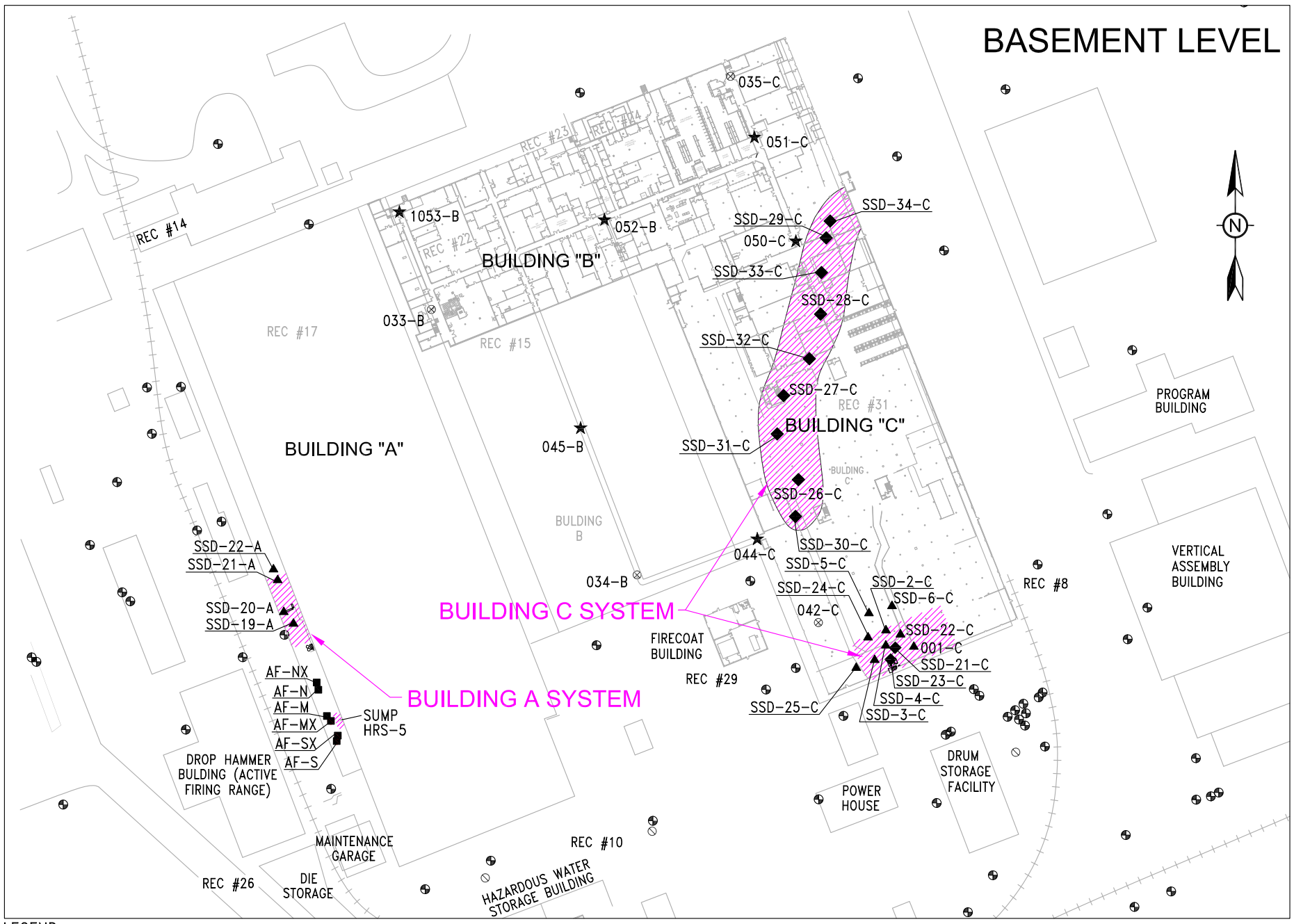
Figure 15 Building C Influent VOC Concentrations

P:\ACAD\0512-124-MRIV\0512124065A.DWG

FIRST FLOOR LEVEL



BASEMENT LEVEL



LEGEND

- GROUNDWATER MONITORING WELL
- SUB-SLAB VAPOR MONITORING POINT
- TARGET OF OPPORTUNITY
- INDOOR AIR SAMPLE
- ABANDONED WELL BORING
- SUB-SLAB VAPOR EXTRACTION POINT
- PROPOSED SUB-SLAB VAPOR EXTRACTION POINT
- INDOOR AIR FILTER
- SSD SUB-SLAB DEPRESSURIZATION
- APPROXIMATE AREA OF SSD SYSTEM INFLUENCE

0 200 400

SCALE IN FEET

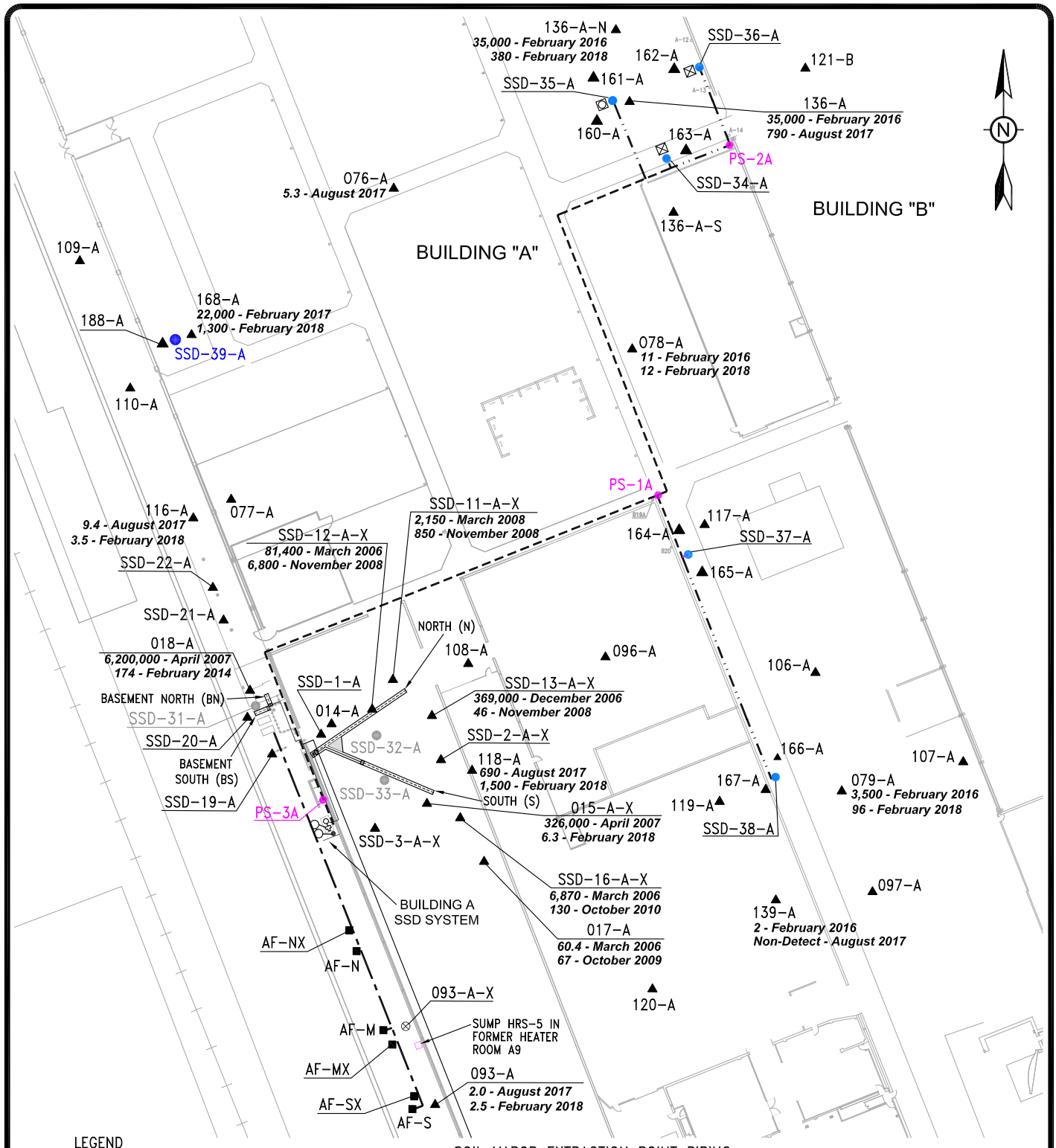
TITLE: **SSD SYSTEM LOCATIONS**

LOCATION: **LMC Middle River Complex**
Middle River, Maryland

TETRA TECH

APPROVED	PR
DRAFTED	CP
PROJECT#	117-0512124
DATE	10-31-17

FIGURE 1



LEGEND

- VERTICAL SUB-SLAB VAPOR EXTRACTION POINT
- PIPE SUMP
- GROUNDWATER MONITORING WELL
- SUB-SLAB VAPOR MONITORING POINT
- SOIL VAPOR EXTRACTION POINT (USED IN PILOT TEST ONLY)
- VERTICAL VAPOR EXTRACTION POINT
- HORIZONTAL SOIL VAPOR EXTRACTION POINT
- HIGHEST SUB-SLAB TCE CONCENTRATION ($\mu g/m^3$)
- **326,000** PRE-SSD SYSTEM AND MOST RECENT CONCENTRATION POST-SSD SYSTEM OPERATION
- ***DL*** DILUTION ANALYSIS
- SOIL VAPOR EXTRACTION POINT PIPING (2" DIA. SCH 40)
- HEADER PIPE (6" DIA. SCH 40)
- INDOOR AIR FILTER CONNECTION TO EMERGENCY POWER SUPPLY (FIELD RUN)

TITLE: **BUILDING A SSD SYSTEM LAYOUT**

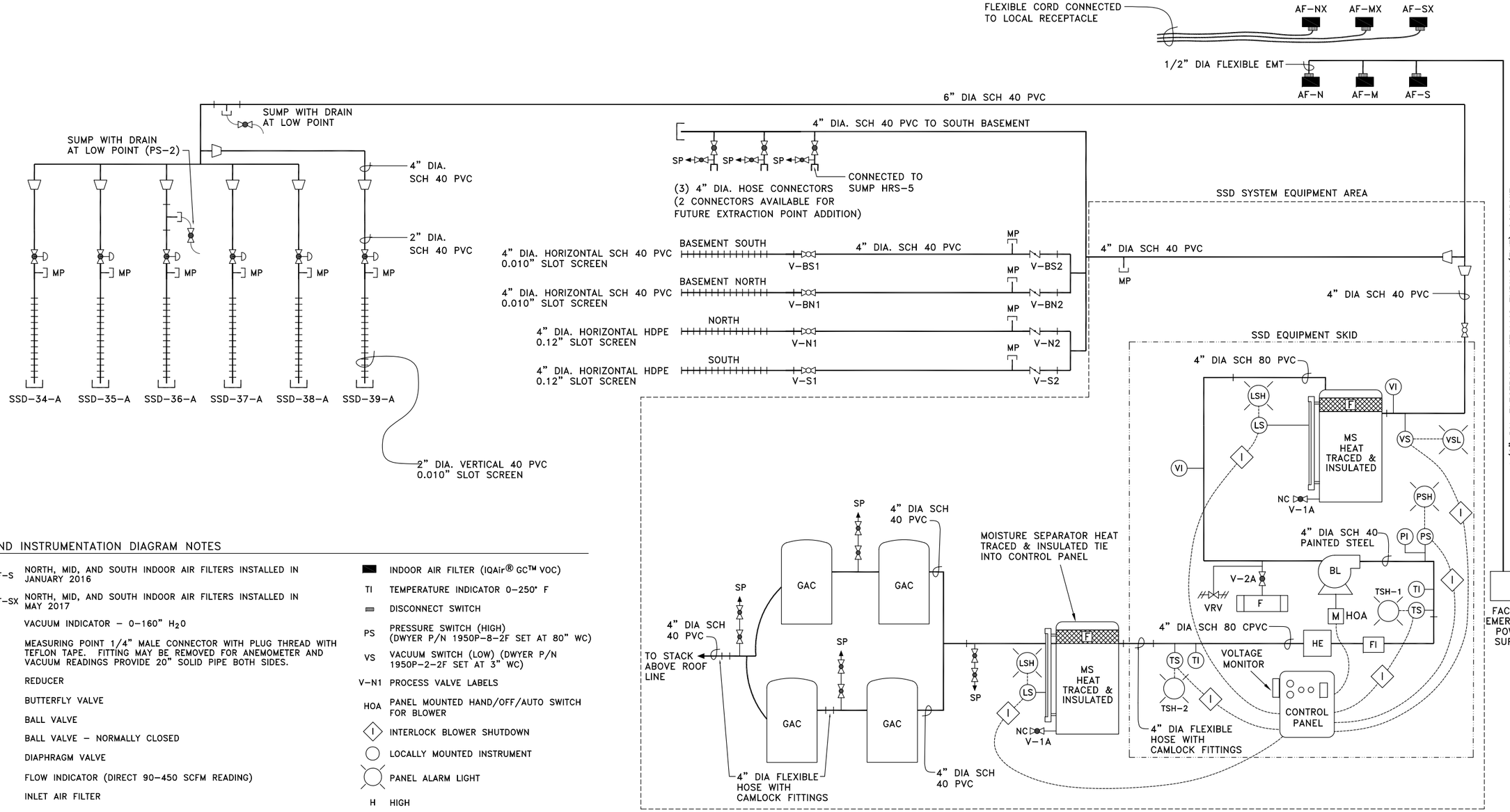
LOCATION: **Middle River, Maryland**

TETRA TECH

APPROVED	PR
DRAFTED	CP
PROJECT#	117-0512140
DATE	6-13-18

FIGURE **2**

P:\ACAD\0512-140-MRIV\0512140005A.DWG



PROCESS AND INSTRUMENTATION DIAGRAM NOTES

AF-N, AF-M, AF-S	NORTH, MID, AND SOUTH INDOOR AIR FILTERS INSTALLED IN JANUARY 2016
AF-NX, AF-MX, AF-SX	NORTH, MID, AND SOUTH INDOOR AIR FILTERS INSTALLED IN MAY 2017
VI	VACUUM INDICATOR – 0–160" H_2O
MP	MEASURING POINT 1/4" MALE CONNECTOR WITH PLUG THREAD WITH TEFLON TAPE. FITTING MAY BE REMOVED FOR ANEMOMETER AND VACUUM READINGS PROVIDE 20" SOLID PIPE BOTH SIDES.
	REDUCER
	BUTTERFLY VALVE
	BALL VALVE
	BALL VALVE – NORMALLY CLOSED
	DIAPHRAGM VALVE
FI	FLOW INDICATOR (DIRECT 90–450 SCFM READING)
F	INLET AIR FILTER
HE	HEAT EXCHANGER (XCHANGER AA-400)
MS	MOISTURE SEPARATOR (GASHO GX-100DL) WITH 40 GALLON CAPACITY, SLIGHT TUBE, REMOVABLE TOP, DRAIN VALVE
LS	LEVEL SWITCH
LSH	LEVEL SWITCH HIGH
VRV	VACUUM RELIEF VALVE – 2" (SET AT 81.6" WC)
SP	SAMPLE PORT 1/4" DIAMETER
BL	AMETEK®, ROTRON® 909BB72W 10 HP MOTOR, 300 SCFM @ 75" H_2O
PI	PRESSURE INDICATOR 0–160" H_2O
TS	TEMPERATURE SWITCH (ASHCROFT P/N T424-T05-030-XFS-150-260; TSH-1 SET AT 220° F AND TSH-2 SET AT 115° F)
GAC	GRANULAR ACTIVATED CARBON VAPOR TREATMENT (SIEMENS VENT SCRUB®, VSC400, VOCARB® 48C)
	INDOOR AIR FILTER (IQAir® GC™ VOC)
TI	TEMPERATURE INDICATOR 0–250° F
	DISCONNECT SWITCH
PS	PRESSURE SWITCH (HIGH) (DWYER P/N 1950P-8-2F SET AT 80" WC)
VS	VACUUM SWITCH (LOW) (DWYER P/N 1950P-2-2F SET AT 3" WC)
V-N1	PROCESS VALVE LABELS
HOA	PANEL MOUNTED HAND/OFF/AUTO SWITCH FOR BLOWER
I	INTERLOCK BLOWER SHUTDOWN
	LOCALLY MOUNTED INSTRUMENT
	PANEL ALARM LIGHT
H	HIGH
L	LOW
SSD	SUB-SLAB DEPRESSUIZATION
M	MOTOR
EMT	ELECTRICAL METALLIC TUBING

TITLE:
BUILDING A SSD SYSTEM PROCESS AND INSTRUMENTATION DIAGRAM

LOCATION:
LMC Middle River Complex
Middle River, Maryland

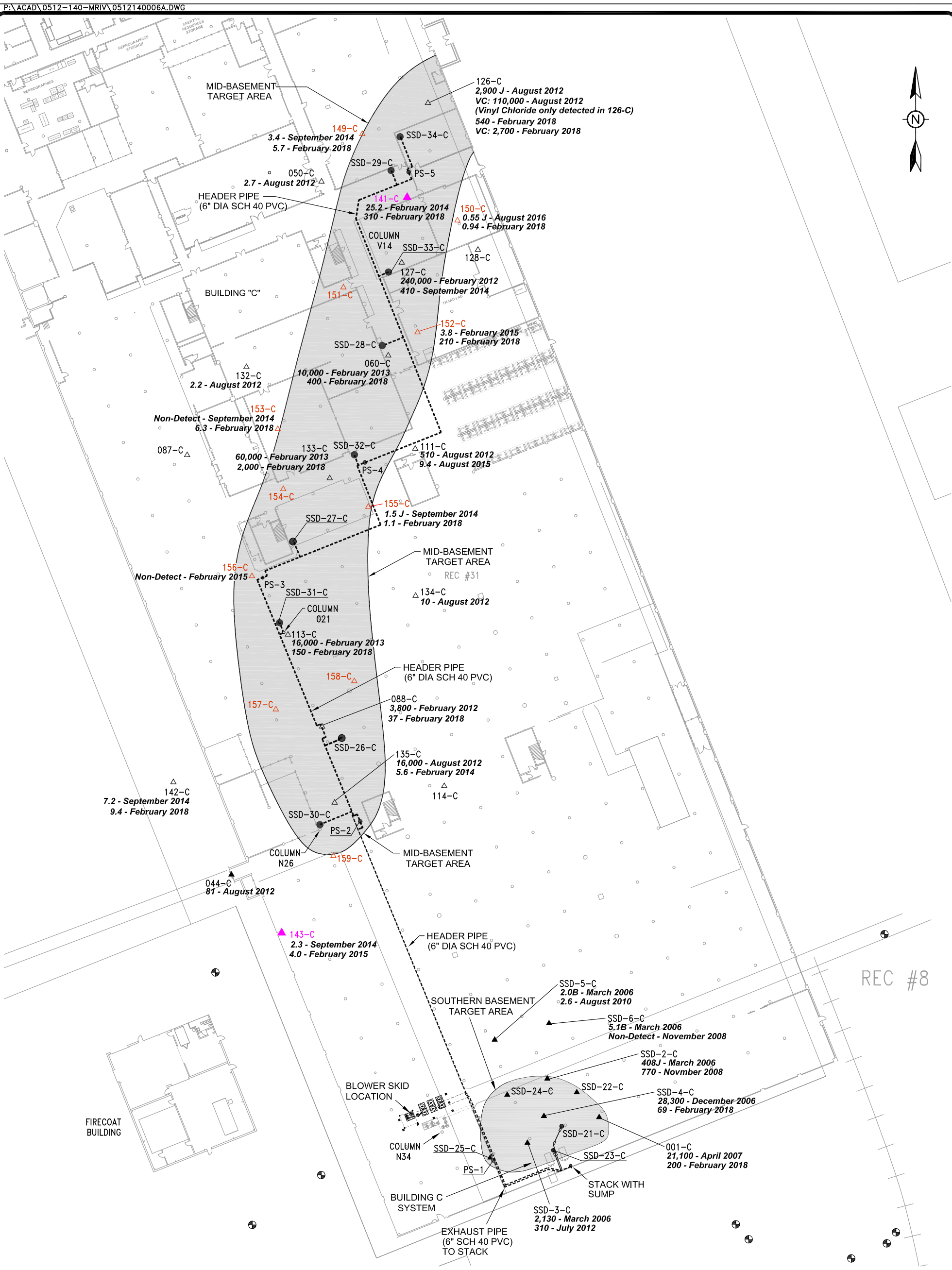
TETRA TECH

APPROVED	PR
DRAFTED	CP
PROJECT#	117-0512124
DATE	10-24-17

FIGURE 3

P:\ACAD\0512-124-MRIV\0512124072A.DWG

P:\ACAD\0512-140-MRIV\0512140006A.DWG



LEGEND

- GROUNDWATER MONITORING WELL
- SUB-SLAB VAPOR MONITORING POINT
- SUB-SLAB VAPOR MONITORING POINT INSTALLED JANUARY 2010
- SUB-SLAB VAPOR MONITORING POINT INSTALLED FEBRUARY 2013
- SUB-SLAB VAPOR MONITORING POINT INSTALLED AUGUST 2014
- SOIL VAPOR EXTRACTION POINT
- SUMP

21,100 HIGHEST SUB-SLAB TCE CONCENTRATION ($\mu g/m^3$) PRE-SSD SYSTEM AND MOST RECENT TCE CONCENTRATION POST-SSD SYSTEM OPERATION

---- HEADER PIPE (2", 3" OR 6" DIA. SCH 40)

SSD SUB-SLAB DEPRESSURIZATION

J ESTIMATED CONCENTRATION

B DETECTED IN LAB BLANK

TCE TRICHLOROETHENE

VC VINYL CHLORIDE

DL DILUTION ANALYSIS

0 60 120

SCALE IN FEET

TITLE:

BUILDING C SSD SYSTEM LAYOUT

LOCATION:

Middle River, Maryland

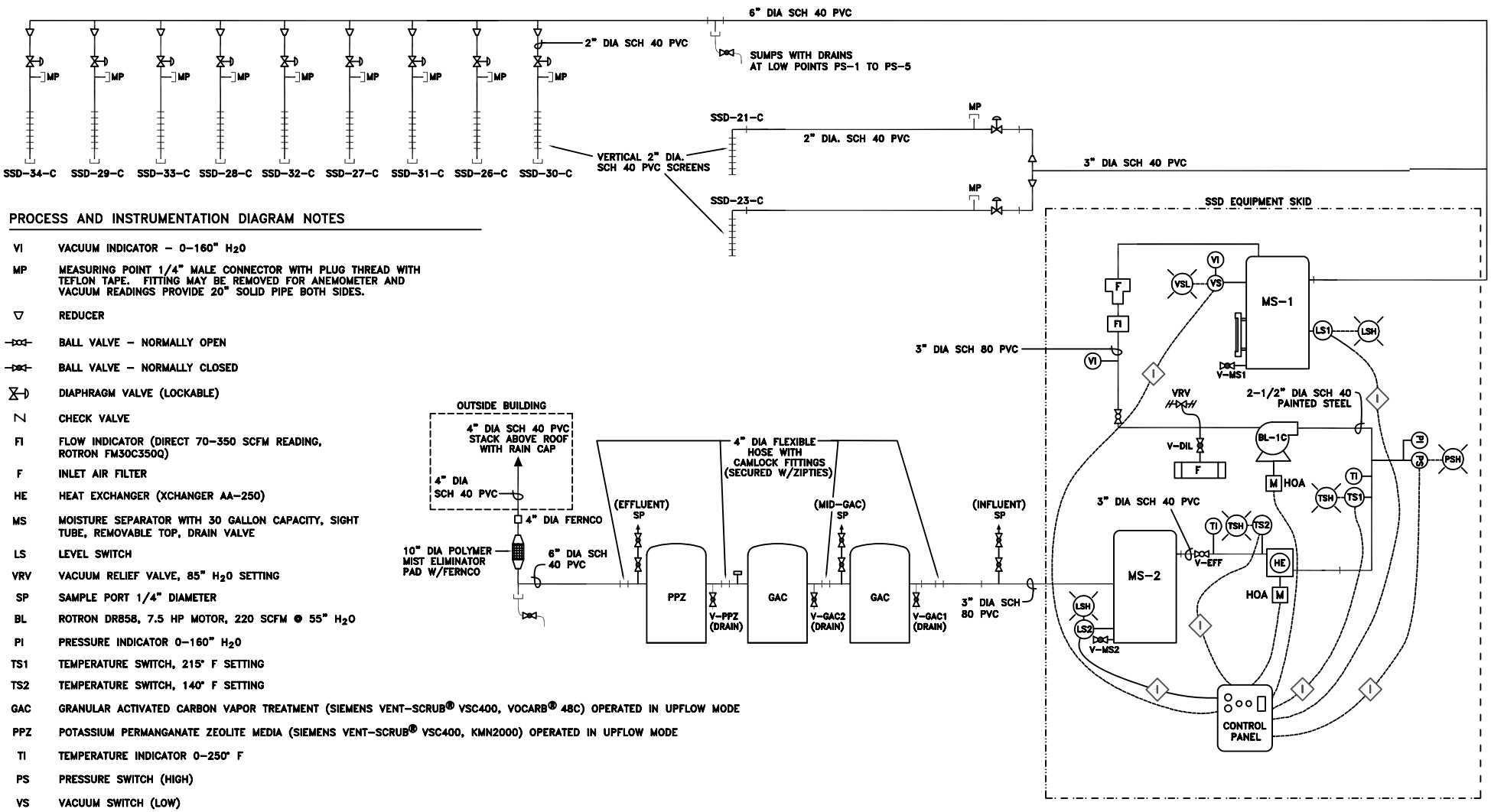
TETRA TECH

APPROVED	PR
DRAFTED	CP
PROJECT#	117-0512140
DATE	4-27-18

FIGURE

4

P:\ACAD\0512-124-MRIV\0512124053A.DWG



PROCESS AND INSTRUMENTATION DIAGRAM NOTES

VI	VACUUM INDICATOR – 0–160" H_2O
MP	MEASURING POINT 1/4" MALE CONNECTOR WITH PLUG THREAD WITH TEFLON TAPE. FITTING MAY BE REMOVED FOR ANEMOMETER AND VACUUM READINGS PROVIDE 20" SOLID PIPE BOTH SIDES.
▽	REDUCER
—⋈—	BALL VALVE – NORMALLY OPEN
—⋈—	BALL VALVE – NORMALLY CLOSED
⧖	DIAPHRAGM VALVE (LOCKABLE)
⩘	CHECK VALVE
FI	FLOW INDICATOR (DIRECT 70–350 SCFM READING, ROTRON FM30C350Q)
F	INLET AIR FILTER
HE	HEAT EXCHANGER (XCHANGER AA-250)
MS	MOISTURE SEPARATOR WITH 30 GALLON CAPACITY, SIGHT TUBE, REMOVABLE TOP, DRAIN VALVE
LS	LEVEL SWITCH
VRV	VACUUM RELIEF VALVE, 85" H_2O SETTING
SP	SAMPLE PORT 1/4" DIAMETER
BL	ROTRON DR858, 7.5 HP MOTOR, 220 SCFM @ 55" H_2O
PI	PRESSURE INDICATOR 0–160" H_2O
TS1	TEMPERATURE SWITCH, 215° F SETTING
TS2	TEMPERATURE SWITCH, 140° F SETTING
GAC	GRANULAR ACTIVATED CARBON VAPOR TREATMENT (SIEMENS VENT-SCRUB® VSC400, VOCARB® 48C) OPERATED IN UPFLOW MODE
PPZ	POTASSIUM PERMANGANATE ZEOLITE MEDIA (SIEMENS VENT-SCRUB® VSC400, KMN2000) OPERATED IN UPFLOW MODE
TI	TEMPERATURE INDICATOR 0–250° F
PS	PRESSURE SWITCH (HIGH)
VS	VACUUM SWITCH (LOW)
V-MS1	PROCESS VALVE LABELS
HOA	PANEL MOUNTED HAND/OFF/AUTO SWITCH
◇ I	INTERLOCK BLOWER SHUTDOWN
○	LOCALLY MOUNTED INSTRUMENT
⊗	PANEL ALARM LIGHT
H	HIGH
L	LOW
M	MOTOR
T	TAP PLUG
SSD	SUB-SLAB DEPRESSURIZATION

TITLE:

BUILDING C SSD SYSTEM PROCESS AND INSTRUMENTATION DIAGRAM

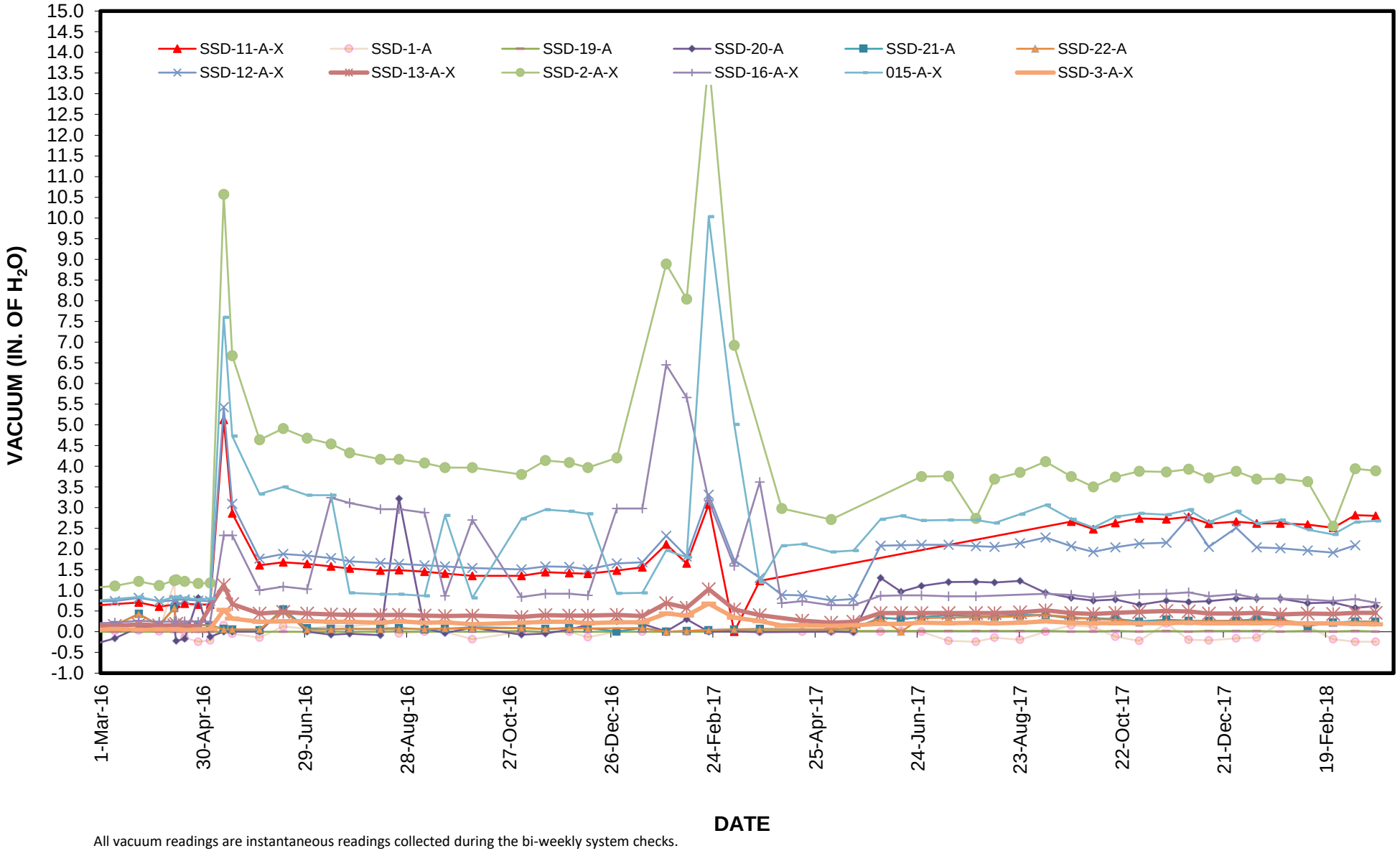
LOCATION: Middle River, Maryland

TETRA TECH

APPROVED	PR
DRAFTED	CP
PROJECT#	117-0507533
DATE	4-27-17

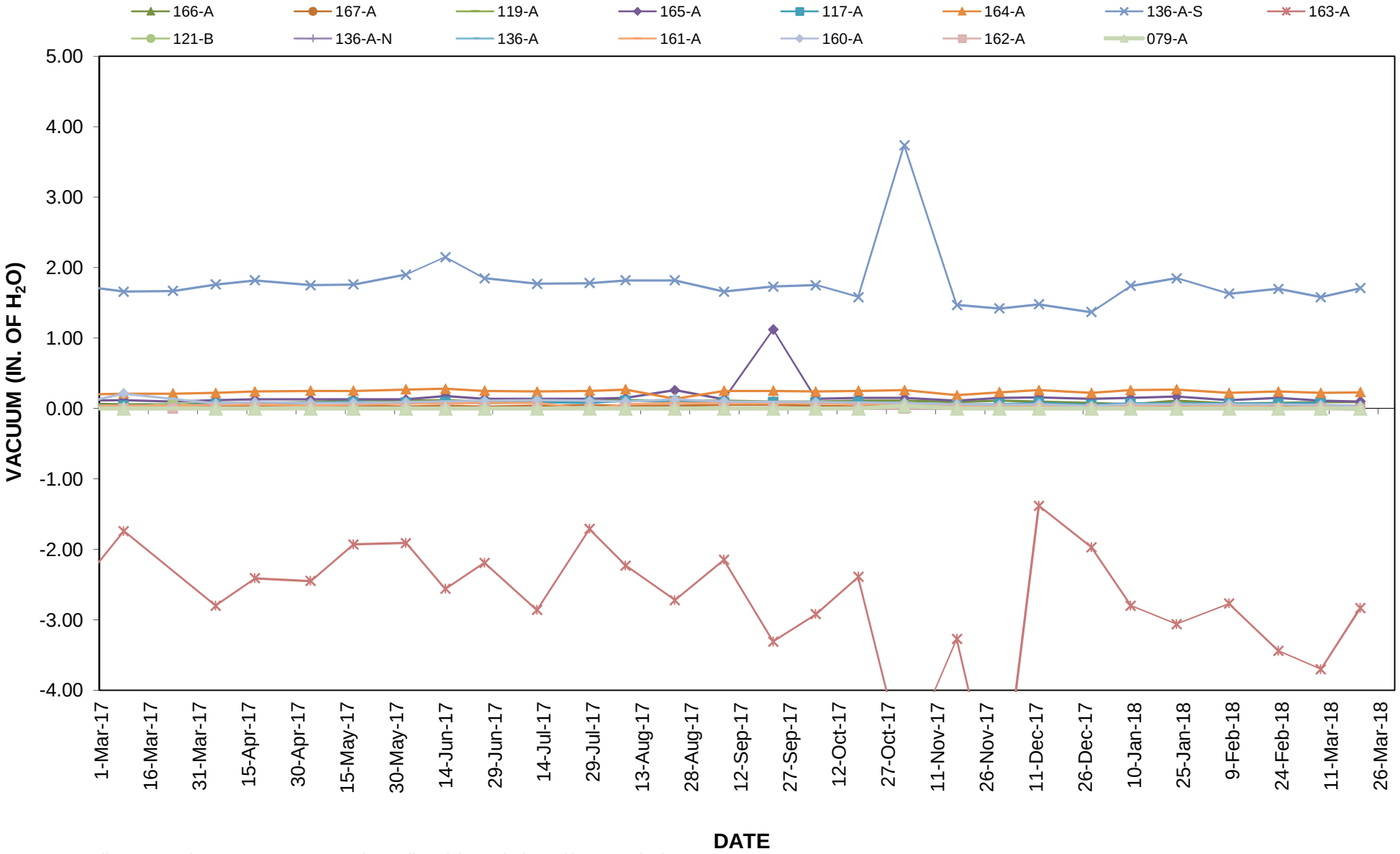
FIGURE 5

FIGURE 6
INDUCED VACUUM
MARCH 2016 TO MARCH 2018
BUILDING A SSD SYSTEM - LAY-UP ROOM AND BASEMENT



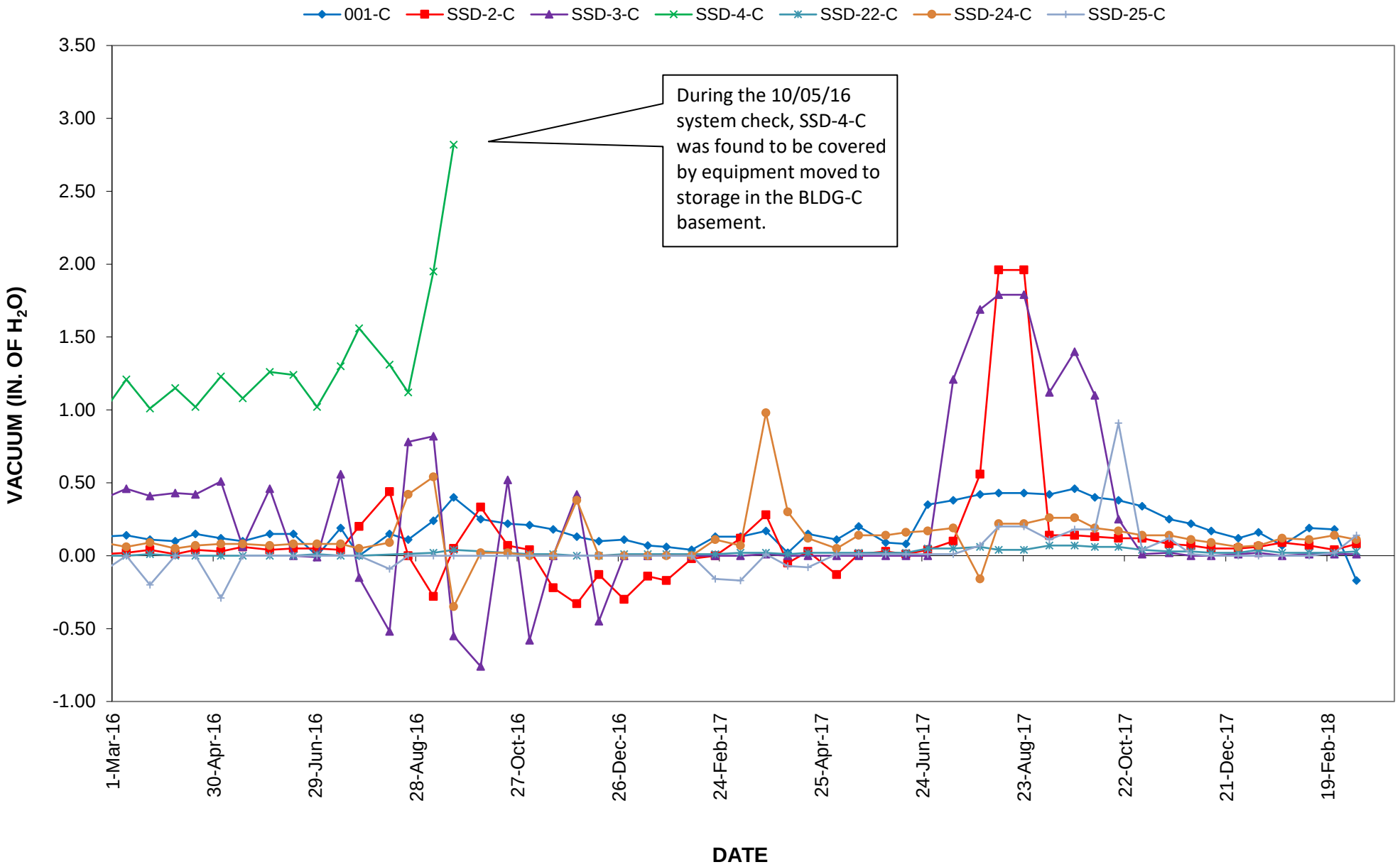
All vacuum readings are instantaneous readings collected during the bi-weekly system checks.
Only the past two years of vacuum data are depicted above.
Increase in vacuum influence beginning April 4, 2016 a result of the installation and operation of the larger blower skid associated with the second-phase expansion.
** NOTE: As of May 18, 2015, all vacuum readings for SSD-11-A, SSD-12-A, SSD-13-A, 015-A, SSD-16-A, SSD-2-A, and SSD-3-A were taken from the SSD-11-A-X, SSD-12-A-X, SSD-13-A-

FIGURE 7
INDUCED VACUUM
MARCH 2017 TO MARCH 2018
BUILDING A SSD SYSTEM - EASTERN AREA



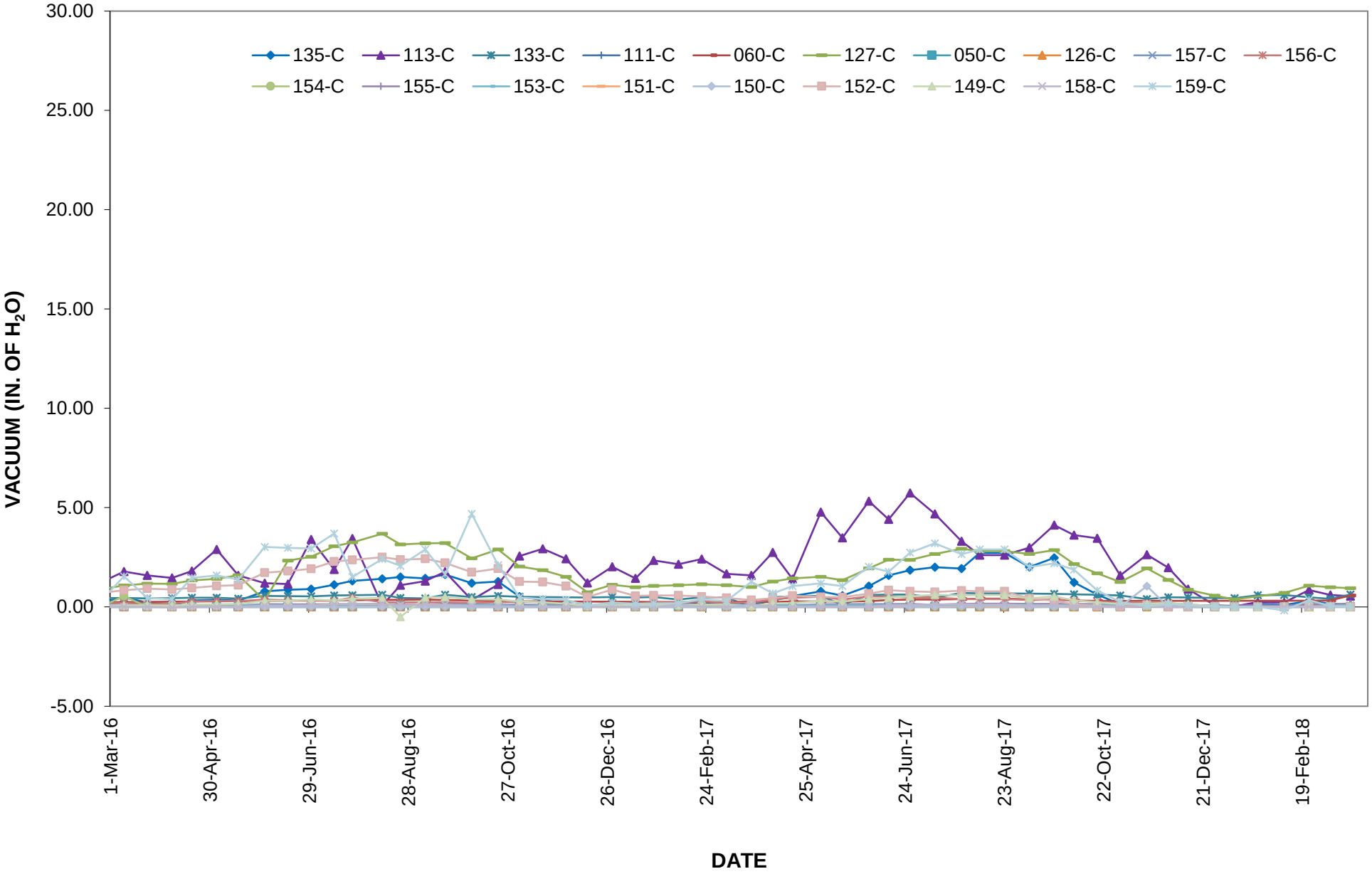
All vacuum readings are instantaneous readings collected during the bi-weekly system checks.
VMPs we included in bi-weekly system checks upon start-up of the second-phase expansion on April 13, 2016.

FIGURE 8
INDUCED VACUUM
MARCH 2016 TO MARCH 2018
BUILDING C SSD SYSTEM - SOUTHERN BASEMENT AREA

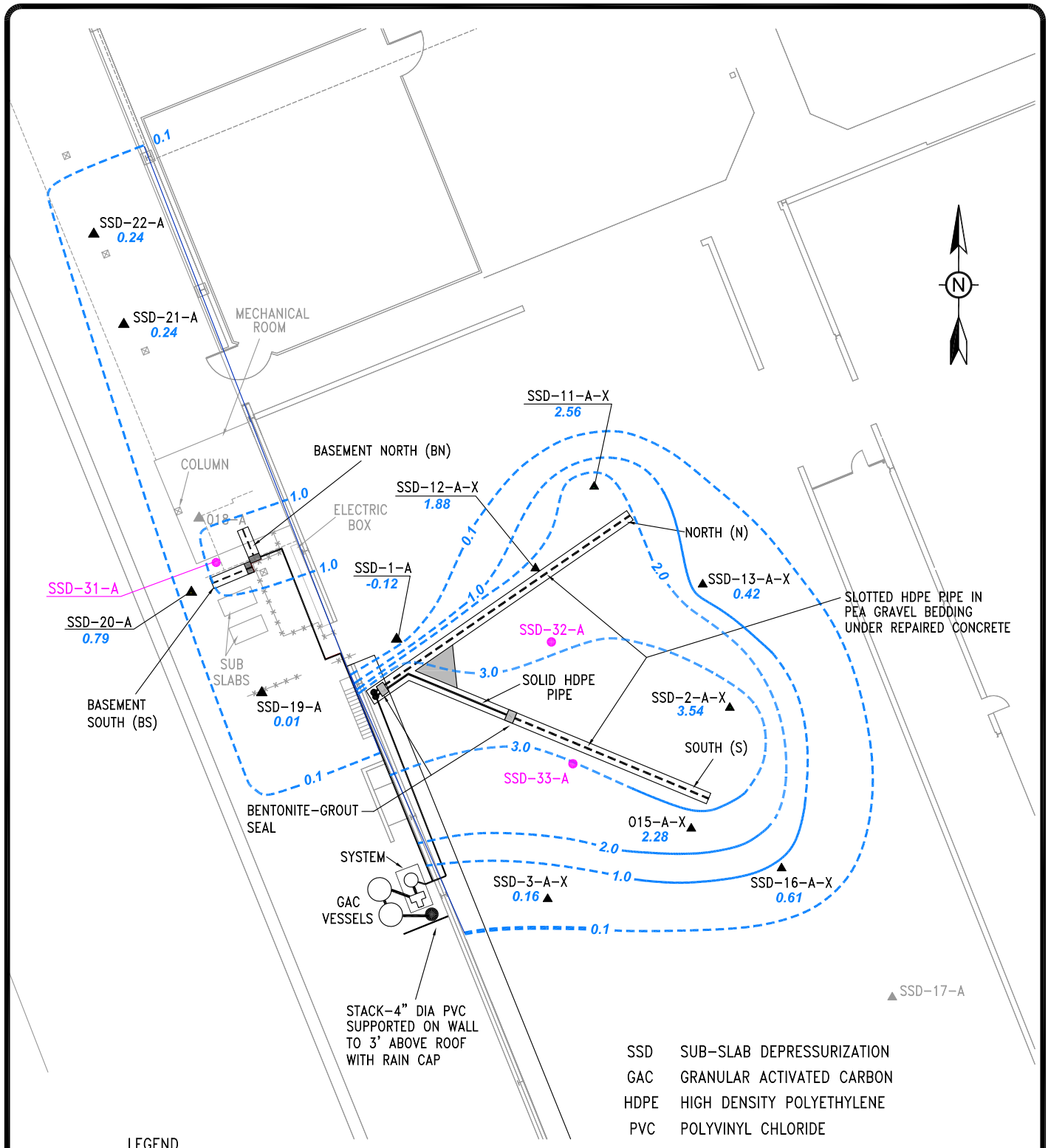


All vacuum readings are instantaneous readings collected during the bi-weekly system checks.
Only the past two years of vacuum data are depicted above.

FIGURE 9
INDUCED VACUUM
MARCH 2016 TO MARCH 2018
BUILDING C SSD SYSTEM - MID-BASEMENT AREA



All vacuum readings are instantaneous readings collected during the bi-weekly system checks.
Sub-slab vapor monitoring points routinely monitored beginning May 1, 2013 following second-phase system expansion in the middle basement area of Building C.



SSD	SUB-SLAB DEPRESSURIZATION
GAC	GRANULAR ACTIVATED CARBON
HDPE	HIGH DENSITY POLYETHYLENE
PVC	POLYVINYL CHLORIDE

0 25 50

SCALE IN FEET

LEGEND

- GROUNDWATER MONITORING WELL
- SUB-SLAB VAPOR MONITORING POINT
- SOIL VAPOR EXTRACTION POINT (USED IN PILOT TEST ONLY)
- 0.06 INCHES OF H_2O INDUCED VACUUM MEASURED ON 3/20/2018
- INFERRED EQUAL VACUUM INFLUENCE
- HORIZONTAL SOIL VAPOR EXTRACTION POINT

TITLE:

INFLUENCE OF SOIL VAPOR EXTRACTION POINTS BUILDING A LAY-UP ROOM AND BASEMENT

LOCATION:

Middle River, Maryland

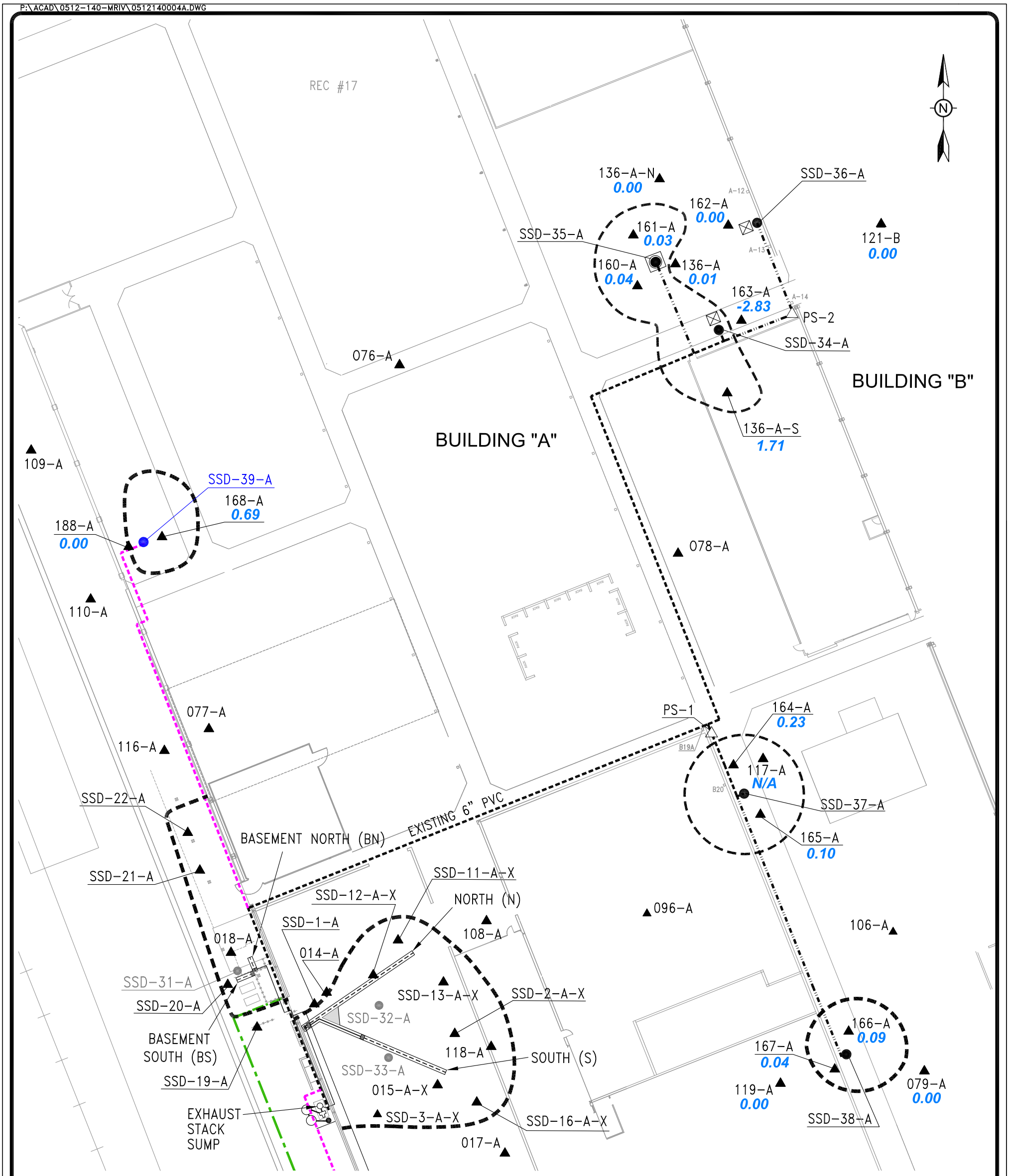
TETRA TECH

APPROVED	PR
DRAFTED	CP
PROJECT#	117-0512140
DATE	4-27-18

FIGURE 10

P:\ACAD\0512-140-MRIV\0512140002A.DWG

P:\ACAD\0512-140-MRIV\0512140004A.DWG



LEGEND

- ▲ SUB-SLAB VAPOR MONITORING POINT
- ● VERTICAL SOIL VAPOR EXTRACTION POINT
- ● NEW SUB-SLAB VAPOR EXTRACTION POINT
- ● SUB-SLAB VAPOR EXTRACTION POINT (USED IN PREVIOUS PILOT TEST)
- ⊗ INDOOR AIR SAMPLING POINT
- APPROXIMATE EXISTING INFLUENCE AREA
- ■ INDOOR AIR FILTER
- SSD SYSTEM BLOWER SKID
- 4" DIA. PVC HEADER
- 6" DIA. PVC SSD SYSTEM EXTRACTION PIPING
- INDOOR AIR FILTER CONNECTION TO EMERGENCY POWER SUPPLY (FIELD RUN)
- △ PIPE SUMP
- ◯ STEEL PIPE SLEEVE (4" DIA.)
- ⊠ PIPE BOLLARD (2" DIA.)
- SSD SUB-SLAB DEPRESSURIZATION
- EXISTING HORIZONTAL SOIL VAPOR EXTRACTION POINT
- 0.69 INCHES OF H_2O INDUCED VACUUM MEASURED ON 3/20/2018
- N/A NOT ACCESSIBLE

NOTE:

PIPE HANGERS PLACED NEXT TO EXISTING SUPPORT BRACKETS FOR STEEL PIPING IN CEILING APPROX. 6-12 FT APART.

0 40 80

SCALE IN FEET

TITLE: **INFLUENCE OF SOIL VAPOR EXTRACTION POINTS BUILDING A EASTERN AREA**

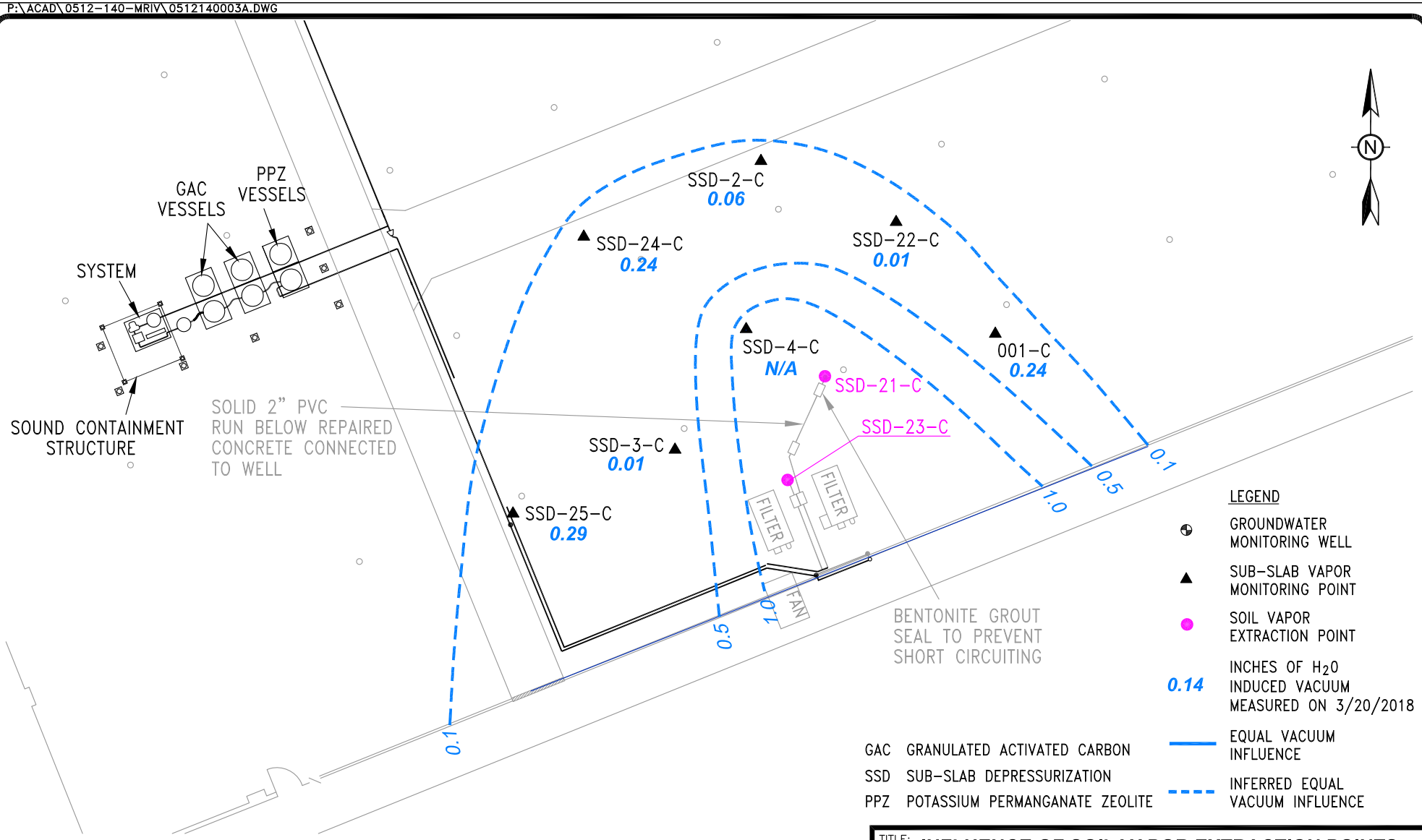
LOCATION: **Middle River, Maryland**

TETRA TECH

APPROVED	DM
DRAFTED	CP
PROJECT#	117-0512140
DATE	4-27-18

FIGURE 11

P:\ACAD\0512-140-MRIV\0512140003A.DWG



LEGEND

- GROUNDWATER MONITORING WELL
- SUB-SLAB VAPOR MONITORING POINT
- SOIL VAPOR EXTRACTION POINT
- 0.14 INCHES OF H_2O INDUCED VACUUM MEASURED ON 3/20/2018
- EQUAL VACUUM INFLUENCE
- INFERRED EQUAL VACUUM INFLUENCE

GAC GRANULATED ACTIVATED CARBON
SSD SUB-SLAB DEPRESSURIZATION
PPZ POTASSIUM PERMANGANATE ZEOLITE

TITLE: **INFLUENCE OF SOIL VAPOR EXTRACTION POINTS BUILDING C - SOUTHERN BASEMENT AREA**

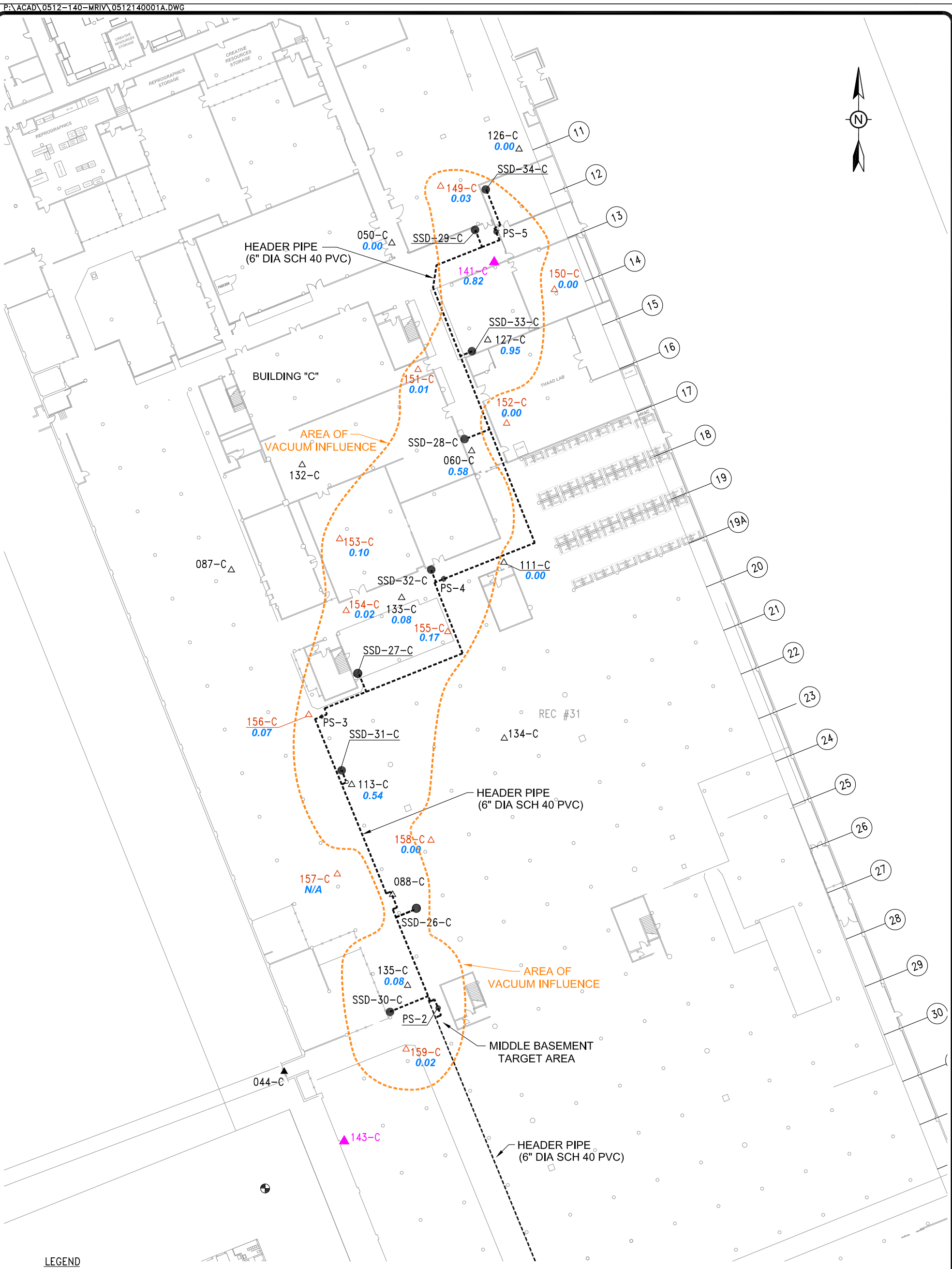
LOCATION: **Middle River, Maryland**

TETRA TECH

APPROVED	PR
DRAFTED	CP
PROJECT#	117-0512140
DATE	4-27-18

FIGURE 12

P:\ACAD\0512-140-MRIV\0512140001A.DWG



LEGEND

- GROUNDWATER MONITORING WELL
- SUB-SLAB VAPOR MONITORING POINT
- SUB-SLAB VAPOR MONITORING POINT INSTALLED JANUARY 2010
- SUB-SLAB VAPOR MONITORING POINT INSTALLED FEBRUARY 2013
- SUB-SLAB VAPOR MONITORING POINT INSTALLED AUGUST 2014
- SOIL VAPOR EXTRACTION POINT
- SUMP

NOTE:
088-C HAS BEEN REMOVED FROM MONITORING.

- AREA OF VACUUM INFLUENCE (> 0.01 INCHES OF H_2O)
- HEADER PIPE (2", 3" OR 6" DIA. SCH 40)
- SSD SUB-SLAB DEPRESSURIZATION
- 0.11 INCHES OF H_2O INDUCED VACUUM MEASURED ON 3/20/2018

0 50 100
SCALE IN FEET

TITLE: **INFLUENCE OF SOIL VAPOR EXTRACTION POINTS BUILDING C MID-BASEMENT AREA**

LOCATION: **Middle River, Maryland**

TETRA TECH

APPROVED	PR
DRAFTED	CP
PROJECT#	117-0512140
DATE	4-27-18

FIGURE 13

FIGURE 14

BUILDING A INFLUENT VOC CONCENTRATIONS

SSD System, Middle River Complex, Middle River, Maryland

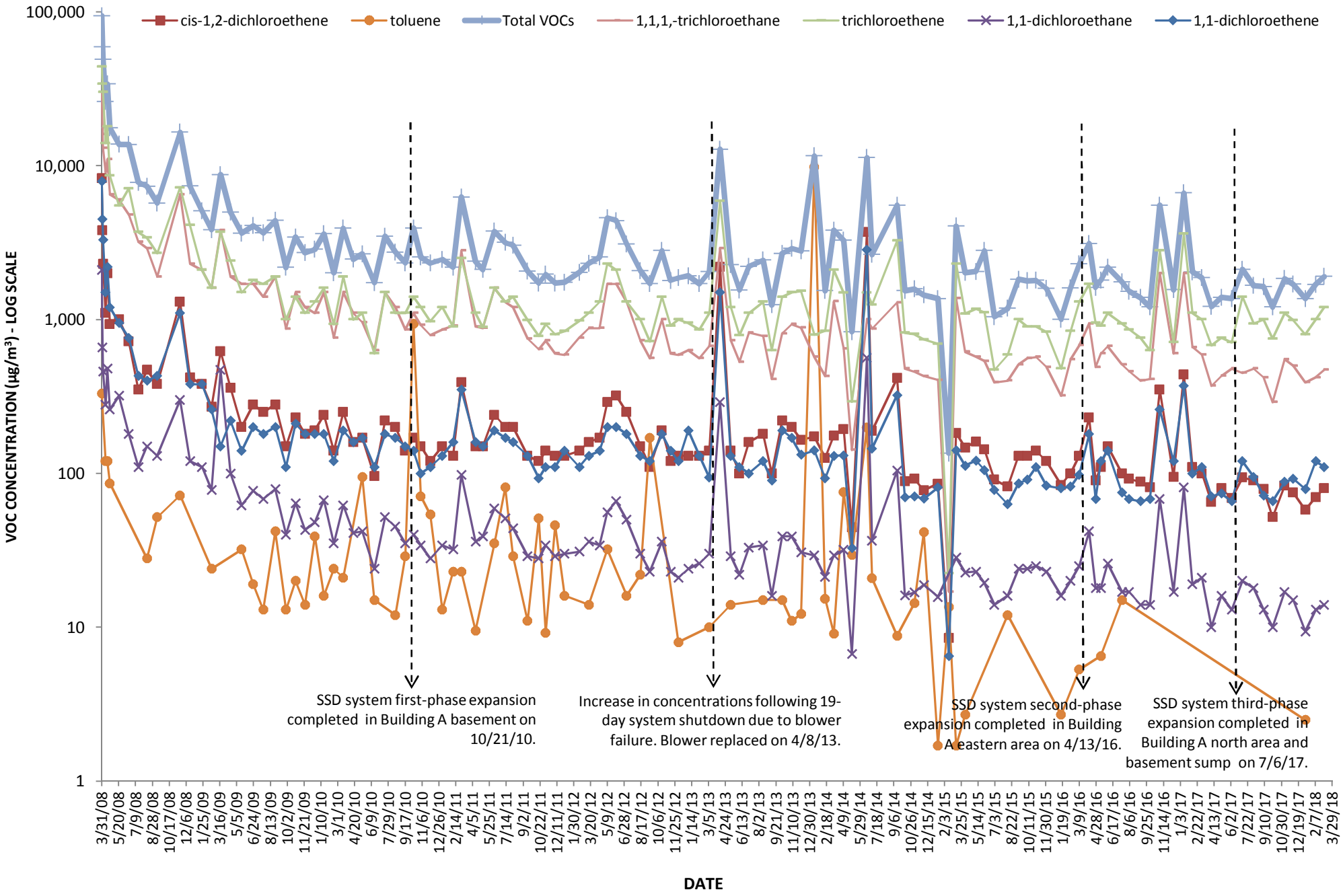
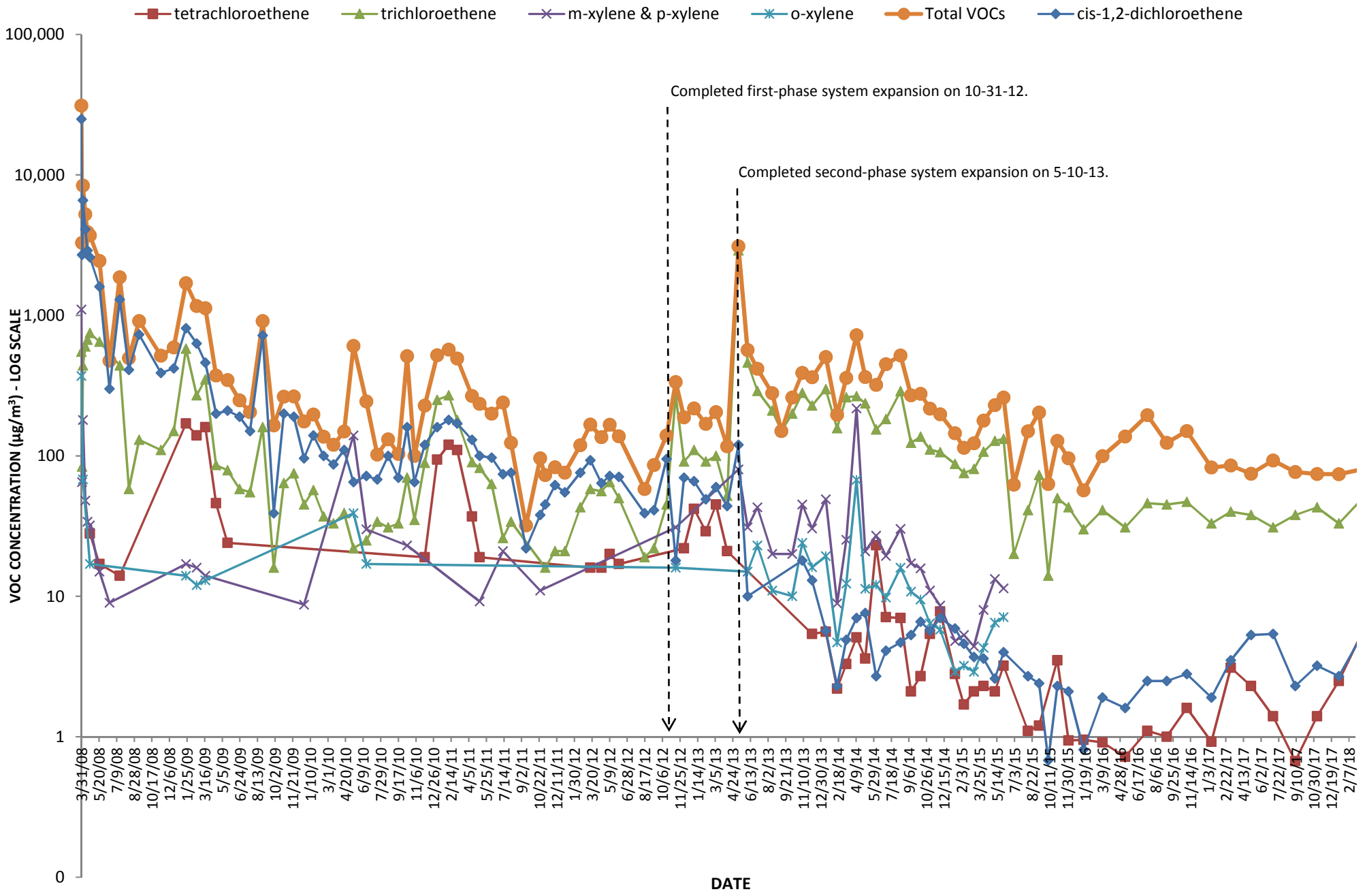


FIGURE 15

BUILDING C INFLUENT VOC CONCENTRATIONS

SSD System, Middle River Complex, Middle River, Maryland



TABLES

Table 1 Building A Influent Concentrations (µg/m3)

Table 2 Building A Mid-GAC Concentrations (µg/m3)

Table 3 Building A Effluent Concentrations (µg/m3)

Table 4 Building C Influent Concentrations (µg/m3)

Table 5 Building C Mid-GAC Concentrations (µg/m3)

Table 6 Building C Effluent Concentrations (µg/m3)

TABLE 1

Building A Influent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	FLOW (scfm)	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs/day)	Mass (lbs. removed in period)
3/31/08	NA	ND	ND	N/A	ND	8,300	ND	2,100	ND	7,900	300	ND	ND	ND	330	ND	30,000	44,000	ND	ND	ND	ND	ND	N/A	1,100	280	94,310	1.190	3.570
4/2/08	140	ND	ND	N/A	ND	3,800	ND	660	ND	4,500	ND	ND	ND	ND	ND	ND	16,000	34,000	ND	ND	ND	ND	ND	N/A	ND	ND	58,960	0.740	1.480
4/4/08	140	ND	ND	N/A	ND	2,300	ND	460	ND	3,300	ND	ND	ND	ND	ND	ND	13,000	30,000	ND	ND	ND	ND	ND	N/A	ND	ND	49,060	0.620	4.340
4/11/08	140	ND	ND	N/A	ND	1,100	ND	280	ND	1,500	ND	ND	ND	ND	120	ND	9,100	14,000	ND	ND	ND	ND	ND	N/A	ND	ND	26,100	0.330	1.980
4/17/08	112	ND	ND	N/A	ND	2,000	ND	480	ND	2,200	ND	ND	ND	ND	120	ND	11,000	18,000	ND	ND	ND	ND	ND	N/A	110	ND	33,910	0.340	2.380
4/24/08	84	ND	ND	N/A	ND	930	ND	260	ND	1,200	ND	ND	ND	ND	86	ND	6,500	8,600	ND	ND	ND	ND	ND	N/A	ND	ND	17,576	0.130	3.510
5/21/08	84	ND	ND	N/A	ND	1,000	ND	320	ND	950	ND	ND	ND	ND	ND	ND	6,000	5,500	ND	ND	ND	ND	ND	N/A	ND	ND	13,770	0.100	3.100
6/19/08	70	180	ND	N/A	ND	720	ND	180	ND	760	ND	ND	ND	ND	ND	ND	4,800	7,100	ND	ND	ND	ND	ND	N/A	ND	ND	13,740	0.090	2.700
7/18/08	84	ND	ND	N/A	ND	350	ND	110	ND	430	ND	ND	ND	ND	ND	ND	3,200	3,700	ND	ND	ND	ND	ND	N/A	ND	ND	7,790	0.060	1.860
8/12/08	56	ND	ND	N/A	ND	470	ND	150	ND	400	ND	ND	ND	ND	28	ND	2,900	3,400	ND	ND	ND	ND	ND	N/A	ND	ND	7,348	0.040	1.240
9/11/08	80	ND	ND	N/A	ND	380	ND	130	ND	430	ND	17	ND	70	52	ND	1,900	2,700	32	ND	ND	ND	ND	N/A	ND	ND	5,711	0.040	2.440
11/18/08	84	ND	ND	N/A	ND	1,300	ND	300	ND	1,100	ND	ND	ND	ND	72	ND	6,500	7,200	ND	ND	ND	ND	ND	N/A	ND	ND	16,472	0.105	3.142
12/18/08	84	ND	ND	N/A	ND	420	ND	120	ND	380	ND	ND	ND	ND	ND	ND	2,300	4,100	ND	ND	ND	ND	ND	N/A	53	ND	7,373	0.056	1.724
1/22/09	84	ND	ND	N/A	ND	380	ND	110	ND	380	ND	ND	ND	ND	ND	ND	2,100	2,100	ND	ND	ND	ND	ND	N/A	ND	ND	5,070	0.038	1.185
2/20/09	84	ND	ND	N/A	ND	270	ND	78	ND	260	ND	ND	ND	ND	24	ND	1,600	1,600	ND	ND	ND	ND	ND	N/A	ND	ND	3,832	0.029	0.809
3/18/09	28	ND	ND	N/A	ND	620	ND	470	ND	150	ND	ND	ND	ND	ND	ND	3,800	3,700	ND	ND	ND	ND	ND	N/A	ND	ND	8,740	0.063	1.946
4/17/09	56	ND	ND	N/A	ND	360	ND	100	ND	220	ND	ND	ND	ND	ND	ND	1,900	2,400	ND	ND	ND	ND	ND	N/A	ND	ND	4,980	0.056	1.677
5/20/09	NA	ND	ND	N/A	ND	200	ND	62	ND	140	ND	ND	ND	ND	32	ND	1,700	1,500	ND	ND	ND	ND	ND	N/A	ND	ND	3,634	0.041	1.264
6/23/09	134	ND	ND	N/A	ND	280	ND	77	ND	200	ND	ND	ND	ND	19	ND	1,700	1,800	ND	ND	ND	ND	ND	N/A	ND	ND	4,076	0.049	1.471
7/23/09	129	ND	ND	N/A	ND	250	ND	68	ND	180	ND	27	ND	ND	13	ND	1,400	1,700	14	ND	ND	ND	ND	N/A	ND	ND	3,652	0.044	1.352
8/28/09	NA	ND	ND	N/A	ND	280	ND	79	ND	200	ND	ND	ND	ND	42	ND	1,900	1,900	ND	ND	ND	ND	ND	N/A	ND	ND	4,401	0.051	1.568
9/28/09	125	ND	ND	N/A	ND	150	ND	40	ND	110	ND	ND	ND	ND	13	ND	870	1,000	ND	ND	ND	ND	ND	N/A	ND	ND	2,183	0.025	0.735
10/27/09	NA	ND	ND	N/A	ND	230	ND	64	ND	210	ND	ND	ND	ND	20	ND	1,500	1,400	ND	ND	ND	ND	ND	N/A	9.7	ND	3,434	0.026	0.803
11/24/09	130	ND	ND	N/A	ND	180	ND	43	ND	180	ND	ND	ND	ND	14	ND	1,200	1,100	ND	ND	ND	ND	ND	N/A	ND	ND	2,717	0.032	0.960
12/23/09	132	ND	ND	N/A	ND	190	ND	48	ND	180	ND	ND	ND	ND	39	ND	1,100	1,300	ND	ND	ND	ND	ND	N/A	ND	ND	2,857	0.035	1.074
1/19/10	130	ND	ND	N/A	ND	240	ND	67	ND	180	ND	ND	ND	ND	16	ND	1,500	1,600	ND	ND	ND	ND	ND	N/A	ND	ND	3,603	0.042	1.304
2/17/10	130	ND	ND	N/A	ND	140	ND	35	ND	120	ND	ND	ND	ND	24	ND	760	930	ND	ND	ND	ND	ND	N/A	ND	ND	2,009	0.023	0.657
3/17/10	120	ND	ND	N/A	ND	250	ND	62	ND	190	ND	ND	ND	ND	21	ND	1,500	1,900	ND	ND	ND	ND	ND	N/A	ND	ND	3,923	0.042	1.302
4/16/10	120	ND	ND	N/A	ND	160	ND	41	ND	160	ND	ND	ND	ND	ND	ND	1,100	1,000	ND	ND	ND	ND	ND	N/A	ND	ND	2,461	0.027	0.796
5/13/10	119	ND	ND	N/A	ND	170	ND	42	ND	170	19	ND	ND	ND	95	ND	960	1,100	ND	ND	18	ND	ND	N/A	75	23	2,672	0.029	0.886
6/18/10	110	ND	ND	N/A	ND	96	ND	24	ND	110	12	ND	ND	ND	15	ND	630	600	12	ND	130	28	ND	N/A	50	26	1,733	0.017	0.514
7/19/10	110	ND	ND	N/A	ND	220	ND	52	ND	180	ND	ND	ND	ND	ND	ND	1,500	1,500	ND	ND	24	ND	ND	N/A	ND	ND	3,476	0.034	1.066
8/19/10	110	ND	ND	N/A	ND	200	ND	45	ND	170	ND	ND	ND	ND	12	ND	1,200	1,100	16	ND	ND	ND	ND	N/A	ND	ND	2,743	0.027	0.841
9/17/10	108	ND	ND	N/A	ND	140	ND	35	ND	150	ND	ND	ND	ND	29	ND	860	1,100	20	ND	ND	ND	ND	N/A	ND	ND	2,334	0.023	0.680
10/12/10	100	ND	ND	N/A	ND	170	ND	40	ND	140	ND	ND	ND	ND	940	ND	1,100	1,400	20	ND	ND	ND	ND	N/A	89	33	3,932	0.035	1.060
11/2/10	138	ND	ND	N/A	ND	150	ND	34	ND	100	ND	ND	ND	ND	71	ND	920	1,200	53	ND	ND	ND	ND	N/A	14	ND	2,542	0.032	0.946
12/1/10	138	ND	ND	N/A	ND	120	ND	28	ND	110	42	ND	ND	ND	54	ND	790	970	13	ND	ND	ND	ND	N/A	170	31	2,328	0.029	0.866
1/5/11	133	ND	ND	N/A	ND	150	ND	34	ND	130	14	ND	ND	ND	13	ND	860	1,200	ND	ND	ND	ND	ND	N/A	47	10	2,458	0.029	0.882
2/7/11	130	ND	ND	N/A	ND	130	ND	32	ND	160	ND	ND	ND	ND	23	ND	910	900	ND	ND	ND	ND	ND	N/A	29	ND	2,184	0.026	0.766
3/3/11	130	ND	ND	N/A	ND	390	ND	98	ND	350	19	ND	ND	ND	23	ND	2,800	2,500	ND	ND	ND	ND	ND	N/A	61	ND	6,241	0.073	2.188
4/14/11	125	ND	ND	N/A	ND	150	ND	36	ND	160	ND	30	ND	ND	10	ND	900	1,100	ND	ND	ND	ND	ND	N/A	ND	ND	2,386	0.027	0.804
5/6/11	130	ND	ND	N/A	ND	150	ND	39	ND	150	ND	ND	ND	ND	ND	ND	880	890	ND	ND	ND	ND	ND	N/A	ND	ND	2,109	0.025	0.764
6/9/11	150	ND	ND	N/A	ND	240	ND	59	ND	190	ND	ND	ND	ND	35	ND	1,600	1,600	20	ND	ND	ND	ND	N/A	ND	ND	3,744	0.050	1.515
7/11/11	128	ND	ND	N/A	ND	200	ND	51	ND	170	ND	40	ND	ND	81	ND	1,300	1,300	ND	ND	ND	ND	ND	N/A	26	ND	3,168	0.036	1.094
8/3/11	160	ND	ND	N/A	ND	200	ND	44	ND	160	ND	ND	ND	ND	29	ND	1,200	1,400	ND	ND	ND	ND	ND	N/A	ND	ND	3,033	0.044	1.309
9/15/11	160	12	ND	N/A	ND	130	ND	29	ND	130	ND	ND	ND	ND	11	ND	750	990	12	ND	ND	ND	ND	N/A	ND	ND	2,064	0.030	0.891
10/18/11	160	8.3	ND	N/A	ND	120	ND	28	ND	93	ND	ND	ND	ND	51	ND	640	780	ND	ND	ND	ND	ND	N/A	ND	ND	1,720	0.025	0.767
11/8/11	165	10	ND	N/A	ND	140	ND	34	ND	110	ND	ND	ND	ND	9.2	ND	730	930	ND	ND	ND	ND	ND	N/A	ND	ND	1,963	0.029	0.874
12/6/11	160	7.3	ND	N/A	ND	130	ND	29	ND	110	ND	ND	ND	ND	46	ND	600	800	ND	ND	ND	ND	ND	N/A	ND	ND	1,722	0.025	0.768
1/3/12	165	ND	ND	N/A	ND	130	ND	30	ND	140	ND	ND	ND	ND	16	ND	590	840	ND	ND	ND	ND	ND	N/A	ND	ND	1,746	0.026	0.803
2/16/12	160	ND	ND	N/A	ND	140	ND	31	ND	110	ND	ND	ND	ND	ND	ND	760	980	ND	ND	ND	ND	ND	N/A	ND	ND	2,021	0.029	0.843
3/15/12	160	ND	ND	N/A	ND	160	ND	36	ND	130	ND	ND	ND	ND	14	ND	880	1,100	ND	ND	ND	ND	ND	N/A	ND	ND	2,320	0.033	1.034
4/16/12	158	ND	ND	N/A	ND	170	ND	34	ND	140	ND	ND	ND	ND	ND	ND	880	1,300	ND	ND	ND	ND	ND	N/A	20	ND	2,544	0.036	1.084
5/9/12	159	ND	ND	N/A	ND	290	ND	56	ND	200	ND	ND	ND	ND	32	ND	1,700	2,300	ND	ND	ND	ND	ND	N/A	ND	ND	4,578	0.065	2.029
6/4/12	159	ND	ND	N/A	ND	320	ND	66	ND	200	ND	ND	ND	ND	ND	ND	1,700	2,100	ND	ND	ND	ND	ND	N/A	ND	ND	4,386	0.063	1.881
7/5/12	162	ND	ND	N/A	ND	250	ND	50	ND	180	ND	ND	ND	ND	16	ND	1,300	1,300	ND	ND	ND	ND	ND	N/A	ND	ND	3,096	0.045	1.398

TABLE 1

Building A Influent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	FLOW (scfm)	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1,-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs/day)	Mass (lbs. removed in period)
8/15/12	164	ND	ND	N/A	ND	150	ND	30	ND	130	ND	ND	ND	ND	22	ND	730	1,000	17	ND	ND	ND	ND	N/A	ND	ND	2,079	0.031	0.950
9/12/12	165	ND	ND	N/A	ND	110	ND	23	ND	120	ND	ND	ND	ND	170	ND	560	720	ND	ND	ND	ND	ND	N/A	11	ND	1,714	0.025	0.763
10/18/12	160	ND	ND	N/A	ND	190	ND	36	ND	180	ND	ND	ND	ND	ND	ND	1,000	1,400	ND	ND	ND	ND	ND	N/A	ND	ND	2,806	0.040	1.251
11/13/12	161	ND	ND	N/A	ND	120	ND	23	ND	140	ND	ND	ND	ND	ND	ND	600	910	ND	ND	ND	ND	ND	N/A	ND	ND	1,793	0.026	0.779
12/6/12	160	ND	ND	N/A	ND	130	ND	21	ND	120	ND	ND	ND	ND	8	ND	590	1,000	ND	ND	ND	ND	ND	N/A	ND	ND	1,869	0.027	0.833
1/4/13	160	ND	ND	N/A	ND	130	ND	24	ND	190	ND	ND	ND	ND	ND	ND	630	950	ND	ND	ND	ND	ND	N/A	ND	ND	1,924	0.028	0.858
2/6/13	160	ND	ND	N/A	ND	130	ND	26	ND	130	ND	ND	ND	ND	ND	ND	560	860	ND	ND	ND	ND	ND	N/A	ND	ND	1,706	0.025	0.687
3/7/13	160	ND	ND	N/A	ND	140	ND	30	ND	94	ND	ND	ND	ND	10	ND	670	1,100	ND	ND	ND	ND	ND	N/A	ND	ND	2,044	0.029	0.911
4/8/13	150	ND	ND	N/A	ND	2,200	ND	290	ND	1,500	ND	ND	ND	ND	ND	ND	2,900	5,900	ND	ND	ND	ND	ND	N/A	ND	ND	12,790	0.172	5.174
5/10/13	150	ND	ND	N/A	ND	140	11	29	ND	130	ND	ND	ND	ND	14	ND	730	1,200	17	ND	ND	ND	ND	N/A	ND	ND	2,271	0.031	0.949
6/5/13	155	ND	ND	N/A	ND	100	ND	22	ND	110	ND	ND	ND	ND	ND	ND	530	790	ND	ND	ND	ND	ND	N/A	ND	ND	1,552	0.022	0.649
7/3/13	159	ND	ND	N/A	ND	160	ND	33	ND	100	ND	ND	ND	ND	ND	ND	820	1,100	ND	ND	ND	ND	ND	N/A	ND	ND	2,213	0.032	0.981
8/14/13	160	ND	ND	N/A	ND	180	ND	34	ND	120	ND	ND	ND	ND	15	ND	780	1,300	ND	ND	ND	ND	ND	N/A	ND	ND	2,429	0.035	1.083
9/9/13	160	ND	ND	N/A	ND	100	ND	16	ND	90	ND	ND	ND	ND	ND	ND	410	630	ND	ND	ND	ND	ND	N/A	ND	ND	1,246	0.018	0.538
10/10/13	160	ND	ND	N/A	ND	220	ND	39	ND	190	ND	ND	ND	ND	15	ND	810	1,400	16	ND	ND	ND	ND	N/A	ND	ND	2,690	0.039	1.199
11/7/13	160	ND	ND	N/A	ND	200	ND	39	ND	170	ND	ND	ND	ND	11	ND	930	1,500	41	ND	ND	ND	ND	N/A	ND	ND	2,891	0.042	1.247
12/5/13	160	0.94	ND	ND	21.2	165	ND	30.7	ND	132	ND	4.4	ND	ND	12.2	2.5	883	1,530	N/A	ND	ND	ND	ND	N/A	ND	ND	2,782	0.040	1.240
1/13/14	160	ND	ND	6.5	11.6	173	2.2	29.3	ND	141	1.8	3.3	4.9	ND	9,820	ND	570	795	N/A	ND	1.9	ND	ND	N/A	4.3	1.7	11,567	0.166	5.157
2/14/14	153	ND	ND	2.4	7.4	126	ND	21.2	ND	92.7	ND	2.1	ND	ND	15.3	ND	429	843	N/A	ND	ND	ND	ND	N/A	ND	ND	1,539	0.021	0.593
3/12/14	160	ND	ND	2.4	ND	176	2.0	29.3	36.4	130	ND	ND	ND	3.6	9.1	ND	1,310	2,100	N/A	ND	ND	ND	ND	N/A	3.0	ND	3,802	0.055	1.695
4/10/14	160	81.7	ND	ND	ND	194	ND	31.8	ND	131	120	ND	ND	ND	75.7	ND	646	1,490	N/A	ND	ND	ND	ND	N/A	387	109	3,266	0.047	1.361
5/5/14	150	4.8	ND	8.8	3.9	44.7	4.1	6.7	ND	32.6	6.5	202	2.3 J	1.2	29.5	ND	142	292	N/A	2.8	11.5	3.0	ND	N/A	24.3	9.3	832	0.011	0.280
6/18/14	155	1,040	ND	30.3	136	3,710	ND	565	ND	2,840	ND	138	34.9 J	ND	199	51.7	1,000 J	1,490	N/A	ND	17.6 J	ND	ND	N/A	25.6 J	ND	11,278	0.157	6.907
7/3/14	158	45.1	ND	ND	8.4 J	189	ND	36.5	81.2	145	ND	ND	ND	ND	20.8 J	ND	871	1,250	N/A	ND	ND	ND	ND	N/A	ND	ND	2,647	0.038	0.563
9/16/14	150	51.1	1.1	1.0 J	54.0	416	4.7	104	ND	323	ND	0.67 J	ND	2.3	8.8	8.1	1,290	3,250	N/A	ND	2.3	0.83 J	1.5	N/A	1.5 J	1.1 J	5,522	0.074	5.578
10/9/14	152	46.6	ND	ND	ND	89.0	ND	16.1	ND	69.8	ND	17.3 J	ND	ND	ND	ND	480	819	N/A	ND	ND	ND	ND	N/A	ND	ND	1,538	0.021	0.483
11/6/14	135	38.2	ND	ND	ND	92.4	ND	16.8 J	ND	71.0	ND	23.9 J	ND	59.4	14.3 J	ND	459	803	N/A	ND	ND	ND	ND	N/A	ND	ND	1,578	0.019	0.536
12/4/14	120	34.3	ND	ND	11.8	77.6	ND	18.8	ND	68.6	ND	19.4 J	ND	ND	41.5 J	ND	428	741	N/A	ND	ND	ND	ND	N/A	ND	ND	1,441	0.016	0.435
1/15/15	50	64.8	ND	ND	6.8	85.6	4.4	15.7	ND	81.0	ND	2.0 J	ND	2.0	1.7	1.3	404	695	N/A	ND	ND	ND	ND	N/A	0.90 J	ND	1,365	0.006	0.257
2/16/15	50	1.5	ND	3.7	ND	8.5	ND	ND	ND	6.5	1.9 J	46.9	4.1 J	ND	13.5	ND	17.0	22.4	N/A	ND	ND	ND	ND	N/A	6.5	2.7 J	135	0.001	0.019
3/10/15	110	0.54	2.9	1.4	2.4	183	1.6	28.3	ND	141	1.1 J	1.4 J	1.2 J	ND	1.7	ND	1,370	2,300	N/A	ND	ND	ND	ND	N/A	4.1	1.3 J	4,042	0.040	0.878
4/6/15	115	0.73	0.78 J	2.1	7.1	147	2.2	22.7	ND	112	ND	3.5 J	2.7 J	0.87 J	2.7	ND	617	1,090	N/A	ND	1.3 J	ND	ND	N/A	2.7 J	0.99 J	2,016	0.021	0.562
5/8/15	110	ND	ND	ND	ND	161	ND	23.0 J	ND	121	ND	ND	ND	ND	ND	ND	573	1,170	N/A	ND	ND	ND	ND	N/A	ND	ND	2,048	0.020	0.647
6/2/15	125	ND	ND	ND	ND	143	ND	19.4 J	33.4	105	133	ND	ND	ND	ND	ND	536	1,110	N/A	ND	ND	ND	ND	N/A	582	142	2,804	0.031	0.787
7/1/15	80	ND	ND	ND	ND	91	ND	14.0	ND	78	ND	ND	ND	ND	ND	ND	390	470	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,043	0.007	0.217
8/10/15	140	12.0	ND	1.3 J	2.4 J	82	2.9 J	16.0	ND	63	ND	ND	ND	ND	12.0	1.4 J	400	590	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,183	0.015	0.595
9/11/15	140	72	ND	2.7 J	1.8 J	130	ND	24	ND	86	ND	ND	ND	ND	ND	1.9 J	510	1,000	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,828	0.023	0.736
10/7/15	145	78	ND	1.5 J	ND	130	ND	24	ND	91	ND	ND	ND	ND	ND	2.0 J	560	900	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,787	0.023	0.605
11/2/15	145	43	ND	3.2 J	1.9 J	140	3.6 J	25	ND	110	ND	ND	ND	ND	ND	2.5 J	570	900	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,799	0.023	0.609
12/3/15	145	34	ND	3.2 J	1.4 J	120	3.2 J	23	ND	83	ND	ND	ND	ND	ND	1.8 J	490	830	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,590	0.021	0.642
1/15/16	140	9.2	ND	1.1 J	2.0	84	2.1	16	ND	80	ND	3.0 J	ND	ND	2.7	1.5 J	320	480 DL	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,002	0.013	0.541
2/12/16	140	2.6	ND	1.0 J	1.0 J	100	2.4	20	0.60 J	82	ND	ND	ND	ND	ND	1.6	550 EB	840 E	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,601	0.020	0.564
3/9/16	130	36	0.49 J	7.9	1.5 J	130	2.4	25	0.70 J	98	ND	2.8 J	ND	0.64 J	5.3	2.0	680 E	1,300 E	N/A	ND	ND	ND	0.42 J	ND	N/A	N/A	2,293	0.027	0.696
4/7/16	288	28	ND	ND	ND	230	ND	42	ND	180	ND	ND	ND	ND	ND	ND	940	1,700	N/A	ND	ND	ND	ND	ND	N/A	N/A	3,120	0.081	2.340
4/27/16	250	ND	ND	ND	ND	90	ND	18	ND	68	ND	ND	ND	ND	ND	ND	490	950	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,616	0.036	0.726
5/12/16	248	ND	ND	19	2.0 J	110	3.5 J	18	ND	120	ND	9.0	ND	ND	6.5	ND	600 B	910	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,798	0.040	0.601
6/2/16	259	31	ND	63	ND	150	ND	26	ND	140	ND	ND	ND	ND	ND	3.6 J	670	1,100	N/A	ND	ND	ND	ND	ND	N/A	N/A	2,184	0.051	1.066
7/14/16	252	65	ND	ND	ND	100	ND	17	ND	75	ND	36	ND	ND	15	ND	510	940	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,758	0.040	1.671
8/4/16	260	20	ND	ND	ND	92	ND	17	ND	68	ND	ND	ND	ND	ND	ND	460	860	N/A	ND	8.2 J	ND	ND	ND	N/A	N/A	1,525	0.036	0.748
9/7/16	260	38	ND	1.5 J	1.2 J	88	2.3 J	14	ND	66	ND	15	ND	ND	ND	1.8 J	400	760	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,388	0.032	1.102
10/5/16	270	ND	ND	1.7	ND	81	ND	14	ND	68	ND	ND	ND	ND	ND	ND	410	630	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,205	0.029	0.818
11/3/16	216	ND	ND	ND	ND	350	ND	68	ND	260	ND	49 J	ND	ND	ND	ND	2,000	2,800	N/A	ND	ND	ND	ND	ND	N/A	N/A	5,527	0.107	3.109
12/14/16	225	11	ND	2 J	ND	95	3.1 J	17	ND	120	ND	ND	ND	ND	ND	2.5 J	600	710	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,561	0.032	1.293

TABLE 1

Building A Influent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	FLOW (scfm)	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)	Mass (lbs. removed in period)
1/13/17	195	**17**	ND	ND	**8.4 J**	**440**	ND	**81**	ND	**370**	ND	**130**	ND	ND	ND	**9.3 J**	**2,000**	**3,600**	N/A	ND	ND	ND	ND	ND	N/A	N/A	**6,656**	**0.117**	3.496
2/8/17	200	**33**	ND	ND	**6**	**110**	**3.7 J**	**19**	ND	**100**	ND	ND	ND	ND	ND	**2.1 J**	**660**	**1,100 E**	N/A	ND	ND	ND	ND	**5.9 J**	N/A	N/A	**2,040**	**0.037**	0.952
3/8/17	360	**21**	ND	ND	**2 J**	**100**	**3.3 J**	**21**	ND	**110**	ND	ND	ND	**8.50 J**	ND	**2.2 J**	**590**	**1,000**	N/A	ND	ND	ND	ND	**6.9 J**	N/A	N/A	**1,865**	**0.060**	1.688
4/5/17	355	**15**	ND	ND	**1.3 J**	**65**	ND	**10**	ND	**71**	ND	ND	ND	ND	ND	ND	**370**	**680**	N/A	ND	ND	ND	ND	ND	N/A	N/A	**1,212**	**0.039**	1.082
5/5/17	360	**31**	ND	**1.60 J**	ND	**80**	ND	**16**	ND	**74**	ND	ND	ND	ND	ND	ND	**430**	**760**	N/A	ND	ND	ND	ND	ND	N/A	N/A	**1,393**	**0.045**	1.351
6/5/17	355	**10**	ND	ND	**3.40 J**	**69**	ND	**13**	ND	**66**	ND	**13 JB**	ND	ND	ND	ND	**480**	**710**	N/A	ND	ND	ND	ND	ND	N/A	N/A	**1,364**	**0.043**	1.348
7/6/17	345	**25**	ND	**7.2 J**	ND	**94**	ND	**20**	ND	**120**	ND	ND	ND	ND	ND	**4.60 J**	**450**	**1,400**	N/A	ND	ND	ND	ND	ND	N/A	N/A	**2,121**	**0.066**	2.037
8/8/17	350	**5 J**	ND	**4.9 J**	ND	**90**	ND	**18**	ND	**95**	ND	**28 JB**	ND	ND	ND	ND	**480**	**940**	N/A	ND	ND	ND	ND	ND	N/A	N/A	**1,661**	**0.052**	1.723
9/7/17	345	**35**	ND	ND	**2**	**79**	ND	**13**	ND	**72**	ND	**16 J**	ND	ND	ND	ND	**420**	**1,000**	N/A	ND	ND	ND	ND	ND	N/A	N/A	**1,637**	**0.051**	1.521
10/4/17	350	**22**	ND	**2.50 J**	ND	**52**	ND	**10**	ND	**66**	ND	**14 J**	ND	ND	ND	ND	**290**	**750**	N/A	ND	ND	ND	ND	ND	N/A	N/A	**1,207**	**0.038**	1.024
11/8/17	355	**4 J**	ND	ND	ND	**83**	ND	**17**	ND	**88**	ND	ND	ND	ND	ND	ND	**550**	**1,100**	N/A	ND	ND	ND	ND	ND	N/A	N/A	**1,842**	**0.059**	2.055
12/4/17	360	**16**	ND	**1.50 J**	ND	**75**	**3.4 J**	**15**	ND	**92**	ND	ND	ND	ND	ND	ND	**500 B**	**990**	N/A	ND	ND	ND	ND	ND	N/A	N/A	**1,693**	**0.055**	1.423
1/9/18	360	**16**	**0.50 J**	**1.70**	**1.20 J**	**58**	**2.0**	**9**	ND	**79**	**0.59 J**	ND	ND	**0.55 J**	**2.5**	**1.1 J**	**390**	**800 E**	N/A	ND	ND	ND	ND	**4.1**	N/A	N/A	**1,367**	**0.044**	1.590
2/9/18	360	**16**	ND	**32.00**	ND	**70**	**3.6 J**	**13**	ND	**120**	ND	**14 J**	ND	ND	ND	ND	**420**	**1,000**	N/A	ND	ND	ND	ND	ND	N/A	N/A	**1,689**	**0.055**	1.692
3/6/18	360	**22**	ND	**2.10 J**	ND	**80**	**3.6 J**	**14**	ND	**110**	ND	ND	ND	ND	ND	ND	**470**	**1,200**	N/A	ND	ND	ND	ND	ND	N/A	N/A	**1,902**	**0.061**	1.537

Notes:

µg/m^3 - micrograms per cubic meter

B - compound was found in the blank and sample

DL - dilution analysis

E - results exceeded calibration range

EPA - United States Environmental Protection Agency

GAC - granular activated-carbon

J - result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value

lbs./day - pounds per day

N/A - not applicable (samples not analyzed for compound)

ND - non-detect (below detection limit)

OM&M - operation, maintenance, and monitoring

scfm - standard cubic feet per minute

SSD - sub-slab depressurization

TO-15 - Toxic Organic Method 15

VOCs - volatile organic compounds

Completed first-phase system expansion (to Building A basement) on October 22, 2010.

Completed second-phase system expansion (to eastern area) on April 13, 2016.

Increase in concentrations following 19-day system shutdown due to blower failure. Blower was replaced on 4/8/13.

Samples not collected in May 2014 and August 2014 as system was shut down due to firewater line break.

Samples analyzed from 4/2/08 to 11/7/13 and from 7/1/15 to present analyzed by TestAmerica, Inc. of Knoxville, TN.

Samples analyzed from 12/5/13 to 6/2/15 analyzed by Pace Analytical Services, Inc. of Minneapolis, MN.

TABLE 2

Building A Mid-GAC Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
4/2/08	6.9	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	6.9	0.0000
4/24/08	ND	ND	N/A	ND	810	ND	240	ND	2,200	ND	ND	ND	ND	ND	ND	2,100	ND	ND	ND	ND	ND	ND	N/A	ND	ND	5,350	0.0400
5/21/08	ND	ND	N/A	ND	280	ND	100	ND	740	ND	ND	ND	ND	ND	ND	410	11	ND	ND	ND	ND	ND	N/A	ND	ND	1,541	0.0100
6/19/08	110	ND	N/A	ND	2,300	ND	830	ND	2,200	ND	53	ND	ND	ND	ND	1,200	ND	ND	ND	ND	ND	ND	N/A	ND	ND	6,693	0.0400
7/18/08	ND	ND	N/A	ND	60	ND	27	ND	270	ND	ND	ND	ND	ND	ND	100	ND	ND	ND	ND	ND	ND	N/A	ND	ND	457	0.0030
8/12/08	ND	ND	N/A	15	60	ND	130	ND	400	ND	ND	ND	ND	ND	ND	1,500	30	16	ND	ND	ND	ND	N/A	ND	ND	2,151	0.0100
9/11/08	ND	ND	N/A	15	ND	ND	170	ND	520	ND	ND	ND	ND	ND	ND	890	53	30	ND	ND	ND	ND	N/A	ND	ND	1,678	0.0100
11/18/08	ND	ND	N/A	ND	ND	ND	60	ND	97	ND	ND	ND	ND	ND	ND	150	180	ND	ND	ND	ND	ND	N/A	ND	ND	487	0.0031
12/18/08	ND	ND	N/A	ND	98	ND	38	ND	330	ND	ND	ND	ND	ND	ND	51	18	ND	ND	ND	ND	ND	N/A	ND	ND	535	0.0040
1/22/09	ND	ND	N/A	ND	42	ND	19	ND	490	ND	ND	ND	ND	ND	ND	25	12	11	ND	ND	ND	ND	N/A	ND	ND	599	0.0045
2/20/09	ND	ND	N/A	ND	220	ND	91	ND	310	ND	ND	ND	ND	ND	ND	380	68	ND	ND	ND	ND	ND	N/A	ND	ND	1,069	0.0081
3/18/09	ND	ND	N/A	ND	210	ND	69	ND	280	ND	ND	ND	ND	ND	ND	1,900	190	ND	ND	ND	ND	ND	N/A	ND	ND	2,649	0.0067
4/17/09	ND	ND	N/A	ND	ND	ND	ND	ND	140	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	140	0.0016
5/20/09	ND	ND	N/A	ND	110	ND	42	ND	140	ND	ND	ND	ND	ND	ND	200	ND	ND	ND	ND	ND	ND	N/A	ND	ND	492	0.0055
6/23/09	ND	ND	N/A	ND	66	ND	130	ND	320	ND	ND	ND	ND	ND	ND	82	ND	18	ND	ND	ND	ND	N/A	ND	ND	616	0.0074
7/23/09	ND	ND	N/A	ND	250	ND	88	ND	210	ND	ND	ND	ND	ND	ND	890	ND	12	ND	ND	ND	ND	N/A	ND	ND	1,450	0.0173
8/28/09	ND	ND	N/A	ND	330	ND	130	ND	290	ND	ND	ND	ND	ND	ND	1,100	ND	14	ND	ND	ND	ND	N/A	ND	ND	1,864	0.0214
9/28/09	ND	ND	N/A	ND	130	ND	38	ND	110	ND	ND	ND	ND	ND	ND	580	ND	ND	ND	ND	ND	ND	N/A	ND	ND	858	0.0096
10/27/09	ND	ND	N/A	ND	170	ND	94	ND	260	ND	ND	ND	ND	ND	ND	180	35	ND	ND	ND	ND	ND	N/A	ND	ND	739	0.0086
11/24/09	ND	ND	N/A	ND	250	ND	84	ND	210	ND	ND	ND	ND	ND	ND	710	ND	ND	ND	ND	ND	ND	N/A	ND	ND	1,254	0.0150
12/23/09	ND	ND	N/A	ND	28	ND	30	ND	180	ND	ND	ND	ND	ND	ND	19	29	ND	ND	ND	ND	ND	N/A	ND	ND	286	0.0035
1/19/10	ND	ND	N/A	ND	190	ND	100	ND	260	ND	ND	ND	ND	ND	ND	16	ND	ND	ND	ND	ND	ND	N/A	ND	ND	566	0.0066
2/17/10	ND	ND	N/A	ND	ND	ND	100	ND	110	ND	ND	ND	ND	ND	ND	16	ND	ND	ND	ND	ND	ND	N/A	ND	ND	226	0.0026
3/17/10	ND	ND	N/A	ND	ND	ND	ND	ND	19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	19	0.0000
4/16/10	ND	ND	N/A	ND	260	ND	89	ND	200	ND	ND	ND	ND	ND	ND	600	14	ND	ND	ND	ND	ND	N/A	ND	ND	1,163	0.0125
5/13/10	13	ND	N/A	ND	260	ND	61	ND	180	15	ND	ND	ND	67	ND	1,300	ND	13	ND	12	ND	ND	N/A	55	16	1,992	0.0213
6/18/10	ND	ND	N/A	ND	20	ND	ND	ND	19	ND	ND	ND	ND	ND	ND	18	ND	ND	ND	76	16	ND	N/A	25	14	188	0.0019
7/19/10	ND	ND	N/A	ND	74	ND	24	ND	89	ND	ND	ND	ND	ND	ND	87	ND	ND	ND	11	ND	ND	N/A	ND	ND	285	0.0028
8/19/10	ND	ND	N/A	ND	210	ND	55	ND	210	ND	ND	ND	ND	ND	ND	720	ND	13	ND	ND	ND	ND	N/A	ND	ND	1,208	0.0120
9/17/10	ND	ND	N/A	ND	330	ND	110	ND	310	ND	ND	ND	ND	ND	ND	430	ND	24	ND	ND	ND	ND	N/A	ND	ND	1,204	0.0119
10/12/10	ND	ND	N/A	ND	400	ND	81	ND	170	ND	ND	ND	ND	32	ND	1,000	49	17	ND	ND	ND	ND	N/A	ND	ND	1,749	0.0173
11/2/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.00	0.0000
12/1/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	N/A	ND	ND	14	0.0001
1/5/11	ND	ND	N/A	ND	ND	ND	ND	ND	24	ND	ND	ND	ND	ND	ND	20	11	ND	ND	ND	ND	ND	N/A	ND	ND	55	0.0005
2/7/11	ND	ND	N/A	ND	13	ND	9	ND	95	ND	ND	ND	ND	ND	ND	53	12	20	ND	ND	ND	ND	N/A	ND	ND	202	0.0020
3/3/11	ND	ND	N/A	ND	15	ND	8	ND	120	ND	ND	ND	ND	66	ND	44	16	13	ND	ND	ND	ND	N/A	18	ND	300	0.0030
4/14/11	ND	ND	N/A	ND	110	ND	40	ND	310	ND	25	ND	ND	ND	ND	48	ND	13	ND	ND	ND	ND	N/A	ND	ND	546	0.0054
5/6/11	ND	ND	N/A	ND	150	ND	51	ND	240	ND	ND	ND	ND	ND	ND	70	34	ND	ND	ND	ND	ND	N/A	ND	ND	545	0.0054
6/9/11	14	ND	N/A	23	760	ND	190	ND	340	ND	ND	ND	ND	26	ND	440	51	20	ND	ND	ND	ND	N/A	ND	ND	1,864	0.0184
7/11/11	11	ND	N/A	ND	320	ND	92	ND	220	ND	21	ND	ND	67	ND	320	16	ND	ND	ND	ND	ND	N/A	29	10	1,106	0.0109
8/3/11	ND	ND	N/A	ND	320	ND	60	ND	170	ND	ND	ND	ND	ND	ND	110	ND	ND	ND	ND	ND	ND	N/A	ND	ND	660	0.0065
9/15/11	ND	ND	N/A	ND	170	ND	35	ND	140	ND	ND	ND	ND	ND	ND	200	ND	ND	ND	ND	ND	ND	N/A	ND	ND	545	0.0054
10/18/11	ND	ND	N/A	ND	110	ND	27	ND	80	ND	ND	ND	ND	22	ND	200	ND	ND	ND	ND	ND	ND	N/A	ND	ND	439	0.0043
11/8/11	ND	ND	N/A	ND	130	ND	33	ND	110	ND	ND	ND	ND	ND	ND	330	ND	ND	ND	ND	ND	ND	N/A	ND	ND	603	0.0060
12/6/11	ND	ND	N/A	ND	140	ND	36	ND	140	ND	ND	ND	ND	ND	ND	310	ND	ND	ND	ND	ND	ND	N/A	ND	ND	626	0.0062

TABLE 2

Building A Mid-GAC Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
1/3/12	ND	ND	N/A	ND	71	ND	19	ND	82	ND	ND	ND	ND	ND	ND	200	ND	ND	ND	ND	ND	ND	N/A	ND	ND	372	0.0037
2/16/12	ND	ND	N/A	ND	120	ND	26	ND	130	ND	ND	ND	ND	ND	ND	430	11	ND	ND	ND	ND	ND	N/A	ND	ND	717	0.0071
3/15/12	ND	ND	N/A	ND	190	ND	37	ND	210	ND	ND	ND	ND	ND	ND	480	38	ND	ND	ND	ND	ND	N/A	ND	ND	955	0.0094
4/16/12	ND	ND	N/A	ND	260	ND	48	ND	200	ND	ND	ND	ND	ND	ND	640	34	ND	ND	ND	ND	ND	N/A	ND	ND	1,182	0.0117
5/9/12	ND	ND	N/A	ND	140	ND	26	ND	140	ND	ND	ND	ND	ND	ND	76	14	ND	ND	ND	ND	ND	N/A	ND	ND	396	0.0039
6/4/12	ND	ND	N/A	ND	170	ND	35	ND	170	ND	ND	ND	ND	ND	ND	120	63	ND	ND	ND	ND	ND	N/A	ND	ND	558	0.0055
7/5/12	ND	ND	N/A	ND	320	ND	74	ND	260	ND	19	ND	ND	ND	ND	210	26	12	ND	ND	ND	ND	N/A	ND	ND	921	0.0091
8/15/12	ND	ND	N/A	ND	240	ND	40	ND	130	ND	ND	ND	ND	10	ND	420	20	13	ND	ND	ND	ND	N/A	ND	ND	873	0.0086
9/12/12	ND	ND	N/A	ND	180	ND	43	ND	140	ND	ND	ND	ND	14	ND	34	13	13	ND	ND	ND	ND	N/A	ND	ND	437	0.0043
10/18/12	ND	ND	N/A	ND	160	ND	29	ND	95	ND	ND	ND	ND	ND	ND	25	28	ND	ND	ND	ND	ND	N/A	ND	ND	337	0.0033
11/13/12	ND	ND	N/A	ND	89	ND	16	ND	94	ND	ND	ND	ND	ND	ND	20	21	ND	ND	ND	ND	ND	N/A	ND	ND	240	0.0024
12/6/12	ND	ND	N/A	ND	86	ND	14	ND	92	ND	ND	ND	ND	ND	ND	26	20	ND	ND	ND	ND	ND	N/A	ND	ND	238	0.0024
1/4/13	ND	ND	N/A	ND	97	ND	21	ND	130	ND	ND	ND	ND	ND	ND	88	15	ND	ND	ND	ND	ND	N/A	ND	ND	351	0.0035
2/6/13	ND	ND	N/A	ND	120	ND	32	ND	120	ND	ND	ND	ND	ND	ND	180	19	ND	ND	ND	ND	ND	N/A	ND	ND	471	0.0047
3/7/13	ND	ND	N/A	ND	180	ND	46	ND	150	ND	ND	ND	ND	ND	ND	150	37	ND	ND	ND	ND	ND	N/A	ND	ND	563	0.0056
4/8/13	ND	ND	N/A	ND	66	ND	15	ND	46	ND	ND	ND	ND	ND	ND	43	92	ND	ND	ND	ND	ND	N/A	ND	ND	262	0.0026
5/10/13	ND	ND	N/A	ND	380	ND	73	ND	210	ND	ND	ND	ND	ND	ND	170	31	16	ND	ND	ND	ND	N/A	ND	ND	880	0.0087
6/5/13	ND	ND	N/A	ND	210	ND	33	ND	160	ND	ND	ND	23	ND	ND	460	15	ND	ND	ND	ND	ND	N/A	ND	ND	901	0.0089
7/3/13	21	ND	N/A	ND	330	ND	78	ND	200	ND	ND	ND	ND	ND	ND	38	42	ND	ND	ND	ND	ND	N/A	ND	ND	709	0.0070
8/14/13	50	ND	N/A	ND	390	ND	59	ND	120	ND	20	ND	ND	7.3	ND	63	66	11	ND	ND	ND	ND	N/A	ND	ND	786	0.0078
9/9/13	17	ND	N/A	ND	180	ND	23	ND	110	ND	ND	ND	ND	ND	ND	50	21	ND	ND	ND	ND	ND	N/A	ND	ND	401	0.0040
10/10/13	29	ND	N/A	ND	190	ND	33	ND	120	ND	ND	ND	ND	9.9	ND	170	32	ND	ND	ND	ND	ND	N/A	ND	ND	584	0.0058
11/7/13	38	ND	N/A	ND	260	ND	48	ND	95	ND	ND	ND	ND	ND	ND	38	39	ND	ND	ND	ND	ND	N/A	ND	ND	518	0.0051
12/5/13	31.8	ND	ND	ND	107	2.9	18.8	ND	51.6	ND	6.0	5.9	ND	4.7	ND	34.1	43.5	N/A	ND	3.2	ND	ND	N/A	ND	ND	310	0.0031
1/13/14	ND	ND	3.9	1.6	162	2.2	22.4	ND	113.0	1.9	2.3	4.7	42.1	64.0	ND	19.3	4.9	N/A	ND	3.7	1.7	ND	N/A	7.4	2.5	460	0.0045
2/14/14	55.1	ND	3.1	3.1	189	2.8	31.0	ND	166	ND	ND	ND	ND	ND	2.5	64.8	54.9	N/A	ND	ND	ND	ND	N/A	ND	ND	572	0.0057
3/12/14	24.5	ND	4.5	ND	154	2.2	24.5	ND	134	ND	28.1	ND	ND	3.4	ND	38.5	47.5	N/A	ND	ND	ND	ND	N/A	ND	ND	461	0.0046
4/10/14	40.8	ND	ND	ND	270	ND	51.4	ND	267	66.2	ND	ND	ND	45.2	ND	65.6	74.8	N/A	ND	ND	ND	ND	N/A	215	59.5	1,156	0.0114
5/5/14	53.4	ND	1.4	10.5	406	3.1	63.8	ND	253	ND	0.96 J	3.6 J	ND	3.0	5.7	47.8	48.9	N/A	ND	ND	ND	ND	N/A	0.94 J	ND	902	0.0089
6/5/14	2.3	ND	9.6	ND	113	3.0	14.3	ND	165	ND	167	1.8 J	23.1	60.4	ND	63.5	24.5	N/A	ND	1.9	ND	ND	N/A	1.8 J	1.9	653	0.0065
7/3/14	7.6 J	ND	ND	ND	286	ND	47.4	16.8	344	ND	ND	ND	ND	11.7 J	ND	178	25.4	N/A	ND	ND	ND	ND	N/A	ND	ND	917	0.0091
9/16/14	ND	ND	1.9	3.6	294	3.0	53.9	ND	179	0.40 J	ND	ND	0.88 J	4.6	ND	76	43.6	N/A	ND	2.4	0.71 J	ND	N/A	1.2 J	ND	665	0.0066
10/9/14	ND	ND	ND	10.4	361	ND	57.5	ND	157	ND	ND	ND	ND	4.4 J	4.7 J	130	17.9	N/A	ND	ND	ND	ND	N/A	ND	ND	743	0.0073
11/6/14	ND	ND	ND	ND	172	ND	25.7	ND	62.2	ND	9.7 J	ND	16.7	6.1 J	3.7 J	98.6	26.2	N/A	ND	ND	ND	ND	N/A	ND	ND	421	0.0042
12/4/14	1.0	ND	ND	7.0	111	3.0	17.3	ND	45.7	ND	3.5 J	4.0 J	5.8	3.1	2.2 J	109.0	25.2	N/A	ND	ND	ND	ND	N/A	ND	ND	338	0.0033
1/15/15	5.9	ND	ND	ND	7.7 J	30.6	ND	ND	5.2 J	ND	ND	ND	10.4	10.9	ND	54.3	49.0	N/A	ND	8.2 J	ND	ND	N/A	6.8 J	7.5 J	197	0.0019
2/9/15	6.5	ND	ND	1.5	18.7	ND	3.1	ND	15.9	ND	ND	ND	ND	0.70 J	ND	17.1	2.6	N/A	ND	ND	ND	ND	N/A	ND	ND	66	0.0007
3/10/15	21.5	ND	2.8	6.9	73.5	2.3	13.1	ND	70.1	ND	ND	3.1 J	ND	2.0	0.79 J	97.3	87.9	N/A	ND	ND	ND	ND	N/A	1.8 J	ND	383	0.0038
4/6/15	29.7	ND	3.1	14.1	173	3.0	27.5	ND	194	ND	ND	3.3 J	ND	4.6	ND	133	102	N/A	ND	1.3 J	ND	0.41 J	N/A	ND	ND	689	0.0068
5/8/15	13.4	ND	ND	17.0	216	ND	37.5	ND	193	ND	ND	ND	ND	ND	ND	96.2	63.3	N/A	ND	ND	ND	ND	N/A	ND	ND	636	0.0063
6/2/15	44.7	ND	3.0	15.9	238	ND	36.1	10.4	128	7.4	3.9 J	4.6	ND	2.7	3.9	179	74.1	N/A	ND	0.99 J	ND	ND	N/A	32.9	8.5	794	0.0079
7/1/15	3.9	ND	1.5	7.7	140	ND	21.0	ND	74	ND	ND	ND	ND	3.0	2.1	260	43.0	N/A	ND	ND	ND	ND	ND	N/A	N/A	556	0.0055
8/10/15	3.7	ND	ND	7.3	150	2.4	28.0	ND	90	ND	ND	ND	ND	8.4	2.8	180	54.0	N/A	ND	ND	ND	ND	ND	N/A	N/A	527	0.0052
9/11/15	2.2	ND	1.9	10	300	2.8	41	0.66 J	140	ND	5.2	ND	ND	3.3	5.1	390	120	N/A	ND	1.3 J	ND	0.48 J	1.3 J	N/A	N/A	1,025	0.0101
10/7/15	1.5	ND	1.8	8.6	220	2.0	33	ND	98	ND	2.8 J	ND	ND	3.6	3.5	310	71	N/A	ND	ND	3.3	ND	ND	N/A	N/A	759	0.0075
11/2/15	0.58 J	ND	3.0	8.4	210	3.3	33	ND	98	ND	2.9 J	ND	ND	ND	3.0	330	30	N/A	ND	ND	ND	0.45 J	ND	N/A	N/A	723	0.0071
12/3/15	ND	ND	1.5	4.8	110	2.2	20	ND	65	ND	2.3 J	ND	ND	ND	1.4 J	97	4.5	N/A	ND	ND	ND	ND	ND	N/A	N/A	309	0.0031

TABLE 2

Building A Mid-GAC Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1,-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
1/15/16	0.58 J	ND	1.9	4.1	110	2.1	25	ND	95	ND	4.0	ND	ND	3.8	1.6	180	31	N/A	ND	ND	ND	ND	ND	N/A	N/A	459	0.0045
2/12/16	ND	ND	2.5	2.2	62	2.6	15	ND	58	ND	3.6	ND	ND	ND	1.0 J	160 B	28	N/A	ND	ND	ND	ND	ND	N/A	N/A	335	0.0033
3/9/16	0.61 J	ND	6.5	3.0	130	2.0	25	ND	100	ND	2.5 J	ND	ND	4.0	1.9	120	3.8	N/A	ND	ND	ND	ND	ND	N/A	N/A	399	0.0039
4/7/16	ND	ND	ND	ND	650	ND	90	ND	290	ND	ND	ND	ND	ND	ND	2,700	530	N/A	ND	ND	ND	ND	ND	N/A	N/A	4,260	0.0421
4/27/16	14	ND	1.8	4.2	210	2.8	17	0.64 J	71	ND	ND	ND	ND	4.9	2.8	250	17	N/A	ND	ND	ND	0.50 J	ND	N/A	N/A	597	0.0059
5/12/16	13	ND	13	4.4 J	190	ND	17	ND	130	ND	17 J	ND	ND	ND	3.8 J	690 B	20	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,098	0.0109
6/2/16	2.6	ND	85	1.1 J	64	2.4	5.6	ND	29	ND	2.2 J	ND	ND	3.1	1.0 J	34	1.6	N/A	ND	ND	ND	0.39 J	1.8 J	N/A	N/A	234	0.0023
7/14/16	3.5	ND	2.5	2.6	170	2.7	18	0.41 J	88	ND	47	ND	ND	5.1	2.8	170	1.7	N/A	ND	1.4 J	ND	ND	2.5 J	N/A	N/A	518	0.0051
8/4/16	2.1	ND	1.5	2.6	160	2.3	25	0.65 J	96	ND	2.3 J	ND	ND	ND	2.6	240	14	N/A	1.7 J	7.5	1.7 J	ND	1.8 J	N/A	N/A	562	0.0056
9/7/16	5.8	0.58 J	1.6	2.8	160	2.8	22	1.1 J	77	ND	3.6	ND	1.7 J	ND	2.9	480 DL	1.1	N/A	ND	1.2 J	ND	0.40 J	1.8 J	N/A	N/A	766	0.0076
10/5/16	11	0.69 J	1.6	4.1	220	2.2	30	1.5 J	100	ND	2.8 J	ND	ND	3	3.5	890 DL	67	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,337	0.0132
11/3/16	42	3.1	3.5	12.0	510 DL	2.9	390	6.3 J	350 E	1 J	13 J	ND	ND	5.6	7.8	4,300 DL	84	N/A	ND	0.8 J	ND	1.2	3.6	N/A	N/A	5,737	0.0567
12/14/16	ND	0.65 J	ND	1.6 J	170	2.6	26	1.0 J	140	ND	6.7	ND	ND	ND	2.8	850 E	110	N/A	ND	ND	ND	0.5 J	ND	N/A	N/A	1,312	0.0130
1/13/17	ND	ND	1.2 J	1.5 J	120	2.5	30	ND	160	ND	8.5	ND	ND	6.3	1.8	610 E	6	N/A	ND	ND	ND	1.2	1.2 J	N/A	N/A	950	0.0094
2/8/17	140	ND	1.1 J	0.7 J	36	1.0 J	9	ND	41	5.6	ND	ND	ND	13.0	0.7 J	190	3	N/A	2.9	6.8	2.4	ND	28	N/A	N/A	481	0.0048
3/8/17	ND	ND	1.3 J	0.7 J	37	2.7	11	ND	61	1.2 J	2.4 J	ND	ND	2.5	0.8 J	160	1 J	N/A	ND	2.3	ND	ND	7.5	N/A	N/A	291	0.0029
4/5/17	1.9	ND	1.0 J	0.5 J	27	2.1	5	ND	47	1.1 J	2.5 J	ND	ND	3.5	0.6 J	43	1 J	N/A	ND	1.7 J	0.8 J	ND	7.5	N/A	N/A	146	0.0014
5/5/17	2.2	ND	1.4 J	0.4 J	38	2.7	6	ND	47	0.7 J	2.6 J	ND	ND	3.2	0.9 J	22	0 J	N/A	ND	0.8 J	ND	ND	3.6	N/A	N/A	132	0.0013
6/5/17	1.2 J	ND	2.4	1.4 J	74	2.6	14	ND	63	ND	4.0 B	ND	ND	ND	1.4 J	100	2	N/A	ND	ND	ND	ND	1.8	N/A	N/A	267	0.0026
7/6/17	ND	ND	3.8	1.1 J	67	2.4	10	ND	76	1.1 B	3.3 J	ND	ND	4.8	1.3 J	57 B	1 J	N/A	ND	ND	ND	ND	3.4 J	N/A	N/A	232	0.0023
8/8/17	ND	ND	2.1	2.8	100	2.1	22	0.42 J	130	ND	9.2 B	ND	ND	ND	1.9	120	1	N/A	ND	ND	ND	0.39 J	ND	N/A	N/A	392	0.0039
9/7/17	1.9	ND	1.3 J	2.6	89	2.1	16	0.40 J	72	ND	13.0	ND	ND	2.9	1.8	180	1 J	N/A	ND	ND	ND	ND	ND	N/A	N/A	384	0.0038
10/4/17	0.89 J	ND	2.4 J	2.3 J	75	2.5 J	14	ND	77	ND	8.3	ND	ND	ND	1.7 J	280	1 J	N/A	ND	ND	ND	ND	ND	N/A	N/A	465	0.0046
11/8/17	1.2 J	ND	1.6	2.6	70	3.2	18	ND	59	ND	3.3 J	ND	ND	ND	1.3 J	310	ND	N/A	ND	ND	ND	ND	ND	N/A	N/A	470	0.0046
12/4/17	46	ND	1.4	3.9	95	1.8 J	28	0.57 J	100	0.89 J	2.7 J	ND	ND	4	1.6	740 EB	ND	N/A	ND	ND	ND	ND	2.2 J	N/A	N/A	1,028	0.0102
1/9/18	51	ND	1.6	1.9 J	61	2.0 J	13	ND	84	0.64 J	2.3 J	ND	ND	ND	1.2 J	320	ND	N/A	ND	ND	ND	ND	3.4 J	N/A	N/A	542	0.0054
2/9/18	ND	ND	45	3.0 J	110	3.5 J	26	ND	190	ND	14 J	ND	ND	ND	2.4 J	750	ND	N/A	ND	ND	ND	ND	11 J	N/A	N/A	1,155	0.0114
3/8/18	0.48 J	ND	1.2 J	1.3 J	77	2.5	12	ND	98	ND	3.1 J	ND	32	ND	1.5 J	230	ND	N/A	ND	ND	ND	ND	12 J	N/A	N/A	471	0.0047

Notes:

µg/m^3 - micrograms per cubic meter

B - compound was found in the blank and sample

DL - dilution analysis

E - results exceeded calibration range

EPA - United States Environmental Protection Agency

GAC - granular activated-carbon

J - result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value

lbs./day - pounds per day

N/A - not applicable (samples not analyzed for compound)

ND - non-detect (below detection limit)

OM&M - operation, maintenance, and monitoring

scfm - standard cubic feet per minute

SSD - sub-slab depressurization

TO-15 - Toxic Organic Method 15

VOCs - volatile organic compounds

Samples not collected in May 2014 and August 2014 as system was shut down due to firewater line break.

Samples analyzed from 4/2/08 to 11/7/13 and from 7/1/15 to present analyzed by TestAmerica, Inc. of Knoxville, TN.

Samples analyzed from 12/5/13 to 6/2/15 analyzed by Pace Analytical Services, Inc. of Minneapolis, MN.

TABLE 3

Building A Effluent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1,-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
3/31/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
4/2/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
4/4/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	110	N/A	ND	ND	110	0.001
4/11/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
4/17/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
4/24/08	ND	ND	N/A	ND	30	ND	13	ND	470	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	513	0.004
5/21/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.00	0.000
6/19/08	76	ND	N/A	ND	67	ND	65	ND	2,200	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	2,408	0.015
8/1/08	ND	ND	N/A	ND	14	ND	15	ND	300	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	329	0.005
8/12/08	ND	ND	N/A	ND	55	ND	42	ND	310	ND	19	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	426	0.005
9/11/08	ND	ND	N/A	ND	ND	ND	ND	ND	46	ND	18	ND	ND	ND	ND	11	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	75	0.001
11/18/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	61	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	61	0.000
12/18/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
1/22/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
2/20/09	ND	ND	N/A	ND	10	ND	ND	ND	110	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	120	0.000
3/18/09	ND	ND	N/A	ND	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	14	0.000
4/17/09	ND	ND	N/A	ND	64	ND	20	ND	53	ND	ND	ND	ND	ND	ND	26	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	163	0.001
5/20/09	ND	ND	N/A	ND	9.9	ND	ND	ND	46	ND	ND	ND	ND	ND	ND	38	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	94	0.000
6/23/09	ND	ND	N/A	ND	11.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	44	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	55	0.000
7/23/09	ND	ND	N/A	ND	ND	ND	21	ND	190	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	211	0.002
8/28/09	ND	ND	N/A	ND	52	ND	29	ND	46	ND	ND	ND	ND	7.7	ND	250	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	385	0.003
9/28/09	ND	ND	N/A	ND	27	ND	19	ND	100	ND	ND	ND	ND	ND	ND	93	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	239	0.002
10/27/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	40	ND	24	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	64	0.001
11/24/09	ND	ND	N/A	ND	ND	ND	ND	ND	53	ND	ND	ND	ND	ND	ND	21	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	74	0.001
12/23/09	ND	ND	N/A	ND	21	ND	10	ND	11	ND	ND	ND	ND	8.8	ND	190	16	ND	N/A	ND	ND	ND	N/A	ND	ND	257	0.003
1/19/10	ND	ND	N/A	ND	27	ND	10	ND	18	ND	ND	ND	ND	ND	ND	200	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	255	0.003
2/17/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
3/17/10	ND	ND	N/A	ND	11	ND	ND	ND	20	ND	ND	ND	ND	ND	ND	17	11	ND	N/A	ND	ND	ND	N/A	ND	ND	59	0.001
4/16/10	ND	ND	N/A	ND	12	ND	9.4	ND	330	ND	ND	ND	ND	ND	ND	27	31	ND	N/A	ND	ND	ND	N/A	ND	ND	409	0.004
5/13/10	7.2	ND	N/A	ND	250	ND	57.0	ND	160	19	ND	ND	ND	58	ND	1,100	24	12	N/A	33	ND	ND	N/A	77	24	1,821	0.019
6/18/10	ND	ND	N/A	ND	ND	ND	ND	ND	90	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	62	13	ND	N/A	16	9.3	190	0.002
7/19/10	ND	ND	N/A	ND	8.7	ND	ND	ND	100	ND	ND	ND	ND	ND	ND	40	16	ND	N/A	ND	ND	ND	N/A	ND	ND	165	0.002
8/19/10	ND	ND	N/A	ND	90	ND	47	ND	270	ND	ND	ND	ND	ND	ND	41	ND	15	N/A	ND	ND	ND	N/A	ND	ND	463	0.005
9/17/10	ND	ND	N/A	ND	88	ND	39	ND	260	ND	ND	ND	ND	ND	ND	120	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	507	0.01
10/12/10	ND	ND	N/A	ND	81	ND	10	ND	58	ND	ND	ND	ND	16	ND	360	30	17	N/A	ND	ND	ND	N/A	ND	ND	572	0.01
11/2/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
12/1/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	14.0	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	14	0.000
1/5/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
2/7/11	ND	ND	N/A	ND	ND	ND	ND	ND	24	ND	ND	ND	ND	ND	ND	ND	14	21	N/A	ND	ND	ND	N/A	ND	ND	59	0.000
3/3/11	120	ND	N/A	ND	ND	ND	ND	ND	25	ND	ND	ND	ND	58	ND	ND	ND	19	N/A	ND	ND	ND	N/A	23	ND	245	0.002
4/14/11	ND	ND	N/A	ND	ND	ND	ND	ND	110	ND	23	ND	ND	55	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	11	ND	199	0.002
5/6/11	ND	ND	N/A	ND	8.8	ND	ND	ND	170	ND	ND	ND	ND	ND	ND	21	19	ND	N/A	ND	ND	ND	N/A	ND	ND	219	0.002
6/9/11	ND	ND	N/A	ND	59.0	ND	91	ND	580	ND	ND	ND	ND	30	ND	34	ND	19	N/A	ND	ND	ND	N/A	ND	ND	813	0.008
7/11/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	13	21	ND	ND	100	ND	26	ND	ND	N/A	ND	ND	ND	N/A	43	17	220	0.002
8/3/11	ND	ND	N/A	ND	ND	ND	ND	ND	19	ND	ND	ND	ND	11	ND	20	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	50	0.001
9/15/11	ND	ND	N/A	ND	100	ND	41	ND	150	ND	ND	ND	ND	ND	ND	12	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	303	0.003

TABLE 3

Building A Effluent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1,-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
10/18/11	ND	ND	N/A	ND	130	ND	35	ND	77	ND	ND	ND	ND	25	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	267	0.003
11/8/11	ND	ND	N/A	ND	150	ND	39	ND	95	ND	ND	ND	ND	ND	ND	15	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	299	0.003
12/6/11	ND	ND	N/A	ND	150	ND	37	ND	110	ND	ND	ND	ND	ND	ND	16	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	313	0.003
1/3/12	ND	ND	N/A	ND	56	ND	15	ND	67	ND	ND	ND	ND	ND	ND	20	11	ND	N/A	ND	ND	ND	N/A	ND	ND	169	0.002
2/16/12	ND	ND	N/A	ND	85	ND	24	ND	100	ND	ND	ND	ND	ND	ND	52	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	261	0.003
3/15/12	ND	ND	N/A	ND	82	ND	19	ND	100	ND	ND	ND	ND	ND	ND	45	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	246	0.002
4/16/12	ND	ND	N/A	ND	180	ND	44	ND	240	ND	ND	ND	ND	ND	ND	140	12	ND	N/A	ND	ND	ND	N/A	ND	ND	616	0.006
5/9/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
6/4/12	ND	ND	N/A	ND	ND	ND	ND	ND	12	9.6	ND	ND	ND	9.1	ND	ND	18	ND	N/A	ND	ND	ND	N/A	42	12	103	0.001
7/5/12	ND	ND	N/A	ND	ND	ND	ND	ND	87	ND	ND	ND	ND	26	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	113	0.001
8/15/12	ND	ND	N/A	ND	130	ND	38	ND	210	ND	ND	ND	ND	8.7	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	387	0.004
9/12/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	13	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	13	0.000
10/18/12	ND	ND	N/A	ND	ND	ND	ND	ND	9.8	ND	ND	ND	ND	ND	ND	ND	13	ND	N/A	ND	ND	ND	N/A	ND	ND	23	0.000
11/13/12	ND	ND	N/A	ND	ND	ND	ND	ND	48	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	48	0.001
12/6/12	ND	ND	N/A	ND	8.8	ND	ND	ND	63	ND	ND	ND	ND	ND	ND	ND	13	ND	N/A	ND	ND	ND	N/A	ND	ND	85	0.001
1/4/13	ND	ND	N/A	ND	33	ND	12	ND	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	145	0.001
2/6/13	ND	ND	N/A	ND	77	ND	28	ND	150	ND	ND	ND	ND	ND	ND	ND	11	ND	N/A	ND	ND	ND	N/A	ND	ND	266	0.003
3/7/13	ND	ND	N/A	ND	130	ND	40	ND	140	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	310	0.003
4/8/13	ND	ND	N/A	ND	56	ND	16	ND	55	ND	ND	ND	ND	ND	ND	ND	42	ND	N/A	ND	ND	ND	N/A	ND	ND	169	0.002
5/10/13	ND	ND	N/A	ND	180	ND	38	ND	190	ND	ND	ND	ND	ND	ND	12	16	ND	N/A	ND	ND	ND	N/A	ND	ND	436	0.004
6/5/13	ND	ND	N/A	ND	86	ND	21	ND	110	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	217	0.002
7/3/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
8/14/13	ND	ND	N/A	ND	8.2	ND	ND	ND	52	ND	17	ND	ND	ND	ND	ND	16	ND	N/A	ND	ND	ND	N/A	ND	ND	93	0.001
9/9/13	ND	ND	N/A	ND	15	ND	ND	ND	180	ND	ND	ND	ND	ND	ND	ND	ND	12	N/A	ND	ND	ND	N/A	ND	ND	207	0.002
10/10/13	ND	ND	N/A	ND	270	ND	66	ND	190	ND	ND	ND	ND	11	ND	ND	13	15	N/A	ND	ND	ND	N/A	ND	ND	565	0.006
11/7/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
12/5/13	0.97	ND	856	ND	1.9	ND	3.0	ND	14.8	ND	105	ND	1.6	3.0	ND	ND	1.8	N/A	12	ND	ND	ND	N/A	ND	ND	1,000	0.010
1/13/14	1.7	ND	12.5	ND	6.4	2.3	5.9	ND	31.3	1.9	1.8	5.7	ND	22.2	ND	ND	ND	N/A	1.4	4.0	ND	ND	N/A	5.8	2.2	105	0.001
2/14/14	0.65	ND	1.7	ND	42.6	2.1	26	ND	111	ND	ND	ND	ND	4.0	ND	2.4	10	N/A	ND	ND	ND	ND	N/A	ND	ND	200	0.002
3/12/14	2.0	ND	13.3	ND	ND	2.3	ND	ND	ND	3.5	35.2	ND	2.6	36.5	ND	ND	1.2	N/A	ND	3.0	ND	ND	N/A	7.7	2.9	110	0.001
4/10/14	2.8	ND	ND	ND	82.9	ND	15.1	ND	97	49.4	48.3	ND	ND	64.9	ND	ND	62.1	N/A	ND	7.2	ND	ND	N/A	154	45.1	629	0.006
5/5/14	0.9	ND	1.4	ND	98.7	2.8	16.8	ND	139	ND	0.88 J	3.1 J	ND	2.5	1.8	1.4 J	ND	N/A	ND	ND	ND	ND	N/A	1.4 J	ND	271	0.003
6/5/14	2.3	ND	3.2	ND	2.9	3.4	ND	ND	ND	ND	19.6	2.6 J	21.9	3.1	ND	6.1	7.1	N/A	ND	2.0	ND	ND	N/A	1.7 J	1.9	78	0.001
7/3/14	5.0 J	ND J	3.5 J	ND	4.1 J	ND	ND	ND	8.6	6.8 J	ND	6.8 J	ND	7.2	ND	ND	ND	N/A	ND	7.3 J	6.5 J	ND	N/A	8.8 J	7.4 J	72	0.001
9/16/14	0.42 J	ND	ND	ND	6.5	3.3	3.5	ND	209	ND	1.4 J	4.5	0.89 J	58.2	ND	8.7	19.4	N/A	0.79 J	2.0	0.75 J	ND	N/A	1.2 J	0.86 J	321	0.003
10/9/14	1.7	ND	4.2	ND	75.9	ND	37.2	ND	409	ND	2.5 J	7.1 J	ND	4.4	2.6 J	8.5	7.2	N/A	ND	ND	ND	ND	N/A	ND	ND	560	0.006
11/6/14	1.3	ND	ND	ND	177	2.0	44.2	ND	151	ND	6.0	5.7	4.1	3.4	3.7	6.3	7.8	N/A	ND	ND	ND	0.5	N/A	5.3 J	3.2 J	422	0.004
12/4/14	1.2	ND	ND	ND	147	3.4	33.9	ND	71.1	ND	2.4 J	4.0 J	5.3 J	3.0	3.3	6.0	8.2	N/A	ND	ND	ND	ND	N/A	ND	3.5	292	0.003
1/15/15	1.9	ND	ND	3.9	161	7.4	30.1	ND	55.3	ND	1.9 J	1.2 J	1.7	2.2	2.1	10.0	10.0	N/A	ND	0.91 J	ND	ND	N/A	1.5 J	ND	291	0.003
2/9/15	1.0 J	ND	ND	3.8	123	ND	19.1	ND	47.8	ND	ND	ND	ND	0.93 J	1.8	5.9	ND	N/A	ND	ND	ND	ND	N/A	ND	ND	203	0.002
3/10/15	0.59	ND	2.1	8.0	195	1.6 J	27.9	ND	79.2	ND	0.59 J	ND	ND	0.74 J	ND	31.6	11.4	N/A	ND	ND	ND	ND	N/A	ND	ND	359	0.004
4/6/15	2.0	0.75 J	6.9	1.6	44.3	3.1	4.4	0.43 J	18.5	ND	161	ND	ND	19.5	ND	3.9	3.1	N/A	ND	1.2 J	ND	ND	N/A	2.1 J	0.96 J	274	0.003
5/8/15	1.4	ND	2.5	4.3	139	2.7 J	12.6	ND	87.6	4.6 J	4.6 J	4.2 J	13.3	12.3	ND	9.9	10.3	N/A	11.3	16.3	5.9 J	ND	N/A	9.2 J	4.00 J	356	0.004
6/2/15	4.5	ND	3.9	4.3	120	ND	12.6	0.77	130	3.7	5.1 J	4.4	ND	2.6	1.7	12.6	12.3	N/A	ND	1.0 J	ND	ND	N/A	16.1	4.40	340	0.003
7/1/15	ND	ND	1.6	5.4	94	2.0	17.0	ND	120	ND	ND	ND	ND	ND	1.7	14.0	7.7	N/A	ND	ND	ND	ND	ND	N/A	N/A	263	0.003
8/24/15	4.6	ND	2.0	ND	1.3 J	2.3	ND	ND	0.61 J	0.61 J	7.5	ND	0.66 J	3.7	ND	3.7	0.60 J	N/A	ND	0.80 J	ND	ND	2.8 J	N/A	N/A	31	0.000

TABLE 3

Building A Effluent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1,-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
9/11/15	3.8	ND	2.0	0.40 J	11	2.3	1.1 J	ND	4.7	ND	4.3	ND	ND	ND	ND	21	19	N/A	ND	0.95 J	ND	ND	ND	N/A	N/A	71	0.001
10/7/15	4.6	ND	2.1	ND	9.1	2.1	1.2 J	ND	30	ND	3.0 J	ND	ND	4.3	ND	18	16	N/A	ND	ND	3.7	ND	1.7 J	N/A	N/A	96	0.001
11/2/15	2.2	ND	3.2	ND	2.3	3.2	3.0	ND	80	0.60 J	3.9	ND	ND	ND	ND	1.9 J	1.1	N/A	ND	ND	ND	0.38 J	2.3 J	N/A	N/A	104	0.001
12/3/15	1.7	ND	4.9	0.43 J	12	2.3	6.2	ND	76	ND	5.0	ND	ND	2.6	ND	0.75 J	ND	N/A	ND	ND	ND	ND	ND	N/A	N/A	112	0.001
1/15/16	2.2	ND	2.0	1.5 J	37	2.3	14	ND	73	ND	2.4 J	ND	ND	2.9	0.96 J	6.3	8.4	N/A	ND	ND	ND	ND	ND	N/A	N/A	153	0.002
2/12/16	0.4 J	ND	1.6	3.5 J	74	3.9	24	ND	81	ND	ND	ND	ND	ND	1.8	10 B	15	N/A	ND	ND	1.0 J	ND	ND	N/A	N/A	216	0.002
3/9/16	1.8	ND	5.1	8.9	200	2.0	45	ND	130	ND	2.6 J	ND	ND	4.4	3.3	2.5	0.50 J	N/A	ND	ND	ND	ND	ND	N/A	N/A	406	0.004
4/7/16	ND	ND	ND	41 J	670	ND	230	ND	530	ND	ND	ND	ND	ND	ND	4,000	ND	N/A	ND	ND	ND	ND	ND	N/A	N/A	5,471	0.054
4/27/16	1.5	ND	1.9	ND	ND	2.5	0.40 J	ND	3.4	ND	ND	ND	0.64 J	ND	ND	3.7	0.45 J	N/A	ND	ND	ND	ND	ND	N/A	N/A	14	0.000
5/12/16	1.5 J	ND	18	7.5	140	3.7 J	44	ND	210	ND	17	ND	ND	6.3	ND	780 B	ND	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,228	0.012
6/2/16	0.47 J	ND	13	0.61 J	46	ND	4.0	ND	8.1	0.66 J	ND	ND	ND	3.8	0.63 J	110	18	N/A	ND	ND	ND	ND	1.9 J	N/A	N/A	207	0.002
7/14/16	1.1 J	ND	2.3	1.1 J	73	3.1	12	ND	120	0.59 J	37	ND	ND	6.4	1.4 J	110	18	N/A	ND	1.5 J	ND	0.44 J	2.3 J	N/A	N/A	390	0.004
8/4/16	0.77 J	ND	1.8	2.3	150	3.4	23	ND	120	0.85 J	3.3 J	ND	3.2	2.9	2.7	95	22	N/A	4.1	18	3.8	ND	3 J	N/A	N/A	460	0.005
9/7/16	0.68 J	ND	1.6	3.5	200	2.6	35	ND	110	ND	4.8	ND	ND	ND	3.5	100	9.1	N/A	ND	1.1 J	ND	ND	ND	N/A	N/A	472	0.005
10/5/16	4.0	ND	1.7	3.4	77	2.1	40	ND	110	ND	3.5	ND	ND	ND	1.5 J	850	9.8	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,103	0.011
11/3/16	ND	1.2 J	3.3	4.5	51	3.1	68	ND	120	ND	11	ND	ND	ND	ND	1600 DL	ND	N/A	ND	ND	ND	1.3	ND	N/A	N/A	1,863	0.018
12/14/16	ND	ND	1.4 J	1.4 J	89	2.7	25	ND	120	ND	4.1	ND	ND	ND	1.5 J	660 E	1.8	N/A	ND	ND	ND	0.46 J	ND	N/A	N/A	907	0.009
1/13/17	ND	ND	N/A	N/A	N/A	N/A	N/A	ND	N/A	ND	5.2	ND	1 J	7.4	N/A	0.97 J	N/A	N/A	ND	ND	ND	N/A	2.3 J	N/A	N/A	17	0.000
2/8/17	0.39 J	ND	1.4	0.42	37	N/A	7	ND	N/A	0.67 J	2.3 J	ND	ND	2.5	N/A	75	18	N/A	ND	1.0 J	ND	N/A	3.2 J	N/A	N/A	149	0.002
3/8/17	ND	ND	1.3 J	0.84 J	33	N/A	15	ND	71	0.80 J	2.4 J	ND	ND	3.7	0.58 J	260	4.6	N/A	ND	ND	ND	0.42 J	4.8	N/A	N/A	398	0.004
4/5/17	ND	ND	1.3 J	0.96 J	63	N/A	5.5	ND	33	0.79 J	ND	ND	ND	3.0	0.88 J	150	27	N/A	ND	ND	ND	ND	4.8	N/A	N/A	290	0.003
5/5/17	0.37 J	ND	1.5	1.0 J	83	2.5	8.7	ND	49	1.00 J	2.4 J	ND	ND	2.9	1.2 J	180	36	N/A	ND	0.64 J	ND	ND	5.5	N/A	N/A	376	0.004
6/5/17	ND	ND	3.5	1.2 J	67	2.8	13	ND	90	0.66 J	2.9 JB	ND	ND	ND	1.3 J	150	26	N/A	ND	ND	ND	ND	2.1 J	N/A	N/A	360	0.004
7/6/17	0.44 J	ND	3.5	1.2 J	96	2.3	14	ND	78	1.3 J	3.7 JB	ND	0.79 J	5.3	1.9	180 B	150	N/A	ND	ND	ND	0.89	4.1	N/A	N/A	543	0.005
8/8/17	ND	ND	1.9	1.1 J	84	2.1	14	ND	95	ND	4.5 B	ND	ND	ND	1.7	110	16	N/A	ND	ND	ND	0.48 J	ND	N/A	N/A	331	0.003
9/7/17	0.93 J	ND	1.4	1.8 J	130	2.1	19	ND	110	0.81 J	15	ND	1.0 J	6.8	2.5	200	34	N/A	ND	1.0 J	ND	0.45 J	2.6	N/A	N/A	529	0.005
10/4/17	ND	ND	1.8	2.2	120	2.6	22	ND	100	ND	3.3 J	ND	ND	4.0	2.2	190	25	N/A	ND	0.71 J	ND	ND	2.9	N/A	N/A	477	0.005
11/8/17	22	ND	0.78 J	ND	23	ND	2.4	ND	8.1	ND	3.2 J	ND	ND	ND	ND	75	10	N/A	ND	ND	ND	ND	ND	N/A	N/A	144	0.001
12/4/17	11	ND	1.9	1.1 J	42	2.5	6.6	ND	25	0.85 J	2.5 J	ND	ND	ND	0.65 J	140 B	29	N/A	ND	ND	ND	0.38 J	1.2 J	N/A	N/A	265	0.003
1/9/18	2.1	1.0 J	1.8	1.9	25	2.4	15	ND	79	ND	3.0 J	ND	ND	ND	0.54 J	300	7.6	N/A	ND	ND	ND	ND	2.4 J	N/A	N/A	442	0.004
2/9/18	9.4	0.83 J	46	1.8 J	27	4.2	18	ND	110	1.4 J	5.2	ND	ND	8.1	0.65 J	220	1.4	N/A	ND	ND	ND	0.40 J	7.2	N/A	N/A	462	0.005
3/8/18	5.0	0.49 J	1.2	1.3 J	33	2.2	10	ND	81	ND	2.5 J	ND	3.3	ND	0.78 J	120	8.5	N/A	ND	ND	ND	ND	ND	N/A	N/A	269	0.003

Notes:

µg/m^3 - micrograms per cubic meter

B - compound was found in the blank and sample

E - results exceeded calibration range

EPA - United States Environmental Protection Agency

J - result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value

lbs./day - pounds per day

N/A - not applicable (samples not analyzed for compound)

ND - non-detect (below detection limit)

OM&M - operation, maintenance, and monitoring

SSD - sub-slab depressurization

TO-15 - Toxic Organic Method 15

VOCs - volatile organic compounds

The chlorodifluoromethane and 1,2,3-trimethylbenzene concentrations reported in the 12/5/2013 sample were reported as tentatively identified compounds and were converted from 238 ppbv and 2.3. ppbv, respectively.

Samples not collected in May 2014 and August 2014 as system was shut down due to firewater line break.

Samples analyzed from 4/2/08 to 11/7/13 and from 7/1/15 to present analyzed by TestAmerica, Inc. of Knoxville, TN.

Samples analyzed from 12/5/13 to 6/2/15 analyzed by Pace Analytical Services, Inc. of Minneapolis, MN.

TABLE 4

Building C Influent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	FLOW (scfm)	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	chloromethane	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-Dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1,-trichloroethane	trichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)	Mass (lbs. removed in period)
3/31/08	55	ND	ND	N/A	ND	ND	25,000	ND	ND	ND	ND	320	ND	ND	ND	ND	ND	ND	550	ND	N/A	990	740	2,100	N/A	1,100	370	31,170	0.1500	0.450
4/2/08	57	ND	ND	N/A	ND	ND	2,700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	84	ND	N/A	63	56	320	N/A	65	ND	3,288	0.0200	0.040
4/4/08	60	ND	ND	N/A	ND	ND	6,600	ND	ND	ND	32	44	ND	ND	ND	ND	ND	ND	440	ND	N/A	180	170	690	N/A	180	68	8,404	0.0500	0.350
4/11/08	65	ND	ND	N/A	ND	ND	4,100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	600	ND	N/A	73	61	370	N/A	48	ND	5,252	0.0300	0.180
4/17/08	60	ND	ND	N/A	ND	ND	2,900	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	670	ND	N/A	69	55	190	N/A	34	ND	3,918	0.0200	0.140
4/24/08	63	ND	ND	N/A	ND	ND	2,600	ND	ND	ND	ND	ND	ND	ND	28	ND	ND	ND	750	ND	N/A	85	70	130	N/A	32	17	3,712	0.0200	0.540
5/21/08	60	ND	ND	N/A	ND	ND	1,600	ND	ND	ND	ND	ND	ND	ND	17	ND	ND	ND	650	ND	N/A	65	51	41	N/A	15	ND	2,439	0.0100	0.310
6/19/08	60	7.4	ND	N/A	ND	ND	300	ND	ND	ND	ND	ND	ND	ND	ND	110	ND	ND	ND	ND	N/A	23	19	8	N/A	9	ND	476	0.0030	0.090
7/18/08	54	ND	ND	N/A	ND	ND	1,300	ND	ND	ND	ND	ND	ND	ND	14	ND	ND	ND	440	ND	N/A	45	36	35	N/A	ND	ND	1,870	0.0090	0.279
8/13/08	60	ND	ND	N/A	16	ND	410	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	58	ND	N/A	ND	ND	13	N/A	ND	ND	497	0.0030	0.093
9/11/08	60	ND	ND	N/A	ND	ND	730	ND	ND	ND	ND	18	ND	ND	ND	ND	ND	13	130	ND	N/A	ND	ND	20	N/A	ND	ND	911	0.0050	0.305
11/12/08	62	ND	ND	N/A	ND	ND	390	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	110	ND	N/A	ND	ND	17	N/A	ND	ND	517	0.0029	0.086
12/18/08	66	ND	ND	N/A	ND	ND	420	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	150	ND	N/A	ND	ND	22	N/A	ND	ND	592	0.0035	0.105
1/22/09	67	ND	ND	N/A	ND	ND	810	ND	ND	ND	ND	ND	ND	ND	170	ND	ND	ND	580	ND	N/A	37	29	38	N/A	17	14	1,695	0.0102	0.306
2/21/09	65	ND	ND	N/A	ND	ND	630	ND	ND	ND	ND	ND	ND	ND	140	ND	ND	ND	270	ND	N/A	39	34	25	N/A	16	12	1,166	0.0068	0.204
3/18/09	66	ND	ND	N/A	ND	ND	460	ND	ND	ND	ND	ND	ND	ND	160	ND	ND	ND	350	ND	N/A	62	51	16	N/A	14	13	1,126	0.0067	0.200
4/17/09	66	ND	ND	N/A	ND	ND	200	ND	ND	ND	ND	ND	ND	ND	46	ND	ND	ND	86	ND	N/A	19	16	6.1	N/A	ND	ND	373	0.0022	0.066
5/20/09	64	ND	ND	N/A	ND	ND	210	ND	ND	ND	ND	ND	ND	ND	24	ND	ND	ND	79	ND	N/A	14	14	5.7	N/A	ND	ND	347	0.0020	0.060
6/23/09	56	ND	ND	N/A	ND	ND	190	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	58	ND	N/A	ND	ND	ND	N/A	ND	ND	248	0.0012	0.037
7/23/09	60	ND	ND	N/A	ND	ND	150	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	55	ND	N/A	ND	ND	ND	N/A	ND	ND	205	0.0011	0.033
8/28/09	NA	ND	ND	N/A	ND	ND	720	ND	ND	ND	ND	ND	17	ND	ND	ND	ND	ND	160	ND	N/A	ND	ND	13	N/A	ND	ND	910	0.0049	0.147
9/28/09	NA	ND	ND	N/A	ND	ND	39	ND	ND	ND	ND	ND	110	ND	ND	ND	ND	ND	16	ND	N/A	ND	ND	ND	N/A	ND	ND	165	0.0009	0.027
10/27/09	60	ND	ND	N/A	ND	ND	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	64	ND	N/A	ND	ND	ND	N/A	ND	ND	264	0.0014	0.043
11/24/09	60	ND	ND	N/A	ND	ND	190	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	75	ND	N/A	ND	ND	ND	N/A	ND	ND	265	0.0000	0.000
12/23/09	65	ND	ND	N/A	ND	ND	96	ND	ND	ND	ND	ND	ND	ND	ND	26	ND	ND	45	ND	N/A	ND	ND	ND	N/A	8.7	ND	176	0.0010	0.031
1/19/10	65	ND	ND	N/A	ND	ND	140	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	57	ND	N/A	ND	ND	ND	N/A	ND	ND	197	0.0012	0.035
2/17/10	68	ND	ND	N/A	ND	ND	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	37	ND	N/A	ND	ND	ND	N/A	ND	ND	137	0.0008	0.025
3/17/10	65	ND	ND	N/A	ND	ND	87	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	33	ND	N/A	ND	ND	ND	N/A	ND	ND	120	0.0007	0.021
4/16/10	65	ND	ND	N/A	ND	ND	110	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	39	ND	N/A	ND	ND	ND	N/A	ND	ND	149	0.0009	0.026
5/13/10	68	58	ND	N/A	ND	ND	65	ND	ND	ND	ND	38	ND	ND	ND	220	ND	ND	22	ND	N/A	25	ND	ND	N/A	140	39	607	0.0037	0.111
6/18/10	66	ND	ND	N/A	ND	ND	72	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	25	ND	N/A	83	17	ND	N/A	30	17	244	0.0014	0.043
7/19/10	60	ND	ND	N/A	ND	ND	68	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	34	ND	N/A	ND	ND	ND	N/A	ND	ND	102	0.0006	0.017
8/19/10	61	ND	ND	N/A	ND	ND	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	31	ND	N/A	ND	ND	ND	N/A	ND	ND	131	0.0007	0.022
9/17/10	63	ND	ND	N/A	ND	ND	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	33	ND	N/A	ND	ND	ND	N/A	ND	ND	103	0.0006	0.018
10/12/10	60	10	ND	N/A	ND	ND	160	ND	ND	ND	ND	11	ND	ND	ND	130	ND	110.0	70	ND	N/A	ND	ND	ND	N/A	23	ND	514	0.0028	0.083
11/2/10	65	ND	ND	N/A	ND	ND	65	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	35	ND	N/A	ND	ND	ND	N/A	ND	ND	100	0.0006	0.018
12/1/10	65	ND	ND	N/A	ND	ND	120	ND	ND	ND	ND	ND	ND	ND	19	ND	ND	ND	89	ND	N/A	ND	ND	ND	N/A	ND	ND	228	0.0013	0.040
1/5/11	68	ND	ND	N/A	ND	ND	160	ND	ND	ND	ND	ND	ND	ND	94	7.7	ND	ND	250	ND	N/A	ND	ND	9	N/A	ND	ND	520	0.0032	0.095
2/7/11	70	ND	ND	N/A	ND	ND	180	ND	ND	ND	ND	ND	ND	ND	120	ND	ND	ND	270	ND	N/A	ND	ND	ND	N/A	ND	ND	570	0.0036	0.108
3/3/11	69	ND	ND	N/A	ND	ND	170	ND	ND	ND	ND	ND	ND	ND	110	34	ND	ND	180	ND	N/A	ND	ND	ND	N/A	ND	ND	494	0.0031	0.092
4/14/11	65	ND	ND	N/A	ND	ND	130	ND	ND	ND	ND	ND	ND	ND	37	10	ND	ND	90	ND	N/A	ND	ND	ND	N/A	ND	ND	267	0.0016	0.047
5/6/11	70	8	ND	N/A	ND	ND	100	ND	ND	ND	ND	16	ND	ND	19	ND	ND	ND	82	ND	N/A	ND	ND	ND	N/A	9	ND	234	0.0015	0.046
6/9/11	55	26	ND	N/A	ND	ND	97	ND	ND	ND	ND	ND	ND	ND	ND	14	ND	ND	63	ND	N/A	ND	ND	ND	N/A	ND	ND	200	0.0010	0.030
7/11/11	51	20	ND	N/A	ND	ND	74	ND	ND	ND	ND	ND	37	ND	ND	62	ND	ND	26	ND	N/A	ND	ND	ND	N/A	21	ND	240	0.0011	0.033
8/3/11	50	14	ND	N/A	ND	ND	76	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	34	ND	N/A	ND	ND	ND	N/A	ND	ND	124	0.0006	0.017
9/15/11	48	10	ND	N/A	ND	ND	22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	32	0.0001	0.004
10/25/11	55	ND	ND	N/A	ND	ND	38	ND	ND	ND	ND	ND	27	ND	ND	20	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	11	ND	96	0.0005	0.015
11/8/11	55	12	ND	N/A	ND	ND	45	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	16	ND	N/A	ND	ND	ND	N/A	ND	ND	73	0.0004	0.011
12/6/11	55	ND	ND	N/A	ND	ND	62	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	21	ND	N/A	ND	ND	ND	N/A	ND	ND	83	0.0004	0.013

TABLE 4

Building C Influent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	FLOW (scfm)	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	chloromethane	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-Dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1,-trichloroethane	trichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)	Mass (lbs. removed in period)
1/3/12	50	ND	ND	N/A	ND	ND	55	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	21	ND	N/A	ND	ND	ND	N/A	ND	ND	76	0.0003	0.011
2/16/12	54	ND	ND	N/A	ND	ND	76	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	43	ND	N/A	ND	ND	ND	N/A	ND	ND	119	0.0006	0.017
3/15/12	55	ND	ND	N/A	ND	ND	93	ND	ND	ND	ND	ND	ND	ND	16	ND	ND	ND	58	ND	N/A	ND	ND	ND	N/A	ND	ND	167	0.0008	0.026
4/16/12	54	ND	ND	N/A	ND	ND	64	ND	ND	ND	ND	ND	ND	ND	16	ND	ND	ND	56	ND	N/A	ND	ND	ND	N/A	ND	ND	136	0.0007	0.020
5/9/12	51	ND	ND	N/A	ND	ND	72	ND	ND	ND	ND	ND	ND	ND	20	9.8	ND	ND	65	ND	N/A	ND	ND	ND	N/A	ND	ND	167	0.0008	0.024
6/4/12	52	ND	ND	N/A	ND	ND	71	ND	ND	ND	ND	ND	ND	ND	17	ND	ND	ND	50	ND	N/A	ND	ND	ND	N/A	ND	ND	138	0.0006	0.003
8/16/12	49	ND	ND	N/A	ND	ND	39	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19	ND	N/A	ND	ND	ND	N/A	ND	ND	58	0.0003	0.008
9/12/12	30	ND	ND	N/A	ND	ND	41	ND	ND	ND	ND	ND	ND	ND	ND	23	ND	ND	22	ND	N/A	ND	ND	ND	N/A	ND	ND	86	0.0002	0.007
10/18/12	65	ND	ND	N/A	ND	ND	95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	45	ND	N/A	ND	ND	ND	N/A	ND	ND	140	0.0008	0.025
11/13/12	61	ND	ND	N/A	ND	ND	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	270	ND	N/A	ND	ND	ND	N/A	31	16	335	0.0018	0.055
12/6/12	62	ND	ND	N/A	ND	ND	70	ND	ND	ND	ND	ND	ND	ND	22	ND	ND	ND	91	ND	N/A	ND	ND	5.3	N/A	ND	ND	188	0.0010	0.033
1/4/13	56	ND	ND	N/A	ND	ND	66	ND	ND	ND	ND	ND	ND	ND	42	ND	ND	ND	110	ND	N/A	ND	ND	ND	N/A	ND	ND	218	0.0011	0.034
2/6/13	60	ND	ND	N/A	ND	ND	49	ND	ND	ND	ND	ND	ND	ND	29	ND	ND	ND	91	ND	N/A	ND	ND	ND	N/A	ND	ND	169	0.0009	0.026
3/7/13	57	ND	ND	N/A	ND	ND	60	ND	ND	ND	ND	ND	ND	ND	45	ND	ND	ND	100	ND	N/A	ND	ND	ND	N/A	ND	ND	205	0.0011	0.033
4/8/13	57	ND	ND	N/A	ND	ND	44	ND	ND	ND	ND	ND	ND	ND	21	ND	ND	ND	52	ND	N/A	ND	ND	ND	N/A	ND	ND	117	0.0006	0.018
5/10/13	112	ND	ND	N/A	ND	ND	120	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2,900	ND	N/A	ND	ND	ND	N/A	80	ND	3,100	0.0312	0.968
6/5/13	161	ND	ND	N/A	ND	ND	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	460	50	N/A	ND	ND	ND	N/A	31	15	566	0.0082	0.246
7/3/13	182	12	ND	N/A	ND	12	ND	ND	ND	ND	ND	9.4	ND	ND	ND	ND	ND	ND	290	16	N/A	11	ND	ND	N/A	43	23	416	0.0068	0.211
8/14/13	180	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	20	ND	ND	ND	ND	ND	210	18	N/A	ND	ND	ND	N/A	20	11	279	0.0045	0.140
9/9/13	182	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	150	ND	N/A	ND	ND	ND	N/A	ND	ND	150	0.0025	0.074
10/10/13	190	14	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	200	16	N/A	ND	ND	ND	N/A	20	10	260	0.0044	0.138
11/7/13	160	13	ND	N/A	ND	ND	18	ND	ND	ND	ND	9.8	ND	ND	ND	ND	ND	ND	280	ND	N/A	ND	ND	ND	N/A	45	24	390	0.0056	0.168
12/5/13	154	6.3	ND	ND	ND	N/A	13	6.6	ND	ND	ND	7.3	4.1	33.9	5.4	4.0	ND	ND	228	N/A	ND	4.8	2.4	ND	N/A	30.4	16.1	362	0.0050	0.155
1/13/14	175	13.7	ND	4.7	ND	N/A	5.7	ND	ND	ND	ND	10.3	3.4	22.6	5.6	49.6	ND	ND	298	N/A	5.5	17.8	ND	ND	N/A	49.1	19.3	505	0.0079	0.246
2/14/14	168	1.8	ND	4.5	ND	N/A	2.3	2.2	ND	ND	ND	2.1	ND	5.3	2.2	2.7	ND	ND	157	N/A	ND	2.8	ND	ND	N/A	8.9	4.7	197	0.0030	0.083
3/12/14	175	9.1	ND	3.0	3.2	N/A	4.9	2.2	ND	ND	ND	5.9	ND	11.5	3.3	6.0	ND	ND	261.0	N/A	1.6	6.0	3.0	ND	N/A	25.3	12.3	358	0.0056	0.175
4/10/14	168	10	ND	7.1	ND	N/A	7.0	ND	ND	ND	ND	67	ND	12.1	5.1	50.7	ND	6.6	266	N/A	ND	6.9	ND	ND	N/A	218	67.4	724	0.0109	0.317
5/5/14	182	11.8	1.2	5.8	1.5 J	N/A	7.6	2.9	ND	ND	ND	4.7	1.2 J	12.7	3.6	30.6	ND	ND	236	N/A	2.1	6.8	3.5	ND	N/A	20.9	11.3	364	0.0060	0.149
6/5/14	180	12.8	ND	ND	2.7	N/A	2.7	2.1	ND	ND	ND	4.1	24.5	13.1	23.1	11.6	ND	ND	154	N/A	6.1	18	6.1	ND	N/A	27	12.1	320	0.0052	0.160
7/3/14	182	14.4	0.77 J	11.2	5.6	N/A	4.1	1.4 J	ND	ND	0.88 J	6.3	147	16.9	7.1	5.7	0.81 J	ND	183	N/A	2.8	7.3	4.7	ND	N/A	19.4	9.8	449	0.0073	0.206
8/13/14	166	10.8	1.7	N/A	66.2	1.5	4.7	ND	7.6	ND	4.8	7.5	ND	20.6	7.0	5.0	ND	33.6	289	N/A	N/A	7.8	3.9	ND	N/A	30.2	16.0	518	0.0077	0.317
9/12/14	175	8.0	1.1	5.6	ND	N/A	5.3	2.9	7.0	ND	ND	2.9	0.76 J	31.2	2.1	3.4	ND	37.9	124	N/A	2.1	5.4	2.1	ND	N/A	17.2	10.8	270	0.0042	0.127
10/9/14	174	6.6	1.2	10.1	0.98	N/A	6.6	2.0	6.1	2.7	3.0	3.2	2.1 J	13.3	2.7	5.1	0.71 J	38.6	137	N/A	2.6	4.7	2.0	ND	N/A	15.8	9.5	277	0.0043	0.117
11/5/14	175	5.2	ND	7.5	ND	N/A	5.7	2.3	3.5	ND	ND	3.2 J	6.0	10.5	5.4	4.3	ND	22.6	111	N/A	3.5 J	5.4	3.2 J	ND	N/A	11.0 J	6.4	217	0.0034	0.092
12/4/14	168	5.3	ND	8.1	1.3	N/A	7.0	2.8	1.9	ND	ND	3.2 J	3.3 J	8.7	7.8	5.0	1.6 J	9.1	106	N/A	3.6 J	4.7	3.7 J	ND	N/A	8.6	5.8	198	0.0030	0.086
1/15/15	175	6.2	ND	8.3	1.7	N/A	5.9	3.1	ND	ND	ND	1.2 J	2.5 J	3.1 J	2.8	3.1	ND	3.0	87.5	N/A	1.2 J	5.5	2.0	ND	N/A	4.8	2.9	145	0.0023	0.096
2/9/15	170	5.6	ND	3.8	0.94	N/A	4.6	ND	ND	ND	ND	1.3 J	0.61 J	2.3 J	1.7	3.7	ND	ND	75.3	N/A	ND	3.8	1.7	ND	N/A	5.3	3.2	114	0.0017	0.043
3/10/15	182	5.0	2.8	4.0	0.82	N/A	3.7	1.5 J	ND	ND	ND	1.3 J	0.62 J	3.0 J	2.1	2.5	ND	0.94 J	80.5	N/A	0.97 J	4.0	1.7	ND	N/A	4.4	2.9	123	0.0020	0.058
4/6/15	175	6.5	1.1	4.6	1.2	N/A	3.6	1.8	2.0	ND	1.1 J	2.0	ND	6.1	2.3	2.3	ND	14.6	107	N/A	1.5 J	5.8	2.4	ND	N/A	8.0	4.3	178	0.0028	0.076
5/8/15	175	6.1	ND	10.4	ND	N/A	2.6	2.3 J	1.7 J	ND	ND	5.3 J	4.0 J	7.8 J	2.1 J	5.2	ND	14	128	N/A	5.1 J	10	5.3 J	ND	N/A	13.3 J	6.5 J	230	0.0036	0.116
6/2/15	170	7.4	1.2	8.3	1.0	N/A	4.0	ND	4.9	ND	ND	2.5	6.3	14.4	3.2	4.3	ND	32.1	132	N/A	3.7	11.1	4.9	ND	N/A	11.4	7.1	260	0.0040	0.099
7/1/15	175	3.2	ND	6.6	4.9	N/A	ND	ND	3.2	ND	ND	ND	ND	ND	ND	2.5	ND	22	20	N/A	ND	ND	ND	ND	ND	N/A	N/A	62	0.0010	0.028
8/10/15	175	5.1	2.1 J	15	0.74 J	N/A	2.7	2.4	5.9	ND	2.0	1.3 J	ND	ND	1.1 J	15.0	ND	45	41	N/A	ND	2.0	0.84 J	ND	7.5	N/A	N/A	150	0.0024	0.094
9/11/15	175	8.0	1.3 J	12	1.1 J	N/A	2.4	2.3	7.7	ND	2.8	2.0	8.7	ND	1.2 J	6.2	ND	58	73	N/A	1.1 J	3.5	1.3 J	ND	11	N/A	N/A	204	0.0032	0.102
10/7/15	175	5.5	ND	3.3	ND	N/A	0.68 J	2.1	2.0	ND	1.0 J	0.60 J	3.4 J	ND	ND	8.7	ND	18	14	N/A	ND	1.2 J	ND	ND	2.6 J	N/A	N/A	63	0.0010	0.026
11/2/15	182	5.1	0.73 J	8.6	0.93 J	N/A	2.3	3.2	3.7	ND	1.4 J	1.2 J	3.4 J	ND	3.5	3.0	ND	32	50	N/A	ND	2.1	0.94 J	ND	5.6	N/A	N/A	128	0.0021	0.054
12/3/15	182	4.5	0.59 J	14	0.51 J	N/A	2.1	2.4	1.5 J	ND	0.54 J	0.61 J	2.4 J	ND	0.94 J	3.9	ND	14	43	N/A	ND	1.9 J	ND	ND	3.2 J	N/A	N/A	96	0.0016	0.049

TABLE 4

Building C Influent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	FLOW (scfm)	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	chloromethane	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-Dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1,-trichloroethane	trichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)	Mass (lbs. removed in period)
1/15/16	188	**4.4**	ND	**4.8**	**0.43 J**	N/A	**0.81 J**	**2.0**	**0.27 J**	ND	ND	ND	**2.4 J**	ND	**0.95 J**	**5.0**	ND	**2.4**	**30**	N/A	ND	**1.3 J**	ND	ND	**2.1 J**	N/A	N/A	**57**	0.0010	0.041
3/9/16	182	**6.4**	**0.64 J**	**12**	**0.88 J**	N/A	**1.9**	**2.3**	**0.69 J**	ND	**0.31 J**	**0.80 J**	**3.3 J**	ND	**0.91 J**	**10**	ND	**11**	**41**	N/A	ND	**2.6**	**0.86 J**	ND	**3.8**	N/A	N/A	**99**	0.0016	0.088
5/12/16	182	**2.9**	**0.50 J**	**6.6**	**1.0 J**	N/A	**1.6**	**2.9**	**0.44 J**	ND	**0.48 J**	**1.1 J**	**2.8 J**	ND	**0.72 J**	**73**	ND	**5.4 B**	**31**	N/A	ND	**1.6 J**	ND	ND	**5.2**	N/A	N/A	**137**	0.0022	0.144
7/14/16	180	**8.0**	**1.2 J**	**13**	**2.4**	N/A	**2.5**	**2.7**	**11**	ND	**5.5**	**1.3 J**	**4.2**	ND	**1.1 J**	**6.2**	ND	**76 B**	**46**	N/A	**1.2 J**	**4.4**	**1.5 J**	ND	**6.5**	N/A	N/A	**195**	0.0031	0.198
9/7/16	182	**8.6**	**0.52 J**	**4.0**	**2.5**	N/A	**2.5**	**2.4**	**4.2**	ND	**1.9**	**1.4 J**	**5.3**	ND	**1.0 J**	**3.2**	ND	**29**	**45**	N/A	**0.93 J**	**3.5**	**1.5 J**	ND	**6.2**	N/A	N/A	**124**	0.0020	0.111
11/3/16	185	**9.8**	**0.80 J**	**22.0**	**2.7**	N/A	**2.8**	**3.0**	**1.7**	ND	**0.76 J**	**1.9**	**13.0**	ND	**1.6 J**	**14**	ND	**13**	**47**	N/A	**1.2 J**	**4.3 J**	**1.4 J**	ND	**9.1**	N/A	N/A	**150**	0.0025	0.142
1/12/17	185	**2.0**	ND	**6.3**	**0.78 J**	N/A	**1.9**	**1.9 J**	ND	ND	ND	**0.90 J**	**6.2**	ND	**0.92 J**	**20**	ND	**1.4 J**	**33**	N/A	ND	**2.0**	**0.91 J**	ND	**4.5**	N/A	N/A	**83**	0.0014	0.096
3/8/17	185	**3.1**	**0.58 J**	**4.8**	**0.59 J**	N/A	**3.5**	**2.7**	**0.31 J**	ND	ND	**2.2**	**3.3 J**	ND	**3.1**	**6.2**	ND	**1.3 J**	**40**	N/A	ND	**1.8 J**	ND	ND	**12**	N/A	N/A	**85**	0.0014	0.078
5/5/17	185	**4.9**	**0.59 J**	**1.6**	**1.1 J**	N/A	**5.3**	**2.1**	**0.36 J**	ND	ND	**0.90 J**	**2.6 J**	ND	**2.3 J**	**4.1**	**0.41 J**	**1.4 J**	**38**	N/A	ND	**2.7**	**1.0 J**	ND	**5.3**	N/A	N/A	**75**	0.0012	0.072
7/6/17	180	**6.1**	**0.76 J**	**15**	**2.9**	N/A	**5.4**	**1.9 J**	**0.42 J**	ND	ND	**1.9**	**5.4**	**2.0**	**1.4 J**	**7.1**	ND	**1.1 JB**	**31**	N/A	ND	**2.5**	**0.91 J**	ND	**7.0**	N/A	N/A	**93**	0.0015	0.093
9/7/17	175	**6.5**	**0.90 J**	**2.7**	**1.5 J**	N/A	**2.3**	**1.8 J**	ND	ND	ND	**0.91 J**	**5.9**	ND	**0.7 J**	**5.6**	ND	**1.1 J**	**38**	N/A	ND	**3.5**	**1.5 J**	ND	**3.7**	N/A	N/A	**77**	0.0012	0.076
11/8/17	185	**4.8**	**0.55 J**	**4.1**	**1.0 J**	N/A	**3.2**	**2.2**	ND	ND	ND	ND	**5.0**	ND	**1.4 J**	**2.8**	ND	**0.66 J**	**43**	N/A	ND	**2.2**	**0.9 J**	ND	**2.5 J**	N/A	N/A	**74**	0.0012	0.076
1/9/18	180	**6.4**	**0.60 J**	**11**	ND	N/A	**2.7**	**2.2**	ND	ND	ND	**0.74 J**	ND	ND	**2.5 J**	**4.2**	ND	**1.7 J**	**33**	N/A	ND	**2.6**	**1.0 J**	**0.54**	**4.8 J**	N/A	N/A	**74**	0.0012	0.074
3/8/18	180	**1.1 J**	**0.57 J**	**4.5**	**0.63 J**	N/A	**4.9**	**2.0**	ND	ND	ND	**0.70 J**	**2.5 J**	ND	**5.0 J**	**2.8**	ND	**0.44 J**	**47**	N/A	ND	**2.6**	**1.0 J**	**0.54**	**3.3 J**	N/A	N/A	**80**	0.0013	0.075

Notes:

µg/m^3 - micrograms per cubic meter

B - compound was found in the blank and sample

EPA - United States Environmental Protection Agency

lbs. - pounds

lbs./day - pounds per day

J - result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value

N/A - not applicable (samples not analyzed for compound)

ND - non-detect (below detection limit)

OM&M - operation, maintenance, and monitoring

scfm - standard cubic feet per minute

SSD - sub-slab depressurization

TO-15 - Toxic Organic Method 15

VOCs - volatile organic compounds

Sampling not conducted in July 2012 due to system shutdown test.

Completed first-phase system expansion on October 31, 2012.

Completed second-phase system expansion on May 10, 2013.

Samples analyzed from 4/2/08 to 11/7/13 and from 7/1/15 to present analyzed by TestAmerica, Inc. of Knoxville, TN.

Samples analyzed from 12/5/13 to 6/2/15 analyzed by Pace Analytical Services, Inc. of Minneapolis, MN.

TABLE 5

Building C Mid-GAC Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,2,4-Trichlorobenzene	1,1,1-trichloroethane	trichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
4/2/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**720**	N/A	ND	ND	**720**	**0.004**
4/24/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**230**	N/A	ND	ND	**230**	**0.001**
5/21/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**50**	N/A	ND	ND	**50**	**0.000**
6/19/08	**28**	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**51**	N/A	ND	ND	**79**	**0.000**
7/18/08	ND	ND	N/A	ND	**150**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**40**	N/A	ND	ND	**190**	**0.001**
8/13/08	ND	ND	N/A	ND	**750**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**15**	N/A	ND	ND	**765**	**0.004**
9/11/08	ND	ND	N/A	ND	**13**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**	N/A	ND	ND	**23**	**0.000**
11/12/08	ND	ND	N/A	ND	**160**	ND	ND	ND	ND	ND	**50**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**17**	N/A	ND	ND	**227**	**0.001**
12/18/08	ND	ND	N/A	ND	**180**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**	N/A	ND	ND	**205**	**0.001**
1/22/09	ND	ND	N/A	ND	**13**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**35**	N/A	ND	ND	**48**	**0.000**
2/20/09	ND	ND	N/A	ND	**14**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**15**	N/A	ND	ND	**29**	**0.000**
3/18/09	ND	ND	N/A	ND	**100**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**19**	N/A	ND	ND	**119**	**0.001**
4/17/09	ND	ND	N/A	ND	**340**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**7.1**	N/A	ND	ND	**347**	**0.002**
5/20/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	**0.0**	0.000
6/23/09	ND	ND	N/A	ND	**70**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.2**	N/A	ND	ND	**75**	**0.000**
7/23/09	ND	ND	N/A	ND	**360**	ND	ND	ND	ND	ND	**21**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	**381**	**0.002**
8/28/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	**20**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	**20**	**0.000**
9/28/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	**0.0**	0.000
10/27/09	ND	ND	N/A	ND	**13**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	**13**	**0.000**
11/24/09	ND	ND	N/A	ND	**23**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	**23**	**0.000**
12/23/09	ND	ND	N/A	ND	**23**	ND	ND	ND	ND	ND	ND	ND	ND	**13**	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	**36**	**0.000**
1/19/10	ND	ND	N/A	ND	**21**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	**21**	**0.000**
2/17/10	ND	ND	N/A	ND	**23**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	**23**	**0.000**
3/17/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	**0.0**	**0.000**
4/16/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	**0.0**	**0.000**
5/13/10	**15**	ND	N/A	ND	**9.6**	ND	ND	ND	ND	**9.8**	ND	ND	ND	**51**	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	**36**	**10**	**131**	**0.001**
6/18/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**79**	**16**	N/A	**26**	**15**	**136**	**0.001**
7/19/10	**11**	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	**11**	**0.000**
8/19/10	ND	ND	N/A	ND	**15**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	**15**	**0.000**
9/17/10	**35**	ND	N/A	ND	**26**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	**61**	**0.000**
10/12/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**12**	ND	ND	**24**	ND	ND	ND	ND	ND	ND	N/A	ND	ND	**36**	**0.000**
11/2/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**12**	ND	ND	N/A	ND	ND	**12**	**0.000**
12/1/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	**0.0**	**0.000**
1/5/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**9**	N/A	ND	ND	**9.0**	**0.000**
2/7/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	**0.0**	**0.000**
3/3/11	ND	ND	N/A	ND	**20**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	**20**	**0.000**
4/14/11	ND	ND	N/A	ND	**180**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	**180**	**0.000**
5/6/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	**11**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	**11**	**0.000**
6/9/11	**32**	ND	N/A	ND	**17**	ND	ND	ND	ND	ND	ND	ND	ND	**13**	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	**62**	**0.000**
7/11/11	**29**	ND	N/A	ND	**160**	ND	ND	ND	ND	ND	**28**	ND	ND	**74**	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	**24**	**8.9**	**324**	**0.000**
8/3/11	**25**	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	**25**	**0.000**
9/15/11	**22**	ND	N/A	ND	**12**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	**34**	**0.000**
10/25/11	**16**	ND	N/A	ND	**19**	ND	ND	ND	ND	ND	**24**	ND	ND	**20**	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	**13**	ND	**92**	**0.000**
11/8/11	**16**	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	**16**	**0.000**
12/6/11	**8.4**	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	**8.4**	**0.000**
1/3/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	**0.00**	**0.000**
2/16/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	**0.00**	**0.000**

TABLE 5

Building C Mid-GAC Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,2,4-Trichlorobenzene	1,1,1-trichloroethane	trichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
3/15/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.00	0.000
4/16/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.00	0.000
5/9/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.00	0.000
6/4/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	8.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	8.7	0.000
8/15/12	ND	ND	N/A	ND	28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	28	0.000
9/12/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	19	0.000
10/18/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.0	0.000
11/13/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.0	0.000
12/6/12	ND	ND	N/A	ND	9.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	57	ND	ND	ND	ND	ND	N/A	ND	ND	66	0.001
1/4/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	21	ND	ND	ND	ND	ND	N/A	ND	ND	21	0.000
2/6/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	24	ND	ND	ND	ND	ND	N/A	ND	ND	24	0.000
3/7/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19	ND	ND	ND	ND	ND	N/A	ND	ND	19	0.000
4/8/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19	ND	ND	ND	ND	ND	N/A	ND	ND	19	0.000
5/10/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	87	ND	ND	ND	ND	ND	N/A	ND	ND	87	0.001
6/5/13	ND	ND	N/A	ND	28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19	ND	ND	ND	ND	N/A	ND	ND	47	0.000
7/3/13	ND	ND	N/A	ND	34	ND	ND	ND	ND	ND	21	ND	ND	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	N/A	ND	ND	69	0.001
8/14/13	9.9	ND	N/A	ND	17	ND	ND	ND	ND	ND	17	ND	ND	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	N/A	ND	ND	56	0.001
9/9/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.0	0.000
10/10/13	11	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	11	0.000
11/7/13	11	ND	N/A	ND	9.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11	ND	ND	ND	N/A	ND	ND	31	0.000
12/5/13	10.9	ND	N/A	ND	7.4	8.6	ND	ND	ND	ND	6.4	ND	ND	2.5	ND	ND	ND	10.7	N/A	ND	ND	ND	ND	N/A	ND	ND	47	0.000
1/13/14	8.3	ND	4.2	ND	11.0	2.2	ND	ND	ND	1.7	2.4	4.8	ND	21.3	ND	ND	3.0	124	N/A	ND	2.7	ND	ND	N/A	5.8	2.4	194	0.002
2/14/14	5.8	ND	6.1	ND	5.7	2.0	ND	ND	ND	ND	ND	2.5	ND	ND	ND	ND	ND	256	N/A	ND	ND	ND	ND	N/A	ND	ND	278	0.003
3/12/14	13.5	ND	3.7	ND	10.5	2.4	ND	ND	ND	3.7	ND	ND	18.2	12.5	ND	ND	ND	5.6	N/A	5.9	15.3	4.4	ND	N/A	17.1	7.6	120	0.001
4/10/14	7.8	ND	8.2	ND	14.6	ND	ND	ND	ND	84.3	ND	ND	ND	64.8	ND	ND	9.6	18.6	N/A	ND	ND	ND	ND	N/A	263	73.6	545	0.005
5/5/14	9.6	ND	6.1	1.3 J	11.7	2.9	ND	ND	ND	ND	1.4 J	3.4 J	ND	1.6	0.90 J	ND	ND	0.86 J	N/A	ND	0.88 J	ND	ND	N/A	0.85 J	ND	41	0.000
6/5/14	8.5	ND	2.6	ND	5.9	2.6	ND	ND	ND	ND	20.6	2.3 J	9.6	1.3 J	ND	ND	ND	ND	N/A	2.0	2.6	ND	ND	N/A	1.9 J	2.2	62	0.001
7/3/14	10.2	0.64 J	12.3	5.1	5.8	1.8	ND	ND	ND	1.4 J	9.7	4.1 J	ND	1.4	0.79 J	ND	ND	3.4	N/A	ND	1.6 J	1.5 J	ND	N/A	1.9 J	1.6	63	0.001
8/13/14	11.4	1.8	N/A	60.1	5.8	1.6 J	5.1	0.69 J	ND	6.0	1.3 J	5.0 J	2.6	10.8	ND	5.4	4.4	20.1	N/A	N/A	14.4	6.3	ND	N/A	18.7	6.4	188	0.002
9/12/14	7.4	2.1	5.9	31.4	5.4	2.4	9.4	ND	ND	0.41 J	1.1 J	ND	0.62 J	1.3	ND	ND	25.3	50.2	N/A	ND	ND	ND	ND	N/A	0.96 J	ND	144	0.001
10/9/14	10.8	ND	11.9	0.90	ND	2.2	1.2 J	ND	ND	ND	1.4 J	4.0 J	ND	1.5	ND	ND	ND	2.2	N/A	ND	ND	ND	ND	N/A	0.87 J	ND	37	0.000
11/5/14	4.9	1.1	8.5	7.3	6.0	2.3	4.7	ND	ND	ND	5.9	5.4	4.2	1.3	ND	ND	15.7	2.8	N/A	ND	ND	ND	ND	N/A	ND	ND	70	0.001
12/4/14	4.9	1.2	7.4	4.9	6.2	3.0	2.9	ND	ND	ND	4.4J	4.0 J	6.0	2.9 J	ND	ND	19.3	ND	N/A	ND	3.1 J	ND	ND	N/A	ND	ND	66	0.001
1/15/15	8.1	ND	8.4	1.8	5.9	3.8	ND	ND	ND	0.74 J	1.7 J	1.0 J	1.7	2.2	ND	ND	9.4	2.9	N/A	ND	0.95 J	ND	ND	N/A	2.4 J	0.80 J	52	0.001
2/9/15	5.9	ND	3.8	1.1	5.7	ND	ND	ND	ND	ND	ND	ND	ND	1.0 J	ND	ND	5.5	6.5	N/A	ND	0.87 J	ND	ND	N/A	1.1 J	ND	31	0.000
3/10/15	1.9	2.7	4.2	ND	3.9	1.9	ND	ND	ND	ND	ND	1.1 J	ND	0.84 J	ND	ND	3.1	4.6	N/A	ND	0.80 J	ND	ND	N/A	0.71 J	ND	26	0.000
4/6/15	2.0	1.1	4.6	1.5	6.0	2.3	1.8	0.71	0.95 J	0.70 J	4.7 J	2.1 J	ND	3.8	ND	ND	9.8	10.6	N/A	ND	1.4 J	0.60 J	ND	N/A	2.6 J	1.2 J	58	0.001
5/8/15	4.2	ND	11.3	ND	3.8	1.7 J	1.5 J	ND	ND	ND	2.1 J	1.8 J	ND	0.79 J	ND	ND	9.2	12.5	N/A	ND	1.4 J	ND	ND	N/A	ND	ND	50	0.000
6/2/15	5.8	ND	6.8	0.82	2.8	2.8	1.6	ND	ND	0.76 J	4.2 J	5.6	ND	1.9	ND	ND	6.0	10.6	N/A	1.1 J	2.5	1.1 J	ND	N/A	2.1 J	1.1 J	58	0.001
7/1/15	ND	ND	7.9	7.9	2.1	ND	9.2	ND	3.5	ND	5.5	ND	ND	ND	ND	ND	13.0	7.4	N/A	ND	ND	ND	ND	ND	N/A	N/A	57	0.001
8/10/15	5.2	ND	17	2.4	1.7	2.8	3.9	ND	1.6	ND	8.2	ND	ND	9.1	ND	ND	5.2	2.9	N/A	ND	ND	ND	ND	1.2 J	N/A	N/A	61	0.001
9/11/15	10	0.74 J	11	3.6	3.9	2.5	8.6	ND	3.2	0.62 J	11	ND	ND	2.8	ND	ND	16	5.9	N/A	ND	1.5 J	ND	ND	3.0 J	N/A	N/A	84	0.001
10/7/15	9.5	1.2 J	5.0	1.9 J	2.3	2.2	7.1	ND	2.7	ND	5.1	ND	ND	3.5	ND	ND	33	0.79 J	N/A	ND	ND	1.8 J	ND	ND	N/A	N/A	76	0.001
11/2/15	5.2	2.2 J	8.5	1.9	3.1	3.1	7.5	ND	2.6	0.83 J	3.8	ND	ND	ND	ND	ND	69	ND	N/A	ND	ND	ND	ND	2.7 J	N/A	N/A	110	0.001
12/3/15	5.8	0.50 J	18	0.71 J	1.6	2.6	2.0	ND	0.76 J	ND	3.0 J	ND	ND	ND	ND	ND	18	ND	N/A	ND	ND	ND	ND	ND	N/A	N/A	53	0.001
1/15/16	2.0	ND	5.4	ND	1.0 J	2.1	0.60 J	ND	0.32 J	ND	2.4 J	ND	ND	ND	ND	ND	7.7	1.0 J	N/A	ND	ND	0.83 J	ND	ND	N/A	N/A	23	0.000
3/9/16	4.8	ND	11	0.38 J	1.2 J	2.4	0.46 J	ND	ND	ND	3.5 J	ND	ND	3.8	ND	ND	7.0	ND	N/A	ND	ND	ND	ND	ND	N/A	N/A	35	0.000

TABLE 5

Building C Mid-GAC Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,2,4-Trichlorobenzene	1,1,1-trichloroethane	trichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
5/12/16	3.6	ND	6.8	0.44 J	1.2 J	3.5	0.46 J	ND	0.51 J	ND	ND	ND	0.54 J	3.9	ND	ND	6.0 B	ND	N/A	ND	0.81 J	ND	ND	ND	N/A	N/A	28	0.000
7/14/16	9.3	0.55 J	9.9	1.4 J	3.4	2.7	3.3	ND	2.7	ND	6.3	ND	1.4 J	ND	ND	ND	11 B	ND	N/A	ND	1.6 J	ND	ND	0.52 J	N/A	N/A	54	0.001
9/7/16	12	0.65 J	3.5	1.5 J	2.7	2.0	7.0	ND	2.7	ND	4.7	ND	1.1 J	ND	ND	ND	16	3.2	N/A	ND	1.1 J	ND	ND	ND	N/A	N/A	58	0.001
11/3/16	11	0.58 J	20.0	1.9	3.1	3.3	6.2	ND	1.9	0.8 J	13.0	ND	ND	9.1	ND	ND	17	0.7 J	N/A	ND	1.1 J	ND	ND	4.0	N/A	N/A	94	0.001
1/12/17	5.8	ND	5.8	0.56 J	1.2 J	2.0	0.8 J	ND	ND	ND	5.5	ND	ND	11	ND	ND	4.4	ND	N/A	ND	ND	ND	ND	2.7 J	N/A	N/A	40	0.000
3/8/17	5.3	ND	4.4	0.66 J	1.7	2.6	0.69 J	ND	ND	0.66 J	2.4 J	ND	70	4.4	ND	ND	5.3	0.55 J	N/A	ND	ND	ND	ND	3.8	N/A	N/A	102	0.001
5/5/17	6.3	ND	1.7	0.68 J	2.3	1.7 J	0.46 J	ND	ND	0.71 J	3.2 J	ND	ND	ND	ND	ND	4.6	ND	N/A	ND	0.69 J	ND	ND	3.9	N/A	N/A	26	0.000
7/6/17	8.4	ND	18	1.0 J	5.7	2.3	0.49 J	ND	ND	1.60 J	5.9	ND	2.2 J	6.2	0.47 B	ND	5.6	0.68	N/A	ND	0.79 J	ND	ND	4.3	N/A	N/A	64	0.001
9/7/17	11	ND	3.1	1.5 J	6.9	2.0	0.38 J	ND	0.31 J	0.64 J	9.2	ND	ND	5.0	0.43 J	ND	5.8	4.2	N/A	ND	1.0 J	ND	ND	ND	N/A	N/A	51	0.001
11/8/17	17	ND	3.5	0.84 J	1.7	2.0	ND	ND	ND	ND	3.3 J	ND	ND	ND	ND	ND	3.4	3.9	N/A	ND	2.0 J	ND	ND	ND	N/A	N/A	38	0.000
1/9/18	4.2	ND	9.6	ND	ND	2.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.71 J	3.9	N/A	ND	ND	ND	ND	3.0 J	N/A	N/A	24	0.000
3/8/18	8.9	ND	4.7	ND	ND	2.2	ND	ND	ND	ND	3.0 J	ND	ND	2.7	ND	ND	1.5 J	1.9	N/A	ND	1.1 J	ND	ND	2.0 J	N/A	N/A	28	0.000

Notes:

µg/m^3 - micrograms per cubic meter

B - compound was found in the blank and sample

EPA - United States Environmental Protection Agency

GAC - granular activated carbon

J - result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value

lbs./day - pounds per day

N/A - not applicable (samples not analyzed for compound)

ND - non-detect (below detection limit)

OM&M - operation, maintenance, and monitoring

SSD - sub-slab depressurization

TO-15 - Toxic Organic Method 15

VOCs - volatile organic compounds

Sampling not conducted in July 2012 due to shutdown test.

November 2012 sample collected while four new extraction wells installed in October 2012 were operating (November 5-26, 2012). Wells temporarily closed until May 16, 2013.

Samples analyzed from 4/2/08 to 11/7/13 and from 7/1/15 to present analyzed by TestAmerica, Inc. of Knoxville, TN.

Samples analyzed from 12/5/13 to 6/2/15 analyzed by Pace Analytical Services, Inc. of Minneapolis, MN.

TABLE 6

Building C Effluent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	methyl-tert-butyl ether	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,2,4-trichlorobenzene	1,1,1,-trichloroethane	1,1,2,-trichloroethane	trichloroethene	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
3/31/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0	0.000
4/2/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	170	N/A	ND	ND	170	0.002
4/4/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	360	N/A	ND	ND	360	0.004
4/11/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	25	N/A	ND	ND	550	N/A	ND	ND	575	0.006
4/17/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	100	N/A	ND	ND	100	0.001
4/24/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	260	N/A	ND	ND	260	0.003
5/23/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	52	N/A	ND	ND	52	0.001
6/19/08	51	ND	N/A	ND	ND	ND	ND	ND	ND	ND	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	54	N/A	ND	ND	155	0.002
7/18/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	29	N/A	ND	ND	29	0.000
8/13/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	10	ND	16	N/A	ND	ND	26	0.000
9/11/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	63	ND	ND	ND	28	ND	ND	ND	ND	ND	N/A	ND	ND	6.1	N/A	ND	ND	97	0.001
11/12/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	47	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	16	N/A	ND	ND	63	0.001
12/18/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	31	N/A	ND	ND	31	0.000
2/4/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	29	N/A	ND	ND	29	0.000
2/20/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	6.8	N/A	ND	ND	6.8	0.000
3/18/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	26	N/A	ND	ND	26	0.000
4/17/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	8.9	N/A	ND	ND	8.9	0.000
5/20/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
6/23/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	5.5	N/A	9.4	ND	15	0.000
7/23/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	29	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	29	0.000
8/28/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
9/28/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
10/27/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
11/24/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
12/23/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	10	0.000
1/19/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
2/17/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
3/17/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
4/16/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
5/13/10	36	ND	N/A	ND	ND	ND	ND	ND	ND	24	31	ND	ND	ND	140	ND	ND	ND	ND	ND	N/A	17	ND	ND	N/A	89	25	362	0.004
6/18/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	68	16	ND	N/A	28	16	128	0.001
7/19/10	10	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	10	0.000
8/19/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
9/17/10	13	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	13	0.000
10/12/10	ND	ND	N/A	ND	21	ND	ND	ND	ND	ND	ND	ND	ND	ND	42	ND	ND	110	ND	25	N/A	ND	ND	ND	N/A	ND	ND	198	0.002
11/2/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
12/1/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	24	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	24	0.000
1/5/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	12	N/A	ND	ND	12	0.000
2/7/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	5	N/A	ND	ND	5.3	0.000
3/3/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
4/14/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	13	0.000
5/6/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	15	N/A	ND	ND	ND	N/A	ND	ND	26	0.000
6/9/11	8.4	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.9	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	17	0.000
7/11/11	9.5	ND	N/A	ND	ND	ND	ND	ND	ND	ND	75	ND	ND	ND	61	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	21	ND	167	0.002
8/3/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	21	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	21	0.000
9/15/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
10/25/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	23	ND	ND	ND	21	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	11	ND	55	0.001

TABLE 6

Building C Effluent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	methyl-tert-butyl ether	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,2,4-trichlorobenzene	1,1,1,-trichloroethane	1,1,2,-trichloroethane	trichloroethene	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
11/8/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
12/6/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
1/3/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
2/16/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
3/15/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
4/16/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
5/9/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
6/4/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	8.4	ND	23	0.000
8/15/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
9/12/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	22	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	22	0.000
10/18/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
11/13/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
12/6/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
1/4/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
2/6/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	5.3	N/A	ND	ND	5.3	0.000
3/7/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
4/8/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
5/10/13	9.9	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	34	N/A	ND	ND	ND	N/A	ND	ND	44	0.000
6/5/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
7/3/13	6.4	ND	N/A	ND	ND	ND	ND	ND	ND	ND	29	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	35	0.000
8/14/13	5.8	ND	N/A	ND	ND	ND	ND	ND	ND	ND	17	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	23	0.000
9/9/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
10/10/13	11	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	11	0.000
11/7/13	10	ND	N/A	ND	ND	ND	ND	ND	ND	ND	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	30	0.000
12/5/13	9.3	ND	ND	ND	2.1	9.2	ND	ND	ND	ND	13.9	ND	ND	ND	3.5	ND	ND	ND	ND	3.7	ND	4.9	2.3	ND	N/A	ND	ND	49	0.000
1/13/14	4.8	ND	4.3	1.6	8.2	ND	ND	ND	ND	ND	2.3	ND	4.8	ND	26.3	ND	ND	ND	ND	3.8	1.7	7.3	ND	ND	N/A	3.6	ND	69	0.001
2/14/14	6.6	3.3	10.6	3.8	7.0	4.5	2.5	2.4	2.4	2.9	1.3	2.1	3.0	4.5	4.0	2.3	3.3	3.6	3.1	5.7	8.7	6.1	4.3	ND	N/A	3.4	2.8	104	0.001
3/12/14	6.9	ND	2.5	ND	ND	2.2	ND	ND	ND	ND	13.7	ND	ND	ND	3.2	ND	ND	ND	ND	1.9	0.94	5.1	2.3	ND	N/A	ND	ND	39	0.000
4/10/14	6.2	ND	ND	ND	ND	ND	ND	ND	ND	110	ND	ND	ND	ND	95.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	330	91.7	633	0.006
5/5/14	6.0	ND	6.8	ND	2.3	3.2	ND	ND	ND	ND	1.4 J	ND	4.0 J	ND	3.4	ND	ND	ND	ND	ND	1.4 J	7.2	3.5	ND	N/A	1.2 J	ND	40	0.000
6/5/14	5.7	ND	2.9	ND	2.5	2.9	ND	ND	ND	ND	20	ND	2.3 J	21.1	2.3	ND	ND	ND	ND	ND	3.1	7.5	3.5	ND	N/A	1.5 J	1.8	77	0.001
7/3/14	10.6	ND	10.6	1.6	4.2	1.1 J	ND	ND	ND	4.3	5.8 J	ND	2.4 J	20.5	4.2	ND	ND	ND	ND	1.6	1.9	9.7	5.4	ND	N/A	7.4	1.8	93	0.001
8/13/14	6.1	ND	N/A	31.1	4.5	ND	2.1 J	ND	ND	ND	ND	ND	1.8 J	ND	3.0	ND	ND	ND	ND	ND	N/A	8.3	4.4	ND	N/A	3.4 J	2.0 J	67	0.001
9/12/14	4.0	0.89 J	5.9	59.4	3.8	3.6	7.3	ND	3.9	ND	0.80 J	ND	1.6 J	0.62 J	2.2	ND	ND	3.9	ND	6.7	1.4 J	8.0	ND	ND	N/A	0.95 J	ND	115	0.001
10/9/14	6.2	ND	10.9	2.1	ND	ND	2.0	ND	ND	ND	2.3 J	ND	4.0 J	ND	2.3	ND	ND	ND	ND	2.1	6.3	2.9	ND	ND	N/A	ND	ND	41	0.000
11/5/14	4.2	ND	9.0	9.0	2.2	2.6	4.7	ND	ND	ND	6.4	ND	5.9	4.5	2.2	ND	ND	2.1	ND	1.9	3.6 J	6.1	3.9 J	ND	N/A	ND	3.2 J	72	0.001
12/4/14	3.8	ND	7.8	8.0	3.0 J	3.1	3.7	ND	ND	ND	5.9	ND	4.3	5.7	3.3	ND	ND	7.3	ND	ND	3.7 J	5.8	4.2	ND	N/A	ND	ND	70	0.001
1/15/15	11.5	ND	8.4	4.3	4.2	2.9	1.2 J	ND	ND	ND	4.2 J	ND	1.0 J	1.9	4.0	ND	ND	13.0	ND	0.93	1.5 J	8.4	4.0	ND	N/A	1.5 J	ND	73	0.001
2/9/15	7.4	ND	3.2	1.8	2.0 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.1	ND	ND	6.3	ND	ND	1.1 J	6.7	3.0	ND	N/A	ND	ND	34	0.000
3/10/15	2.9	2.8	3.7	0.86	1.1 J	1.7 J	ND	ND	ND	ND	ND	ND	0.99 J	ND	2.1	ND	ND	2.8	ND	ND	1.0 J	4.5	2.1	ND	N/A	0.94 J	ND	27	0.000
4/6/15	10.7	0.79 J	5.1	2.10	3.6	2.7	1.0 J	ND	ND	0.79 J	8.1	ND	ND	ND	2.8	ND	ND	7.8	ND	0.87 J	1.8	8.2	3.9	ND	N/A	1.6 J	ND	62	0.001
5/8/15	5.4	ND	17.9	ND	1.4 J	ND	0.68 J	ND	ND	ND	ND	ND	ND	ND	1.4 J	ND	ND	3.4	ND	ND J	ND	5.2	2.4 J	ND	N/A	ND	ND	38	0.000
6/2/15	13.6	ND	6.1	0.99	1.7	ND	1.1 J	ND	ND	ND	6.4	ND	5.4	ND	3.5	ND	ND	4.4	ND	1.10	2.2	10.2	5.9	ND	N/A	ND	ND	63	0.001
7/1/15	ND	ND	9.7	ND	ND	ND	2.0	ND	2.0	ND	ND	ND	ND	ND	2.5	ND	ND	5.2	ND	ND	ND	ND	ND	ND	ND	N/A	N/A	21	0.000
8/10/15	7.2	ND	15.0	ND	ND	2.4	ND	ND	ND	ND	8.1	ND	ND	ND	15.0	ND	ND	1.4 J	ND	2.4	ND	3.0	1.3 J	ND	ND	N/A	N/A	56	0.001
9/11/15	11	ND	9.0	ND	ND	2.6	0.98 J	ND	1.4 J	ND	6.4	ND	ND	ND	4.1	ND	ND	1.5 J	ND	2.6	1.6 J	5.9	2.5	ND	2.0 J	N/A	N/A	52	0.001
10/7/15	11	ND	3.8	0.90 J	ND	2.1	3.9	ND	1.1 J	ND	4.2	ND	ND	ND	6.2	ND	ND	1.2 J	ND	1.4	ND	2.4	1.1 J	ND	1.2 J	N/A	N/A	41	0.000

TABLE 6

Building C Effluent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	methyl-tert-butyl ether	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,2,4-trichlorobenzene	1,1,1,-trichloroethane	1,1,2,-trichloroethane	trichloroethene	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
11/2/15	9.7	0.48 J	10	4.0	1.5 J	3.6	12	ND	3.2	0.63 J	3.8	ND	ND	2.2 J	2.9	ND	ND	15	ND	ND	ND	2.7	1.3 J	ND	ND	N/A	N/A	73	0.001
12/3/15	5.9	ND	19	1.4 J	0.68 J	2.5	3.3	ND	0.88 J	ND	2.5 J	ND	ND	ND	3.2	ND	ND	9.4	ND	ND	ND	3.0	1.0 J	ND	ND	N/A	N/A	53	0.001
1/15/16	9.4	ND	5.5	0.54 J	ND	2.3	1.2 J	ND	0.48 J	ND	2.7 J	ND	ND	ND	5.0	ND	ND	6.7	ND	ND	1.1 J	4.3	1.7 J	ND	ND	N/A	N/A	41	0.000
3/9/16	5.6	ND	11	0.57 J	0.59 J	2.1	0.97 J	ND	ND	ND	5.4	ND	ND	ND	6.1	ND	ND	7.3	ND	ND	ND	3.3	1.2 J	ND	ND	N/A	N/A	44	0.000
5/12/16	3.9	ND	6.8	0.46 J	0.49 J	3.5	0.51 J	ND	ND	ND	4.0	ND	ND	ND	8.3	ND	ND	7.2 B	ND	ND	ND	2.9	1.1 J	ND	ND	N/A	N/A	39	0.000
7/14/16	10	ND	11	1.1 J	1.2 J	3.3	1.4 J	ND	1.0 J	0.90 J	7.4	ND	ND	ND	5.8	ND	ND	13 B	ND	ND	1.7 J	6.7	2.4	ND	2.4 J	N/A	N/A	69	0.001
9/7/16	7.5	ND	3.5	1.2 J	2.3	2.1	6.1	ND	2.5	ND	4.3	ND	ND	ND	2.7	ND	ND	13	ND	6.9	1.2 J	4.7	1.8 J	ND	ND	N/A	N/A	60	0.001
11/3/16	8.1	ND	17	ND	ND	3.3	1.4	ND	1.3	1.2	23	ND	ND	ND	15	ND	ND	ND	ND	ND	1.3 J	5.2	1.8 J	ND	5.5	N/A	N/A	84	0.001
1/12/17	5.2	ND	5.9	0.50 J	ND	2.0	2.0	ND	0.5 J	1.0 J	12	ND	ND	ND	21	ND	ND	ND	ND	ND	0.9 J	3.2	1.4 J	ND	4.8	N/A	N/A	60	0.001
3/8/17	5.0	ND	4.4	0.61 J	0.5 J	2.8	1.7	ND	0.36 J	1.1 J	2.9 J	ND	ND	ND	7.9	ND	ND	0.72 J	ND	ND	ND	2.7	1.0 J	ND	1.4	N/A	N/A	33	0.000
5/5/17	5.5	ND	1.7	0.67 J	0.6 J	2.0	1.0 J	ND	0.30 J	0.72 J	2.5 J	ND	ND	ND	3.4	ND	ND	1.1 J	ND	ND	0.94 J	3.8	1.5 J	ND	3.6	N/A	N/A	29	0.000
7/6/17	6.3	ND	14	0.92 J	0.9 J	2.1	0.75 J	ND	ND	1.2 J	4.6	ND	ND	0.64 J	6.4	ND	ND	2.0 JB	ND	0.4 J	0.84 J	3.7	1.4 J	ND	3.5	N/A	N/A	50	0.000
9/7/17	6.8	ND	3.2	0.83 J	2.3	2.1	0.49 J	ND	0.40 J	0.76 J	6.3	ND	ND	ND	7.2	ND	ND	3.8	ND	8.1	1.8 J	4.3	1.9 J	ND	1.3 J	N/A	N/A	52	0.001
11/8/17	6.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.1 J	ND	ND	ND	2.6	ND	ND	0.89 J	ND	6.4	ND	3.0	1.3 J	ND	ND	N/A	N/A	24	0.000
1/9/18	5.4	ND	9.8	ND	ND	2.7	ND	ND	ND	0.76 J	4.1 J	ND	ND	ND	3.6	ND	ND	1.9 J	ND	7.4	ND	3.0	1.3 J	ND	ND	N/A	N/A	40	0.000
3/8/18	5.1	ND	4.6	ND	ND	2.0	ND	ND	ND	0.70 J	3.3 J	ND	ND	ND	4.5	ND	ND	0.39 J	ND	3.3	ND	4.8	2.1	ND	2.6 J	N/A	N/A	33	0.000

Notes:

µg/m^3 - micrograms per cubic meter

B - compound was found in the blank and sample

EPA - United States Environmental Protection Agency

lbs./day - pounds per day

J - result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value

N/A - not applicable (samples not analyzed for compound)

ND - non-detect (below detection limit)

OM&M - operation, maintenance, and monitoring

SSD - sub-slab depressurization

TO-15 - Toxic Organic Method 15

VOCs - volatile organic compounds

Sampling not conducted in July 2012 due to system shutdown test.

November 2012 sample collected after the potassium permanganate zeolite (PPZ) unit. PPZ unit was taken offline prior to the December 2012 sample.

Samples analyzed from 4/2/08 to 11/7/13 and from 7/1/15 to present analyzed by TestAmerica, Inc. of Knoxville, TN.

Samples analyzed from 12/5/13 to 6/2/15 analyzed by Pace Analytical Services, Inc. of Minneapolis, MN.

APPENDICES

Appendix A—Biweekly and Quarterly System Check Forms

Appendix B— Analytical Reports for System Samples

APPENDIX A—BIWEEKLY AND QUARTERLY SYSTEM CHECK FORMS

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 10/5/17 **Time:** 1240 **Personnel:** GMN

1. Was the system running upon arrival?
(YES) NO

2. Were there any alarm conditions upon arrival?
YES (NO)

Comment: _____

3. Is the blower vacuum relief valve open?
YES (NO)

4. Is the dilution valve open?
YES (NO) % Open: _____

5. Are there any leaks or damage to system hoses?
YES (NO)

6. Is there any damage to system components?
YES (NO)

7. Are all locks and zip-ties secure?
(YES) NO

8. Was there a GAC change out?
YES (NO)

9. How many GAC units are at this location?
NEW 0 SPENT 2

10. Do these fall to zero when system is turned off?
Flow Gauge (YES) NO
Pressure Gauge (YES) NO
Vacuum Gauges (YES) NO

11. Do the temp. gauges fall when system is turned off?
(YES) NO

12. Does the heat-exchanger have dust on the underside?
YES (NO)

13. Was the underside of the heat-exchanger vacuumed?
YES (NO)

Comment: _____

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
22	32	10	154	114	26	350	1226.4

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	3.57	867	76.5 *	X	NC	
South	4.44	780	68.1 *	X		
Basement North	16.5	244	21.3 *	X		
Basement South	1.80	1550	135.3 *	X		
Basement HRS5	1.42	319	27.8 *	X		
SSD-34-A	21.2	415	9.0 **	X		
SSD-35-A	19.8	490	10.7 **	X		
SSD-36-A	16.6	877	19.1 **	X		
SSD-37-A	2.44	891	19.4 **	X		
SSD-38-A	9.49	2450	53.4 **	X		
SSD-39-A	~~24.204~~	344	7.5 **	X		

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.10		160-A	0.09	
079-A	0.09		SSD-1-A	-0.66	
167-A	0.04		SSD-12-A-X	2.51	
119-A	0.00		SSD-11-A-X	2.66	
165-A	0.04		SSD-13-A-X	0.44	
117-A	0.18		SSD-2-A-X	3.88	
164-A	0.24		015-A-X	2.91	
136-A-S	1.75		SSD-16-A-X	0.91	
163-A	-2.92		SSD-3-A-X	2.21	
121-B	0.00		SSD-~~22-A~~ 21	0.80	
162-A	0.00		SSD-21-A	0.27	
136-A-N	0.00		SSD-~~20-A~~ 22	0.26	
136-A	0.00		SSD-19-A	0.13	
161-A	~~0.00~~		168-A	0.60	
	0.08		188-A	0.10	

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	**A-INFLUENT**	**A-MID GAC**	**A-EFFLUENT**	**Comments**
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	**Contains Water?**	**Water Drained?**	**Volume Drained**	**Drain Valve Closed?**	**Comments**
Moisture Separator	No	-	-	Yes	
Exhaust Stack Sump	No	-	-	Yes	
PS-1-A	No	-	-	Yes	
PS-2-A	No	-	-	Yes	
PS-3-A	No	-	-	Yes	
PS-4-A	No	-	-	Yes	
PS-5-A	No	-	-	Yes	
Drain stacks	N/A	-	-	-	

INDOOR AIR FILTER MONITORING				
	AF-N/NX	**AF-M/MX**	**AF-S/SX**	**Comments**
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/3900	6/3900	6/3900	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	GRN	GRN	GRN	
Life status color of the GAC Filter (F-2)?	GRN	GRN	GRN	
Life status color of the Post-Filter (F-3)?	GRN	GRN	GRN	
Was the Pre-Filter (F-1) replaced?	No	No	No	
Was the GAC Filter (F-2) replaced?	No	No	No	
Was the Post-Filter (F-3) replaced?	No	No	No	

MAINTENANCE RECORD		
Issue Requiring Maintenance	**Maintenance Conducted**	**Issue Status**
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: [signature] 10-5-17 **TIME:** _____

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 10-18-17 **Time:** 1200 **Personnel:** JMW

1. Was the system running upon arrival?
YES NO

2. Were there any alarm conditions upon arrival?
YES NO
Comment: _____

3. Is the blower vacuum relief valve open?
YES NO

4. Is the dilution valve open?
YES NO % Open: _____

5. Are there any leaks or damage to system hoses?
YES NO

6. Is there any damage to system components?
YES NO

7. Are all locks and zip-ties secure?
YES NO

8. Was there a GAC change out?
YES NO

9. How many GAC units are at this location?
NEW 0 SPENT 0

10. Do these fall to zero when system is turned off?
Flow Gauge YES NO
Pressure Gauge YES NO
Vacuum Gauges YES NO

11. Do the temp. gauges fall when system is turned off?
YES NO

12. Does the heat-exchanger have dust on the underside?
YES NO

13. Was the underside of the heat-exchanger vacuumed?
YES NO
Comment: _____

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
20	32	12	130	102	28	355	12578.0

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	3.48	957	83.5 *	X	N/O	
South	4.89	741	64.7 *	✓	↓	
Basement North	15.24	1060	91.7 *	✓		VOR VEL
Basement South	1.89	1515	132.3 *	X		
Basement HRS5	1.45	315	27.5 *	X		
SSD-34-A	14.78	701	15.3 **	X		
SSD-35-A	14.73	332	7.2 **	X		
SSD-36-A	1.04	928	20.2 **	X		
SSD-37-A	2.89	835	18.2 **	X		
SSD-38-A	9.62	2498	54.5 **	X	↓	
SSD-39-A	16.89	374	8.2 **	X		

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.11		160-A	N/A	INVERP
079-A	0.00		SSD-1-A	-0.14	
167-A	0.03		SSD-12-A-X	2.04	
119-A	0.00		SSD-11-A-X	2.62	
165-A	0.15		SSD-13-A-X	0.46	
117-A	0.09		SSD-2-A-X	3.69	
164-A	0.25		015-A-X	2.62	
136-A-S	1.58		SSD-16-A-X	0.81	
163-A	-2.39		SSD-3-A-X	0.31	
121-B	0.00		SSD-22-A	1.26	
162-A	0.00		SSD-21-A	0.30	
136-A-N	0.00		SSD-20-A	0.80	
136-A	0.41		SSD-19-A	0.02	
161-A	0.86		168-A	N/A	INVERP
			188-A	0.00	

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	**A-INFLUENT**	**A-MID GAC**	**A-EFFLUENT**	**Comments**
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING					
Location	**Contains Water?**	**Water Drained?**	**Volume Drained**	**Drain Valve Closed?**	**Comments**
Moisture Separator	Yes	Yes	1/3 gal	Yes	
Exhaust Stack Sump	Yes	Yes	Trace	Yes	
PS-1-A	~~NO~~	-	-	Yes	
PS-2-A	No	-	-	Yes	
PS-3-A	No	-	-	Yes	
PS-4-A	No	-	-	Yes	
PS-5-A	No	-	-	Yes	
Drain stacks	N/A	-	-	-	

INDOOR AIR FILTER MONITORING				
	AF-N/NX	**AF-M/MX**	**AF-S/SX**	**Comments**
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	YES	Yes	
Life status color of the Pre-Filter (F-1)?	GRN	GRN	GRN	
Life status color of the GAC Filter (F-2)?	GRN	GRN	GRN	
Life status color of the Post-Filter (F-3)?	GRN	GRN	GRN	
Was the Pre-Filter (F-1) replaced?	~~GRN~~ NO	No	No	
Was the GAC Filter (F-2) replaced?	No	No	No	
Was the Post-Filter (F-3) replaced?	No	No	No	

MAINTENANCE RECORD		
Issue Requiring Maintenance	**Maintenance Conducted**	**Issue Status**
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: [signature] 10-18-17 **TIME:**

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 11/1/17 **Time:** _____ **Personnel:** AE/MW

1. **Was the system running upon arrival?** (YES) NO
2. **Were there any alarm conditions upon arrival?** YES (NO)
   Comment: _____
3. **Is the blower vacuum relief valve open?** YES (NO)
4. **Is the dilution valve open?** YES (NO) % Open: _____
5. **Are there any leaks or damage to system hoses?** YES (NO)
6. **Is there any damage to system components?** YES (NO)
7. **Are all locks and zip-ties secure?** (YES) NO
8. **Was there a GAC change out?** YES (NO)
9. **How many GAC units are at this location?** NEW 0 SPENT 0
10. **Do these fall to zero when system is turned off?**
    Flow Gauge (YES) NO
    Pressure Gauge (YES) NO
    Vacuum Gauges (YES) NO
11. **Do the temp. gauges fall when system is turned off?** (YES) NO
12. **Does the heat-exchanger have dust on the underside?** (YES) NO
13. **Was the underside of the heat-exchanger vacuumed?** (YES) NO

    Comment: _____

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
~~30~~ 30	~~30~~ 30	~~10~~ 10	126	92	28	~~300~~ 353	12912.0

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	3.45	872	76.1 *	X		
South	4.66	930	81.2 *	X		
Basement North	~~3.45~~ 4.90	508	44.3 *	✓		
Basement South	1.81	1396	121.9 *	X		
Basement HRS5	1.48	316	27.6 *	X		
SSD-34-A	49.4	384	8.4 **	X		
SSD-35-A	19.8	374	8.2 **	X		
SSD-36-A	1.05	903	19.7 **	X		
SSD-37-A	2.83	862	18.8 **	X		
SSD-38-A	9.63	620	13.5 **	X		
SSD-39-A	4.56	466	10.2 **	X		

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.11		160-A	0.08	
079-A	0.04		SSD-1-A	0.20	
167-A	0.05		SSD-12-A-X	2.02	
119-A	0.00		SSD-11-A-X	2.62	
165-A	0.15		SSD-13-A-X	0.42	
117-A	NA	HVY EQP	SSD-2-A-X	3.70	
164-A	0.26		015-A-X	3.50	
136-A-S	3.74		SSD-16-A-X	0.80	
163-A	-5.01		SSD-3-A-X	0.21	
121-B	0.01		SSD-22-A	0.28	
162-A	0.00		SSD-21-A	0.28	
136-A-N	0.02		SSD-20-A	0.80	
136-A	0.00		SSD-19-A	0.01	
161-A	0.07		168-A	0.64	
			188-A	0.80	

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	**A-INFLUENT**	**A-MID GAC**	**A-EFFLUENT**	**Comments**
Time	NA	N/A	N/A	Planned week of 11/6
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	**Contains Water?**	**Water Drained?**	**Volume Drained**	**Drain Valve Closed?**	**Comments**
Moisture Separator	Yes	Yes	~ 6 gal	Yes	
Exhaust Stack Sump	Yes	Yes	0.3 gal	Yes	
PS-1-A	No	-	-	Yes	
PS-2-A	No	-	-	Yes	
PS-3-A	No	-	-	Yes	
PS-4-A	Yes	Yes	~ 7 gal	Yes	
PS-5-A	No	-	-	Yes	
Drain stacks	NA	-	-	Yes	

INDOOR AIR FILTER MONITORING				
	AF-N/NX	**AF-M/MX**	**AF-S/SX**	**Comments**
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/310	6/300	6/300	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	GRN	GRN	GRN	
Life status color of the GAC Filter (F-2)?	GRN	GRN	GRN	
Life status color of the Post-Filter (F-3)?	GRN	GRN	GRN	
Was the Pre-Filter (F-1) replaced?	No	No	No	
Was the GAC Filter (F-2) replaced?	No	No	No	
Was the Post-Filter (F-3) replaced?	No	No	No	

MAINTENANCE RECORD		
Issue Requiring Maintenance	**Maintenance Conducted**	**Issue Status**
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: J Wilkes 11-1-17 **TIME:**

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 11/17/17 **Time:** _____ **Personnel:** AE

1. Was the system running upon arrival?
(YES) NO

2. Were there any alarm conditions upon arrival?
YES (NO)

Comment: _____

3. Is the blower vacuum relief valve open?
YES (NO)

4. Is the dilution valve open?
YES (NO) % Open: _____

5. Are there any leaks or damage to system hoses?
YES (NO)

6. Is there any damage to system components?
YES (NO)

7. Are all locks and zip-ties secure?
(YES) NO

8. Was there a GAC change out?
YES (NO)

9. How many GAC units are at this location?
NEW _____ SPENT _____

10. Do these fall to zero when system is turned off?
Flow Gauge (YES) NO
Pressure Gauge (YES) NO
Vacuum Gauges (YES) NO

11. Do the temp. gauges fall when system is turned off?
(YES) NO

12. Does the heat-exchanger have dust on the underside?
(YES) NO

13. Was the underside of the heat-exchanger vacuumed?
(YES) NO

Comment: _____

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
18	30	12	124	94	28	360	132965

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North (top)	-3.15	916	80.0 *	N	NO	
South (bottom)	-4.57	720	62.9 *	N		
Basement North	-14.41	1,021	89.1 *	Y		
Basement South	-1.74	1,511	131.9 *	Y		
Basement HRS5	-14.39	311	27.2 *	N		
SSD-34-A	-19.56	335	10.7.3 **	N		
SSD-35-A	-19.51	500	10.9 **	N		
SSD-36-A	-1.02	420	20.1 **	N		
SSD-37-A	-2.73	817	17.8 **	N		
SSD-38-A	-9.63	2,891	63.0 **	N		
SSD-39-A	-19.13	1,052	22.9 **	N		

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	-0.09		160-A	-0.06	
079-A	0.00		SSD-1-A	-0.13	
167-A	-0.03		SSD-12-A-X	-1.96	
119-A	0.00		SSD-11-A-X	-2.59	
165-A	-0.11		SSD-13-A-X	-0.44	
117-A	-0.06		SSD-2-A-X	-3.63	
164-A	-0.19		015-A-X	-2.47	
136-A-S	-1.47		SSD-16-A-X	-0.78	
163-A	3.27		SSD-3-A-X	-0.20	
121-B	0.00		SSD-22-A	-0.20	
162-A	0.00		SSD-21-A	-0.14	
136-A-N	0.00		SSD-20-A	-0.69	
136-A	0.00		SSD-19-A	-0.02	
161-A	-0.04		168-A	-0.67	
			188-A	0.00	

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time				
Summa Canister ID				
Flow Contr. ID				
Start Vacuum (in. Hg)				
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator	Y	Y	12 gal	Y	
Exhaust Stack Sump	Y	Y	1.5 gal	Y	
PS-1-A	N	-	-	Y	
PS-2-A	N	-	-	Y	
PS-3-A	N	-	-	Y	
PS-4-A	N	-	-	Y	
PS-5-A	N	-	-	Y	
Drain stacks	N/A	-	-	-	

INDOOR AIR FILTER MONITORING				
	AF-N/NX	AF-M/MX	AF-S/SX	Comments
Was the power on upon arrival?	Y	Y	Y	
Was the fan running upon arrival?	Y	Y	Y	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	N	N	N	
Is the "do not turn off filter" warning sign in place?	Y	Y	Y	
Life status color of the Pre-Filter (F-1)?	GRN	GRN	GRN	
Life status color of the GAC Filter (F-2)?	GRN	GRN	GRN	
Life status color of the Post-Filter (F-3)?	GRN	GRN	GRN	
Was the Pre-Filter (F-1) replaced?	N	N	N	
Was the GAC Filter (F-2) replaced?	N	N	N	
Was the Post-Filter (F-3) replaced?	N	N	N	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: [signature] 11-17-17 **TIME:** _____

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 11/30/17 **Time:** 1300 **Personnel:** JMW

1. Was the system running upon arrival?
YES NO

2. Were there any alarm conditions upon arrival?
YES NO
Comment: _____

3. Is the blower vacuum relief valve open?
YES NO

4. Is the dilution valve open?
YES NO % Open: _____

5. Are there any leaks or damage to system hoses?
YES NO

6. Is there any damage to system components?
YES NO

7. Are all locks and zip-ties secure?
YES NO

8. Was there a GAC change out?
YES NO

9. How many GAC units are at this location?
NEW 2 SPENT 0

10. Do these fall to zero when system is turned off?
Flow Gauge YES NO
Pressure Gauge YES NO
Vacuum Gauges YES NO

11. Do the temp. gauges fall when system is turned off?
YES NO

12. Does the heat-exchanger have dust on the underside?
YES NO

13. Was the underside of the heat-exchanger vacuumed?
YES NO
Comment: _____

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
20	30	10	124	98	28	360	13594.4

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	3.32	841	77.8 *	X	N/A	
South	4.71	733	64.0 *	X		
Basement North	14.28	596	52.0 *	X		
Basement South	1.78	1568	136.9 *	X		
Basement HRS5	1.42	290	25.3 *	X		
SSD-34-A	19.17	239	5.2 **	X		
SSD-35-A	18.95	485	10.6 **	X		
SSD-36-A	1.07	975	19.1 **	X		
SSD-37-A	2.74	870	19.0 **	X		
SSD-38-A	9.35	2441	53.2 **	X		
SSD-39-A	18.58	529	11.5 **	X		← OPEN TO 11/17

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.11		160-A	0.15	
079-A	0.00		SSD-1-A	-0.18	
167-A	0.03		SSD-12-A-X	1.91	
119-A	0.00		SSD-11-A-X	3.51	
165-A	0.15		SSD-13-A-X	0.43	
117-A	0.06		SSD-2-A-X	3.55	
164-A	0.23		015-A-X	2.35	
136-A-S	1.42		SSD-16-A-X	0.74	
163-A	~5.87		SSD-3-A-X	0.20	
121-B	0.0		SSD-22-A	0.22	
162-A	0.00		SSD-21-A	0.22	
136-A-N	0.00		SSD-20-A	0.71	
136-A	0.01		SSD-19-A	0.01	
161-A	0.04		168-A	0.64	
			188-A	0.00	

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	NA	NA	NA	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator	Yes	Yes	2530	Yes	
Exhaust Stack Sump	Yes	Yes	~300mL	Yes	
PS-1-A	No	-	-	Yes	
PS-2-A	No	-	-	Yes	
PS-3-A	No	-	-	Yes	
PS-4-A	Yes	Yes	~750mL	Yes	
PS-5-A	Yes	Yes	6	Yes	
Drain stacks	-	-	-	-	

INDOOR AIR FILTER MONITORING				
	AF-N/NX	AF-M/MX	AF-S/SX	Comments
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/3000	6/3000	6/3000	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	Grn/Org	Grn	Grn/Org	
Life status color of the GAC Filter (F-2)?	Grn	Grn	Grn	
Life status color of the Post-Filter (F-3)?	Grn	Grn	Grn	
Was the Pre-Filter (F-1) replaced?	No	No	No	
Was the GAC Filter (F-2) replaced?	No	No	No	
Was the Post-Filter (F-3) replaced?	No	No	No	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: J Walker 11-30-17 **TIME:**

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 12-12-17 **Time:** 1130 **Personnel:** JMW

1. Was the system running upon arrival?
(YES) NO

2. Were there any alarm conditions upon arrival?
YES (NO)

Comment: _____

3. Is the blower vacuum relief valve open?
YES (NO)

4. Is the dilution valve open?
Moisture Separator 1 (NO) % Open: _____
Moisture Separator 2

5. Are there any leaks or damage to system hoses?
YES (NO)

6. Is there any damage to system components?
YES (NO)

7. Are all locks and zip-ties secure?
(YES) NO

8. Was there a GAC change out?
YES (NO)

9. How many GAC units are at this location?
NEW 0 SPENT 2

10. Do these fall to zero when system is turned off?
Flow Gauge (YES) NO
Pressure Gauge (YES) NO
Vacuum Gauges (YES) NO

11. Do the temp. gauges fall when system is turned off?
(YES) NO

12. Does the heat-exchanger have dust on the underside?
(YES) NO

13. Was the underside of the heat-exchanger vacuumed?
(YES) NO

Comment: _____

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
20	33	13	118	84	23	355	13878.5

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	3.72	857	74.8 *	N	NA	
South	5.31	710	62.1 *	N		
Basement North	14.23	383	33.4 *	N		
Basement South	1.67	1738	151.7 *	N		
Basement HRS5	1.38	295	25.8 *	N		
SSD-34-A	21.3	408	8.9 **	N		
SSD-35-A	21.1	450	9.8 **	N		
SSD-36-A	1.10	915	19.9 **	N		
SSD-37-A	3.07	839	18.1 **	N		
SSD-38-A	10.41	2511	54.7 **	N		
SSD-39-A	20.8	662	14.4 **	N		

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.19		160-A	0.06	
079-A	0.00		SSD-1-A	-0.24	
167-A	0.15		SSD-12-A-X	2.09	
119-A	0.00		SSD-11-A-X	2.82	
165-A	0.16		SSD-13-A-X	0.46	
117-A	0.08		SSD-2-A-X	3.94	
164-A	0.26		015-A-X	2.65	
136-A-S	1.48		SSD-16-A-X	0.79	
163-A	-1.38		SSD-3-A-X	0.19	
121-B	0.00		SSD-22-A	0.24	
162-A	0.00		SSD-21-A	0.25	
136-A-N	0.00		SSD-20-A	0.58	
136-A	0.01		SSD-19-A	0.03	
161-A	0.04		168-A	0.19	
			188-A	-0.01	

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	**A-INFLUENT**	**A-MID GAC**	**A-EFFLUENT**	**Comments**
Time	12/4	12/4	12/4	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING					
Location	**Contains Water?**	**Water Drained?**	**Volume Drained**	**Drain Valve Closed?**	**Comments**
Moisture Separator 1	Yes	Yes	30 gal	Yes	
Moisture Separator 2	No	-	-	Yes	
Exhaust Stack Sump	Yes	Yes	500mL	Yes	
PS-1-A	No	-	-	Yes	
PS-2-A	No	-	-	Yes	
PS-3-A	No	-	-	Yes	
PS-4-A	Yes	Yes	TRACE	Yes	
PS-5-A	Yes	Yes	5 gal	Yes	
Drain stacks	No	-	~~500mL~~	-	

INDOOR AIR FILTER MONITORING				
	AF-N/NX	**AF-M/MX**	**AF-S/SX**	**Comments**
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	Grn	Grn	Grn	
Life status color of the GAC Filter (F-2)?	Grn	Grn	Grn	
Life status color of the Post-Filter (F-3)?	Grn	Grn	Grn	
Was the Pre-Filter (F-1) replaced?	No	No	No	
Was the GAC Filter (F-2) replaced?	No	No	No	
Was the Post-Filter (F-3) replaced?	No	No	No	

MAINTENANCE RECORD		
Issue Requiring Maintenance	**Maintenance Conducted**	**Issue Status**
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: [signature] 12-12-17 **TIME:** _____

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 12-28-17 **Time:** 1200 **Personnel:** JMW

1. Was the system running upon arrival?
(YES) NO

2. Were there any alarm conditions upon arrival?
YES (NO)

Comment: _____

3. Is the blower vacuum relief valve open?
YES (NO)

4. Is the dilution valve open?
Moisture Separator 1 (NO) % Open: _____
Moisture Separator 2

5. Are there any leaks or damage to system hoses?
YES (NO)

6. Is there any damage to system components?
YES (NO)

7. Are all locks and zip-ties secure?
(YES) NO

8. Was there a GAC change out?
YES (NO)

9. How many GAC units are at this location?
NEW (0) SPENT (0)

10. Do these fall to zero when system is turned off?
Flow Gauge (YES) NO
Pressure Gauge (YES) NO
Vacuum Gauges (YES) NO

11. Do the temp. gauges fall when system is turned off?
(YES) NO

12. Does the heat-exchanger have dust on the underside?
(YES) NO

13. Was the underside of the heat-exchanger vacuumed?
(YES) NO

Comment: _____

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
20	33	13	110	72	36	360	14250.3

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	3.75	1046	74.8 *	X		
South	5.30	815	62.0 *	X		
Basement North	20.6	254	33.4 *	X		
Basement South	1.56	1795	151.7 *	✓		
Basement HRS5	1.58	344	25.8 *	X		
SSD-34-A	22.9	237	8.9 **	X		
SSD-35-A	22.8	274	9.8 **	X		
SSD-36-A	9.78	738	19.9 **	X		
SSD-37-A	3.09	947	18.1 **	X		
SSD-38-A	11.28	2628	54.7 **	X		
SSD-39-A	22.7	729	14.4 **	X		

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.08		160-A	0.04	
079-A	0.00		SSD-1-A	-0.04	
167-A	0.04		SSD-12-A-X	NA	HV EQP
119-A	0.00		SSD-11-A-X	2.80	
165-A	0.14		SSD-13-A-X	0.46	
117-A	0.05		SSD-2-A-X	3.89	
164-A	0.20		015-A-X	2.68	
136-A-S	1.37		SSD-16-A-X	0.70	
163-A	-1.97		SSD-3-A-X	0.13	
121-B	0.00		SSD-22-A	0.24	
162-A	0.00		SSD-21-A	0.24	
136-A-N	0.00		SSD-20-A	0.02	
136-A	0.01		SSD-19-A	0.01	
161-A	NA	HV EQP	168-A	0.17	
			188-A	-0.02	

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	**A-INFLUENT**	**A-MID GAC**	**A-EFFLUENT**	**Comments**
Time	NA	NA	NA	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	**Contains Water?**	**Water Drained?**	**Volume Drained**	**Drain Valve Closed?**	**Comments**
Moisture Separator 1	Yes	Yes	23	Yes	
Moisture Separator 2	No	-	-	yes	
Exhaust Stack Sump	No	-	Trace	Yes	
PS-1-A	No	-	-	Yes	
PS-2-A	No	-	-	Yes	
PS-3-A	No	-	-	Yes	
PS-4-A	No	-	-	Yes	
PS-5-A	Yes	Yes	2	Yes	
Drain stacks	No	-	-	Yes	

INDOOR AIR FILTER MONITORING				
	AF-N/NX	**AF-M/MX**	**AF-S/SX**	**Comments**
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/3000	6/1000	6/3000	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	ORG	ORG	ORG	
Life status color of the GAC Filter (F-2)?	ORG	ORG	ORG	
Life status color of the Post-Filter (F-3)?	ORG	ORG	ORG	
Was the Pre-Filter (F-1) replaced?	1/9	1/9	1/9	
Was the GAC Filter (F-2) replaced?	1/9	1/9	1/9	
Was the Post-Filter (F-3) replaced?	1/9	1/9	1/9	

MAINTENANCE RECORD		
Issue Requiring Maintenance	**Maintenance Conducted**	**Issue Status**
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: [signature] 12 - 28 - 17 **TIME:** _____

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 1-9-18 **Time:** 1339 **Personnel:** JMW

1. Was the system running upon arrival?
(YES) NO

2. Were there any alarm conditions upon arrival?
YES (NO)

Comment: _____

3. Is the blower vacuum relief valve open?
YES (NO)

4. Is the dilution valve open?
YES NO % Open: _____

5. Are there any leaks or damage to system hoses?
YES (NO)

6. Is there any damage to system components?
YES (NO)

7. Are all locks and zip-ties secure?
(YES) NO

8. Was there a GAC change out?
YES (NO)

9. How many GAC units are at this location?
NEW 0 SPENT 0

10. Do these fall to zero when system is turned off?
Flow Gauge (YES) NO
Pressure Gauge (YES) NO
Vacuum Gauges (YES) NO

11. Do the temp. gauges fall when system is turned off?
(YES) NO

12. Does the heat-exchanger have dust on the underside?
(YES) NO

13. Was the underside of the heat-exchanger vacuumed?
(YES) NO

Comment: _____

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
30	34	14	118	90	25	360	14540.6

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	3.55	990	74.8 86.4			
South	5.03	807	62.9 70.5	X		
Basement North	19.18	2761	33.4 29.8	V		
Basement South	1.76	1750	152.8 *	X		
Basement HRS5	21.21	330	28.8 *	X		
SSD-34-A	21.65	202	4.4 **	X		
SSD-35-A	21.25	564	12.3 **	X		
SSD-36-A	0.74	734	16.0 **	X		
SSD-37-A	3.96	584	12.7 **	X		
SSD-38-A	20.64	2555	55.7 **	X		
SSD-39-A	21.4	742	16.2 **	X		

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.86	NA	160-A	0.86	
079-A	0.00		SSD-1-A	-0.04	
167-A	0.04		SSD-12-A-X	1.45	
119-A	0.00		SSD-11-A-X	2.70	
165-A	0.15		SSD-13-A-X	0.42	
117-A	0.07		SSD-2-A-X	3.64	
164-A	0.26		015-A-X	2.54	
136-A-S	1.74		SSD-16-A-X	0.70	
163-A	-2.80		SSD-3-A-X	0.14	
121-B	0.00		SSD-22-A	0.37	
162-A	0.00		SSD-21-A	0.34	
136-A-N	0.00		SSD-20-A	0.76	
136-A	0.01		SSD-19-A	0.01	
161-A	0.04		168-A	-0.75	
			188-A	-0.87	

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	**A-INFLUENT**	**A-MID GAC**	**A-EFFLUENT**	**Comments**
Time	1254	1238	1247	
Summa Canister ID	11621	10344	11683	
Flow Contr. ID	10614	10104	11594	
Start Vacuum (in. Hg)	-29.3	-29.3	-29.3	
Stop Vacuum (in. Hg)	-4	-4	-4	

SYSTEM CONDENSATE MONITORING					
Location	**Contains Water?**	**Water Drained?**	**Volume Drained**	**Drain Valve Closed?**	**Comments**
Moisture Separator 1	Yes	Yes	36	Yes	
Moisture Separator 2	No	-	-	Yes	
Exhaust Stack Sump	Yes	Yes	3	Yes	
PS-1-A	No	-	-	Yes	
PS-2-A	No	-	-	Yes	
PS-3-A	No	-	-	Yes	
PS-4-A	No	-	-	Yes	
PS-5-A	Yes	Yes	5.5	Yes	
Drain stacks	N/A	-	-	-	

INDOOR AIR FILTER MONITORING				
	AF-N/NX	**AF-M/MX**	**AF-S/SX**	**Comments**
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/3000	6/3000	6/3000	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	GRN	GRN	GRN	
Life status color of the GAC Filter (F-2)?	GRN	GRN	GRN	
Life status color of the Post-Filter (F-3)?	GRN	GRN	GRN	
Was the Pre-Filter (F-1) replaced?	Yes	Yes	Yes	
Was the GAC Filter (F-2) replaced?	Yes	Yes	Yes	
Was the Post-Filter (F-3) replaced?	Yes	Yes	Yes	

MAINTENANCE RECORD		
Issue Requiring Maintenance	**Maintenance Conducted**	**Issue Status**
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: _____ 1-9-18 **TIME:** _____

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 1-23-18 **Time:** 1155 **Personnel:** JMW

1. Was the system running upon arrival?
YES NO

2. Were there any alarm conditions upon arrival?
YES NO
Comment: _____

3. Is the blower vacuum relief valve open?
YES NO

4. Is the dilution valve open?
YES NO % Open: _____

5. Are there any leaks or damage to system hoses?
YES NO

6. Is there any damage to system components?
YES NO

7. Are all locks and zip-ties secure?
YES NO

8. Was there a GAC change out?
YES NO

9. How many GAC units are at this location?
NEW 0 SPENT 0

10. Do these fall to zero when system is turned off?
Flow Gauge YES NO
Pressure Gauge YES NO
Vacuum Gauges YES NO

11. Do the temp. gauges fall when system is turned off?
YES NO

12. Does the heat-exchanger have dust on the underside?
YES NO

13. Was the underside of the heat-exchanger vacuumed?
YES NO
Comment: _____

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
21	33	12	128	102	23	350	14710.1

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	3.59	1011	88.3 *	X		
South	5.11	815	71.1 *	X		
Basement North	19.20	143	12.5 *	X		
Basement South	1.70	1725	150.6 *	X		
Basement HRS5	1.60	331	28.9 *	X		
SSD-34-A	20.9	210	4.6 **	X		
SSD-35-A	20.9	570	12.4 **	X		
SSD-36-A	7.58 ↔	0.73	16.5 **	X		
SSD-37-A	3.39	932	20.3 **	X		
SSD-38-A	10.69	2644	57.6 **	X		
SSD-39-A	20.9	615	13.4 **	X		

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
~~166-A~~ 167	0.04		160-A	0.16	
079-A	0.00		SSD-1-A	-0.11	
~~167-A~~ 166	0.11		SSD-12-A-X	2.04	
119-A	0.00		SSD-11-A-X	2.67	
165-A	0.17		SSD-13-A-X	0.43	
117-A	NA	HVY EQP	SSD-2-A-X	3.75	
164-A	0.27		015-A-X	2.40	
136-A-S	1.85		SSD-16-A-X	0.63	
163-A	3.06		SSD-3-A-X	0.19	
121-B	0.00		SSD-22-A	0.24	
162-A	0.00		SSD-21-A	0.25	
136-A-N	0.00		SSD-20-A	0.68	
136-A	0.01		SSD-19-A	0.01	
161-A	0.05		168-A	0.75	
			188-A	-0.11	

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	NA	NA	NA	
Summa Canister ID				
Flow Contr. ID				
Start Vacuum (in. Hg)				
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator 1	Yes	Yes	~2	Yes	
Moisture Separator 2	No	-	-	Yes	
Exhaust Stack Sump	Yes	Yes	0.5	Yes	
PS-1-A	No	-	-	Yes	
PS-2-A	No	-	-	Yes	
PS-3-A	No	-	-	Yes	
PS-4-A	No	-	-	Yes	
PS-5-A	Yes	Yes	2.5	Yes	
Drain stacks	No	-	-	Yes	

INDOOR AIR FILTER MONITORING				
	AF-N/NX	AF-M/MX	AF-S/SX	Comments
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/3000	6/3000	6/3000	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	GRN	GRN	GRN	
Life status color of the GAC Filter (F-2)?	GRN	GRN	GRN	
Life status color of the Post-Filter (F-3)?	GRN	GRN	GRN	
Was the Pre-Filter (F-1) replaced?	No	No	No	
Was the GAC Filter (F-2) replaced?	No	No	No	
Was the Post-Filter (F-3) replaced?	No	No	No	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: _____ 1-23-18 **TIME:** _____

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 2-8-12 Time: 1320 Personnel: JMW

1. Was the system running upon arrival?
YES NO

2. Were there any alarm conditions upon arrival?
YES NO
Comment: _____

3. Is the blower vacuum relief valve open?
YES NO

4. Is the dilution valve open?
YES NO % Open: _____

5. Are there any leaks or damage to system hoses?
YES NO

6. Is there any damage to system components?
YES NO

7. Are all locks and zip-ties secure?
YES NO

8. Was there a GAC change out?
YES NO

9. How many GAC units are at this location?
NEW 0 SPENT 0

10. Do these fall to zero when system is turned off?
Flow Gauge YES NO
Pressure Gauge YES NO
Vacuum Gauges YES NO

11. Do the temp. gauges fall when system is turned off?
YES NO

12. Does the heat-exchanger have dust on the underside?
YES NO

13. Was the underside of the heat-exchanger vacuumed?
YES NO
Comment: _____

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
19	32	13	112	84	26	360	15094.5

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	3.39	~~941~~ 841	73.4 *	X		
South	4.81	788	68.8 *	X		
Basement North	15.69	489	42.7 *	✓		
Basement South	1.83	1515	132.3 *	X		
Basement HRS5	1.34	333	29.1 *	X		
SSD-34-A	20.1	285	4.5 **	X		
SSD-35-A	20.9	264	5.8 **	X		
SSD-36-A	9.69	726	15.8 **	X		
SSD-37-A	2.89	823	17.9 **	X		
SSD-38-A	10.19	2514	54.8 **	X		
SSD-39-A	623	1997	13.7 **	X		

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.67		160-A	0.02	
079-A	0.00		SSD-1-A	-0.17	
167-A	0.02		SSD-12-A-X	1.89	
119-A	0.00		SSD-11-A-X	2.55	
165-A	0.12		SSD-13-A-X	0.44	
117-A	0.07		SSD-2-A-X	3.55	
164-A	0.22		015-A-X	2.33	
136-A-S	1.63		SSD-16-A-X	0.62	
163-A	2.77		SSD-3-A-X	0.17	
121-B	0.00		SSD-22-A	0.24	
162-A	0.00		SSD-21-A	0.24	
136-A-N	0.00		SSD-20-A	0.68	
136-A	0.01		SSD-19-A	0.01	
161-A	0.03		168-A	0.56	
			188-A	0.01	

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	1125/1127	1221/1223	1117/1119	
Summa Canister ID	11670	11722	09812	
Flow Contr. ID	10104	10614	11594	
Start Vacuum (in. Hg)	29.5	29.5	29	
Stop Vacuum (in. Hg)	0	0	0	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator 1	(Yes) | No	(Yes) | No	43 gal	Yes | No	
Moisture Separator 2	Yes | (No)	Yes | (No)	-	Yes | No	
Exhaust Stack Sump	(Yes) | No	(Yes) | No	500 mL	Yes | No	
PS-1-A	Yes | (No)	Yes | (No)	-	Yes | No	
PS-2-A	Yes | (No)	Yes | (No)	-	Yes | No	
PS-3-A	Yes | (No)	Yes | (No)	-	Yes | No	
PS-4-A	Yes | (No)	Yes | (No)	-	Yes | No	
PS-5-A	(Yes) | No	Yes | No	3.5 gal	Yes | No	
Drain stacks	Yes | (No)	Yes | (No)	-	Yes | No	

INDOOR AIR FILTER MONITORING				
	AF-N/NX	AF-M/MX	AF-S/SX	Comments
Was the power on upon arrival?	Yes | No	Yes | No	Yes | No	
Was the fan running upon arrival?	Yes | No	Yes | No	Yes | No	
Fan speed/airflow setting (#/cfm)	67300	67300	67300	
Is there damage to unit or signs of tampering?	Yes | (No)	Yes | (No)	Yes | (No)	
Is the "do not turn off filter" warning sign in place?	Yes | No	Yes | No	Yes | No	
Life status color of the Pre-Filter (F-1)?	GN | OR | RD	GN | OR | RD	GN | OR | RD	
Life status color of the GAC Filter (F-2)?	GN | OR | RD	GN | OR | RD	GN | OR | RD	
Life status color of the Post-Filter (F-3)?	GN | OR | RD	GN | OR | RD	GN | OR | RD	
Was the Pre-Filter (F-1) replaced?	Yes | (No)	Yes | (No)	Yes | (No)	
Was the GAC Filter (F-2) replaced?	Yes | (No)	Yes | (No)	Yes | (No)	
Was the Post-Filter (F-3) replaced?	Yes | (No)	Yes | (No)	Yes | (No)	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: J. W. Wells 2-8-18 **TIME:** _____

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 2-23-18 **Time:** 1330 **Personnel:** JMW

1. Was the system running upon arrival?
YES NO

2. Were there any alarm conditions upon arrival?
YES NO
Comment: _____

3. Is the blower vacuum relief valve open?
YES NO

4. Is the dilution valve open?
YES NO % Open: _____

5. Are there any leaks or damage to system hoses?
YES NO

6. Is there any damage to system components?
YES NO

7. Are all locks and zip-ties secure?
YES NO

8. Was there a GAC change out?
YES NO

9. How many GAC units are at this location?
NEW 0 SPENT 0

10. Do these fall to zero when system is turned off?

Flow Gauge	YES	NO
Pressure Gauge	YES	NO
Vacuum Gauges	YES	NO

11. Do the temp. gauges fall when system is turned off?
YES NO

12. Does the heat-exchanger have dust on the underside?
YES NO

13. Was the underside of the heat-exchanger vacuumed?
YES NO

13. Was the system running upon departure?
YES NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
20	32	12	122	94	25	360	15426.0

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	3.47	867	75.7 *	X		
South	4.81	760	66.3 *	X		
Basement North	15.96	7MAX	~ *	✓		
Basement South	1.85	1597	139.4 *	X		
Basement HRS5	1.59	296	25.8 *	X		
SSD-34-A	19.99	444	9.7 **	X		
SSD-35-A	19.92	633	13.8 **	X		
SSD-36-A	0.66	704	15.3 **	X		
SSD-37-A	2.91	268	5.8 **	X		
SSD-38-A	10.03	2707	59.0 **	X		
SSD-39-A	20.0	545	11.9 **	X		

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.08		160-A	NA	HVY EQP
079-A	0.00		SSD-1-A	0.14	
167-A	0.04		SSD-12-A-X	1.95	
119-A	0.00		SSD-11-A-X	2.58	
165-A	0.15		SSD-13-A-X	0.42	
117-A	0.07		SSD-2-A-X	3.60	
164-A	0.24		015-A-X	2.40	
136-A-S	1.70		SSD-16-A-X	0.63	
163-A	-3.44		SSD-3-A-X	0.19	
121-B	0.00		SSD-22-A	0.22	
162-A	0.00		SSD-21-A	0.21	
136-A-N	0.00		SSD-20-A	0.74	
136-A	0.01		SSD-19-A	0.01	
161-A	0.05		168-A	0.52	
			188-A	-0.01	

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SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	**A-INFLUENT**	**A-MID GAC**	**A-EFFLUENT**	**Comments**
Time	N/A	N/A	N/A	3/1
Summa Canister ID				
Flow Contr. ID				
Start Vacuum (in. Hg)				
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING					
Location	**Contains Water?**	**Water Drained?**	**Volume Drained**	**Drain Valve Closed?**	**Comments**
Moisture Separator 1	Yes | No	Yes | No	~10 gal	Yes | No	
Moisture Separator 2	Yes | No	Yes | No	–	Yes | No	
Exhaust Stack Sump	Yes | No	Yes | No	~500 m2	Yes | No	
PS-1-A	Yes | No	Yes | No	–	Yes | No	
PS-2-A	Yes | No	Yes | No	–	Yes | No	
PS-3-A	Yes | No	Yes | No	–	Yes | No	
PS-4-A	Yes | No	Yes | No	–	Yes | No	
PS-5-A	Yes | No	Yes | No	0.75 gal	Yes | No	
Drain stacks	Yes | No	Yes | No	–	Yes | No	

INDOOR AIR FILTER MONITORING				
	AF-N/NX	**AF-M/MX**	**AF-S/SX**	**Comments**
Was the power on upon arrival?	Yes | No	Yes | No	Yes | No	
Was the fan running upon arrival?	Yes | No	Yes | No	Yes | No	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	Yes | No	Yes | No	Yes | No	
Is the "do not turn off filter" warning sign in place?	Yes | No	Yes | No	Yes | No	
Life status color of the Pre-Filter (F-1)?	GN | OR | RD	GN | OR | RD	GN | OR | RD	
Life status color of the GAC Filter (F-2)?	GN | OR | RD	GN | OR | RD	GN | OR | RD	
Life status color of the Post-Filter (F-3)?	GN | OR | RD	GN | OR | RD	GN | OR | RD	
Was the Pre-Filter (F-1) replaced?	Yes | No	Yes | No	Yes | No	
Was the GAC Filter (F-2) replaced?	Yes | No	Yes | No	Yes | No	
Was the Post-Filter (F-3) replaced?	Yes | No	Yes | No	Yes | No	

MAINTENANCE RECORD		
Issue Requiring Maintenance	**Maintenance Conducted**	**Issue Status**
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

2-20 5:24 BR
" " B
12-09 0:15 BR
" " B

PERSONNEL SIGNATURE: [signature] 2-23-2018 **TIME:** _____

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 3-8-18 **Time:** 1200 **Personnel:** JMW

1. Was the system running upon arrival?
(YES) NO

2. Were there any alarm conditions upon arrival?
YES (NO)

Comment: _____

3. Is the blower vacuum relief valve open?
YES (NO)

4. Is the dilution valve open?
YES (NO) % Open: _____

5. Are there any leaks or damage to system hoses?
YES (NO)

6. Is there any damage to system components?
YES (NO)

7. Are all locks and zip-ties secure?
(YES) NO

8. Was there a GAC change out?
YES (NO)

9. How many GAC units are at this location?
NEW 0 SPENT 0

10. Do these fall to zero when system is turned off?
Flow Gauge (YES) NO
Pressure Gauge (YES) NO
Vacuum Gauges (YES) NO

11. Do the temp. gauges fall when system is turned off?
(YES) NO

12. Does the heat-exchanger have dust on the underside?
(YES) NO

13. Was the underside of the heat-exchanger vacuumed?
(YES) NO

13. Was the system running upon departure?
(YES) NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
19	31	12	116	91	25	360	15736.3

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	3.45	887	77.7 *	X		
South	4.83	669	58.4 *	✓		
Basement North	6.17	758	66.2 *	✓		
Basement South	1.89	524	133.0 *	X		
Basement HRS5	1.56	331	28.9 *	X		
SSD-34-A	20.1	383	8.3 **	X		
SSD-35-A	20.1	460	10.0 **	X		
SSD-36-A	0.65	691	15.1 **	X		
SSD-37-A	2.46	800	17.4 **	X		
SSD-38-A	1.43	2463	53.7 **	X		
SSD-39-A	20.0	631	13.8 **	X		

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.09		160-A	0.05	
079-A	0.00		SSD-1-A	-0.19	
167-A	0.04		SSD-12-A-X	1.94	
119-A	0.08		SSD-11-A-X	2.57	
165-A	0.14		SSD-13-A-X	0.42	
117-A	~~0.08~~ 0.08		SSD-2-A-X	3.58	
164-A	0.02		015-A-X	2.23	
136-A-S	1.58		SSD-16-A-X	0.53	
163-A	-3.19		SSD-3-A-X	0.17	
121-B	0.09		SSD-22-A	0.24	
162-A	0.00		SSD-21-A	0.23	
136-A-N	0.00		SSD-20-A	0.73	
136-A	0.01		SSD-19-A	0.01	
161-A	0.04		168-A	0.84	
			188-A	-0.01	

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	1331/1333	1335/1337	1340/1343	
Summa Canister ID	10337	11606	10738	
Flow Contr. ID	10614	11901	09879	
Start Vacuum (in. Hg)	29.5	29	29.5	
Stop Vacuum (in. Hg)	0	1	1	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator 1	(Yes) | No	(Yes) | No	~26 gal	(Yes) | No	
Moisture Separator 2	Yes | (No)	Yes | (No)	-	(Yes) | No	
Exhaust Stack Sump	(Yes) | No	(Yes) | No	~0.5 gal	(Yes) | No	
PS-1-A	Yes | (No)	Yes | (No)	-	(Yes) | No	
PS-2-A	Yes | (No)	Yes | (No)	-	(Yes) | No	
PS-3-A	Yes | (No)	Yes | (No)	-	(Yes) | No	
PS-4-A	Yes | (No)	Yes | (No)	-	(Yes) | No	
PS-5-A	(Yes) | No	(Yes) | No	1gal	(Yes) | No	
Drain stacks	Yes | (No)	Yes | (No)	-	(Yes) | No	

INDOOR AIR FILTER MONITORING				
	AF-N/NX	AF-M/MX	AF-S/SX	Comments
Was the power on upon arrival?	(Yes) | No	(Yes) | No	(Yes) | No	
Was the fan running upon arrival?	(Yes) | No	(Yes) | No	(Yes) | No	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	Yes | (No)	Yes | (No)	Yes | (No)	
Is the "do not turn off filter" warning sign in place?	(Yes) | No	(Yes) | No	(Yes) | No	
Life status color of the Pre-Filter (F-1)?	(GN) | OR | RD	(GN) | OR | RD	(GN) | OR | RD	
Life status color of the GAC Filter (F-2)?	(GN) | OR | RD	(GN) | OR | RD	(GN) | OR | RD	
Life status color of the Post-Filter (F-3)?	(GN) | OR | RD	(GN) | OR | RD	(GN) | OR | RD	
Was the Pre-Filter (F-1) replaced?	Yes | (No)	Yes | (No)	Yes | (No)	
Was the GAC Filter (F-2) replaced?	Yes | (No)	Yes | (No)	Yes | (No)	
Was the Post-Filter (F-3) replaced?	Yes | (No)	Yes | (No)	Yes | (No)	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: Y Walker **TIME:** 3/8

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 3-20-18 Time: 1220 Personnel: JHW

1. Was the system running upon arrival?
   YES NO
2. Were there any alarm conditions upon arrival?
   YES NO
   Comment: _____
3. Is the blower vacuum relief valve open?
   YES NO
4. Is the dilution valve open?
   YES NO % Open: _____
5. Are there any leaks or damage to system hoses?
   YES NO
6. Is there any damage to system components?
   YES NO
7. Are all locks and zip-ties secure?
   YES NO
8. Was there a GAC change out?
   YES NO
9. How many GAC units are at this location?
   NEW 0 SPENT 0
10. Do these fall to zero when system is turned off?
    Flow Gauge YES NO
    Pressure Gauge YES NO
    Vacuum Gauges YES NO
11. Do the temp. gauges fall when system is turned off?
    YES NO
12. Does the heat-exchanger have dust on the underside?
    YES NO
13. Was the underside of the heat-exchanger vacuumed?
    YES NO
13. Was the system running upon departure?
    YES NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
19	32	13	115	76	25	360	16022.6

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North			*			NA - NO ACCESS
South			*			NA - NO ACCESS
Basement North	5.75	1516	132.3 *	✓		
Basement South	1.90	1143	126.0 *	X		
Basement HRS5	1.55	270	23.6 *	X		
SSD-34-A	19.92	293	6.4 **	X		
SSD-35-A	19.92	276	6.0 **	X		
SSD-36-A	0.64	683	14.9 **	X		
SSD-37-A	2.98	796	17.4 **	X		
SSD-38-A	10.30	2332	50.8 **	X		
SSD-39-A	19.68	643	11.8 **	X		

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.04		160-A	0.14	
079-A	6.00		SSD-1-A	-0.12	
167-A	0.04		SSD-12-A-X	1.88	
119-A	0.00		SSD-11-A-X	2.56	
165-A	0.10		SSD-13-A-X	0.42	
117-A	NA	INTERP	SSD-2-A-X	3.54	
164-A	0.23		015-A-X	2.28	
136-A-S	1.71		SSD-16-A-X	0.61	
163-A	-2.83		SSD-3-A-X	0.16	
121-B	0.00		SSD-22-A	0.24	
162-A	-0.08		SSD-21-A	0.24	
136-A-N	0.00		SSD-20-A	0.74	
136-A	0.01		SSD-19-A	0.02	
161-A	0.03		168-A	0.81	
			188-A	-0.01	

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	NA	NA	NA	4/1
Summa Canister ID	↓	↓	↓	
Flow Contr. ID				
Start Vacuum (in. Hg)				
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator 1	Yes | No	Yes | No	1.5 gal	Yes | No	
Moisture Separator 2	Yes | No	Yes | No	~	Yes | No	
Exhaust Stack Sump	Yes | No	Yes | No	0.5 gal	Yes | No	
PS-1-A	Yes | No	Yes | No	~	Yes | No	
PS-2-A	Yes | No	Yes | No	~	Yes | No	
PS-3-A	Yes | No	Yes | No	~	Yes | No	
PS-4-A	Yes | No	Yes | No	~	Yes | No	
PS-5-A	Yes | No	Yes | No	0.125 gal	Yes | No	
Drain stacks	Yes | No	Yes | No	~	Yes | No	

INDOOR AIR FILTER MONITORING				
	AF-N/NX	AF-M/MX	AF-S/SX	Comments
Was the power on upon arrival?	Yes | No	Yes | No	Yes | No	
Was the fan running upon arrival?	Yes | No	Yes | No	Yes | No	
Fan speed/airflow setting (#/cfm)	6/3000	6/3000	6/3000	
Is there damage to unit or signs of tampering?	Yes | No	Yes | No	Yes | No	
Is the "do not turn off filter" warning sign in place?	Yes | No	Yes | No	Yes | No	
Life status color of the Pre-Filter (F-1)?	GN | OR | RD	GN | OR | RD	GN | OR | RD	
Life status color of the GAC Filter (F-2)?	GN | OR | RD	GN | OR | RD	GN | OR | RD	
Life status color of the Post-Filter (F-3)?	GN | OR | RD	GN | OR | RD	GN | OR | RD	
Was the Pre-Filter (F-1) replaced?	Yes | No	Yes | No	Yes | No	3/28
Was the GAC Filter (F-2) replaced?	Yes | No	Yes | No	Yes | No	
Was the Post-Filter (F-3) replaced?	Yes | No	Yes | No	Yes | No	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: J. Walker **TIME:** 3/20

QUARTERLY SSD SYSTEM CHECK - BUILDING A

LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Date: 12-12-17 **Time:** 0800 **Quarter:** 4 **Personnel:** JMW, MS

GENERAL SYSTEM MONITORING

1. Are all system components in good condition?

(YES) NO Comments: _____

2. Are there any leaks in the system pipes?

YES (NO) Comments: _____

3. Does the demister media need cleaned or replaced?

YES (NO) Comments: _____

4. Does the dilution valve air filter need replaced?

YES (NO) Comments: _____

5. Does the vacuum relief valve activate upon high vacuum?

(YES) NO Comments: _____

6. What is the amperage draw on the blower?

Wire Color	Amperage
Red	16.36
White	17.40
Black	16.17

Comments: _____

7. Is the fire extinguisher located near the system?

(YES) NO Comments: _____

8. Was the area around the system cleaned?

(YES) NO Comments: _____

AUTO-DIALER AND ALARM SWITCH MONITORING

Zone	Alarm	Limit	Switch Functioning Properly		Auto-Dialer Call-Out Triggered		Comments
Zone 1	High Liquid Level	Full	(YES)	NO	(YES)	NO	
Zone 2	High Pressure	55" WC	(YES)	NO	(YES)	NO	
Zone 3	High Temperature 1	220 °F	(YES)	NO	(YES)	NO	
Zone 4	High Temperature 2	140 °F	(YES)	NO	(YES)	NO	
Zone 7	Low Vacuum	3" WC	(YES)	NO	YES	NO	

Do the Auto-Dialer Batteries Need Replaced? YES NO

QUARTERLY SSD SYSTEM CHECK - BUILDING A

LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

GAC UNIT MONITORING

1. Are there any signs of corrosion and/or leaks in any of the GAC units?

YES (NO) Comments: _____

2. Are the sample ports in good condition?

(YES) NO Comments: _____

3. Are there any warn spots or holes in the flexible hoses?

YES (NO) Comments: _____

VMP MONITORING

Vapor Pins

1. Are all secure covers in good condition?

(YES) NO Comments: _____

2. Are all secure covers flush with the ground?

(YES) NO Comments: _____

3. Are all vapor pins firmly installed in the concrete slab with little wiggle room?

(YES) NO Comments: _____

4. Are all VMPs properly labeled?

(YES) NO Comments: _____

Classic Vapor Monitoring Points

5. Are all well lids in good condition?

(YES) NO Comments: _____

6. Do all well lids have the proper number of bolts?

(YES) NO Comments: _____

7. Is the tubing inside the point in good condition?

(YES) NO Comments: _____

8. Is the tubing capped?

(YES) NO Comments: _____

QUARTERLY SSD SYSTEM CHECK - BUILDING A

LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

INDOOR AIR FILTER MONITORING

AF-N

Date of quarterly HEPA filter change: Week of 12/27
Date of quarterly GAC filter change: ↓
Date of quarterly filter sleeve change: ↓
Was the filter housing cleaned? (YES) NO

AF-NX

Date of quarterly HEPA filter change: Week of 12/27
Date of quarterly GAC filter change: ↓
Date of quarterly filter sleeve change: ↓
Was the filter housing cleaned? (YES) NO

AF-M

Date of quarterly HEPA filter change: Week of 12/27
Date of quarterly GAC filter change: ↓
Date of quarterly filter sleeve change: ↓
Was the filter housing cleaned? (YES) NO

AF-MX

Date of quarterly HEPA filter change: Week of 12/27
Date of quarterly GAC filter change: ↓
Date of quarterly filter sleeve change: ↓
Was the filter housing cleaned? (YES) NO

AF-S

Date of quarterly HEPA filter change: Week of 12/27
Date of quarterly GAC filter change: ↓
Date of quarterly filter sleeve change: ↓
Was the filter housing cleaned? (YES) NO

AF-SX

Date of quarterly HEPA filter change: Week of 12/27
Date of quarterly GAC filter change: ↓
Date of quarterly filter sleeve change: ↓
Was the filter housing cleaned? (YES) NO

Personnel's Signature: [signature] Date: 12-12-17

QUARTERLY SSD SYSTEM CHECK - BUILDING A

LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Date: 3-28-18 **Time:** 1325 **Quarter:** 1 **Personnel:** JMW

GENERAL SYSTEM MONITORING

1. Are all system components in good condition?
   (YES) NO Comments: _____
2. Are there any leaks in the system pipes?
   YES (NO) Comments: _____
3. Does the demister media need cleaned or replaced?
   YES (NO) Comments: _____
4. Does the dilution valve air filter need replaced?
   YES (NO) Comments: _____
5. Does the vacuum relief valve activate upon high vacuum?
   (YES) NO Comments: _____
6. What is the amperage draw on the blower?

Wire Color	Amperage
Red	17.74
White	18.66
Black	15.85

Comments: _____

7. Is the fire extinguisher located near the system?
   (YES) NO Comments: _____
8. Was the area around the system cleaned?
   (YES) NO Comments: _____

AUTO-DIALER AND ALARM SWITCH MONITORING

Zone	Alarm	Limit	Switch Functioning Properly		Auto-Dialer Call-Out Triggered		Comments
Zone 1	High Liquid Level	Full	(YES)	NO	(YES)	NO	
Zone 2	High Pressure	55" WC	(YES)	NO	(YES)	NO	
Zone 3	High Temperature 1	220 °F	(YES)	NO	(YES)	NO	
Zone 4	High Temperature 2	140 °F	(YES)	NO	(YES)	NO	
Zone 7	Low Vacuum	3" WC	(YES)	NO	(YES)	NO	

Do the Auto-Dialer Batteries Need Replaced? YES (NO)

QUARTERLY SSD SYSTEM CHECK - BUILDING A

LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

GAC UNIT MONITORING

1. Are there any signs of corrosion and/or leaks in any of the GAC units?

YES (NO) Comments: _____

2. Are the sample ports in good condition?

(YES) NO Comments: _____

3. Are there any warn spots or holes in the flexible hoses?

YES (NO) Comments: _____

VMP MONITORING

Vapor Pins

1. Are all secure covers in good condition?

(YES) NO Comments: _____

2. Are all secure covers flush with the ground?

(YES) NO Comments: _____

3. Are all vapor pins firmly installed in the concrete slab with little wiggle room?

(YES) NO Comments: _____

4. Are all VMPs properly labeled?

(YES) NO Comments: _____

Classic Vapor Monitoring Points

5. Are all well lids in good condition?

(YES) NO Comments: _____

6. Do all well lids have the proper number of bolts?

(YES) NO Comments: _____

7. Is the tubing inside the point in good condition?

(YES) NO Comments: _____

8. Is the tubing capped?

(YES) NO Comments: _____

QUARTERLY SSD SYSTEM CHECK - BUILDING A

LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

INDOOR AIR FILTER MONITORING

AF-N

Date of quarterly HEPA filter change: 3/28
Date of quarterly GAC filter change: "
Date of quarterly filter sleeve change: "
Was the filter housing cleaned? (YES) NO

AF-NX

Date of quarterly HEPA filter change: 3/28
Date of quarterly GAC filter change: "
Date of quarterly filter sleeve change:
Was the filter housing cleaned? (YES) NO

AF-M

Date of quarterly HEPA filter change: 3/28
Date of quarterly GAC filter change: "
Date of quarterly filter sleeve change:
Was the filter housing cleaned? (YES) NO

AF-MX

Date of quarterly HEPA filter change: 3/28
Date of quarterly GAC filter change: "
Date of quarterly filter sleeve change:
Was the filter housing cleaned? (YES) NO

AF-S

Date of quarterly HEPA filter change: 3/28
Date of quarterly GAC filter change: "
Date of quarterly filter sleeve change:
Was the filter housing cleaned? (YES) NO

AF-SX

Date of quarterly HEPA filter change: 3/28
Date of quarterly GAC filter change: "
Date of quarterly filter sleeve change:
Was the filter housing cleaned? (YES) NO

Personnel's Signature: [signature] Date: 3/28

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 10/4/17 **Time:** 0830 **Personnel:** JMW

1. Was the system running upon arrival?
(YES) NO

2. Were there any alarm conditions upon arrival?
YES (NO)

Comment: _____

3. Is the blower vacuum relief valve open?
YES (NO)

4. Is the dilution valve open?
YES (NO) % Open: _____

5. Are there any leaks or damage to system hoses?
YES (NO)

6. Is there any damage to system components?
YES (NO)

7. Are all locks and zip-ties secure?
(YES) NO

8. Was there a GAC or PPZ change out?
YES (NO) Comment: _____

9. How many GAC and PPZ units are at this location?
GAC: NEW 3 SPENT 0
PPZ: NEW 1 SPENT 0

11. Do these fall to zero when system is turned off?

Flow Gauge	(YES)	NO
Pressure Gauge	(YES)	NO
Vacuum Gauges	(YES)	NO

12. Do the temp. gauges fall when system is turned off?
(YES) NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
32	38	6	162	114	45	180	36500.6

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C			CLOSED			
SSD-23-C	8.82	210	4.58	X	No	
SSD-30-C	20.7	255	5.6	✓		
SSD-26-C	3.89	180	3.9	X		
SSD-31-C	25.2	>MAX	~	✓		
SSD-27-C	0.98	981	21.4	✓		
SSD-32-C	3.41	1088	23.7	X		
SSD-28-C	1.83	1621	35.3	✓		
SSD-33-C	8.82	1156	25.2	✓		
SSD-29-C	17.7 ~~53.7~~	3370	73.5	X	↓	
SSD-34-C	24.9	154	3.4	X		

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	1.88		111-C	0.09	
135-C	1.23		155-C	0.15	
157-C	0.01		133-C	0.64	
113-C	3.62		154-C	0.12	
156-C	0.32		153-C	0.02	
151-C	0.91		158-C	0.04	
126-C	0.00		001-C	0.41	
149-C	0.34		SSD-22-C	0.06	
050-C	0.00		SSD-2-C	0.13	
141-C	-0.34		SSD-4-C	N/A	HVY EQP
127-C	2.16		SSD-24-C	0.19	
150-C	0.03		SSD-3-C	1.10	
152-C	0.13		SSD-25-C	0.18	
060-C	0.33				

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	**C-INFLUENT**	**C-MID GAC**	**C-EFFLUENT**	**Comments**
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	**Contains Water?**	**Water Drained?**	**Volume Drained**	**Drain Valve Closed?**	**Comments**
Moisture Separators					
MS-1	No	-	-	Yes	
MS-2	No	-	-	Yes	
Pipe Sumps					
PS-1	No	-	-	Yes	
PS-2	No	-	-	Yes	
PS-3	No	-	-	Yes	
PS-4	No	-	-	Yes	
PS-5	No	-	-	Yes	
System Sumps					
Exhaust Stack	No	-	-	Yes	
GAC and PPZ Drains					
Lead GAC	No	-	-	Yes	
Lag GAC	No	-	-	Yes	
PPZ	No	-	-	Yes	

13. How many empty drums are on-site? 0

14. How many Bldg. A water drums are on-site? PART FULL 1 FULL 0

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 0 FULL 0

17. Are waste drums labeled and in good condition?

YES NO Comment: _____

18. Is the secondary containment pad in good condition?

YES NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	**Maintenance Conducted**	**Issue Status**
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: _____ 10-4-17 **TIME:** _____

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 10-18-17 **Time:** 1000 **Personnel:** JMW

1. Was the system running upon arrival?
(YES) NO

2. Were there any alarm conditions upon arrival?
YES (NO)

Comment: _____

3. Is the blower vacuum relief valve open?
YES (NO)

4. Is the dilution valve open?
YES (NO) % Open: _____

5. Are there any leaks or damage to system hoses?
YES (NO)

6. Is there any damage to system components?
YES (NO)

7. Are all locks and zip-ties secure?
(YES) NO

8. Was there a GAC or PPZ change out?
YES (NO) Comment: _____

9. How many GAC and PPZ units are at this location?
GAC: NEW 3 SPENT 0
PPZ: NEW 1 SPENT 0

11. Do these fall to zero when system is turned off?

Flow Gauge	YES	NO
Pressure Gauge	YES	NO
Vacuum Gauges	YES	NO

12. Do the temp. gauges fall when system is turned off?
YES NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
30	38	8	~~38~~ 164	112	45	180	3683.8.2

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C			(CLOSED)			
SSD-23-C	13.73	1896	41.33	X	N/A	
SSD-30-C	19.82	231	5.0	✓		
SSD-26-C	3.44	115	2.5	X		
SSD-31-C	22.7	>MAX	~	✓		
SSD-27-C	0.97	957	20.9	✓		
SSD-32-C	2.34	993	21.6	✓		
SSD-28-C	1.55	1520	33.1	✓		
SSD-33-C	8.63	1119	24.4	✓		
SSD-29-C	17.15	3344	72.9	X	✓	
SSD-34-C	24.2	190	4.1	✓		

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	0.83		111-C	0.00	
135-C	0.62		155-C	0.14	
157-C	0.00		133-C	0.61	
113-C	3.46		154-C	0.03	
156-C	0.27		153-C	0.18	
151-C	0.01		158-C	0.01	
126-C	0.01		001-C	0.38	
149-C	0.22		SSD-22-C	0.06	
050-C	0.01		SSD-2-C	0.12	
141-C	0.50		SSD-4-C	N/A	COVERED
127-C	1.69		SSD-24-C	0.17	
150-C	0.02		SSD-3-C	0.25	
152-C	0.03		SSD-25-C	0.91	
060-C	0.30				

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	**C-INFLUENT**	**C-MID GAC**	**C-EFFLUENT**	**Comments**
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	**Contains Water?**	**Water Drained?**	**Volume Drained**	**Drain Valve Closed?**	**Comments**
Moisture Separators					
MS-1	No	-	-	Yes	
MS-2	No	-	-	Yes	
Pipe Sumps					
PS-1	No	-	-	Yes	
PS-2	No	-	-	Yes	
PS-3	No	-	-	Yes	
PS-4	No	-	-	Yes	
PS-5	No	-	-	Yes	
System Sumps					
Exhaust Stack	Yes	Yes	Trace	Yes	
GAC and PPZ Drains					
Lead GAC	No	-	-	Yes	
Lag GAC	No	-	-	Yes	
PPZ	No	-	-	Yes	

13. How many empty drums are on-site? 0

14. How many Bldg. A water drums are on-site? PART FULL 1 FULL 0

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 0 FULL 0

17. Are waste drums labeled and in good condition?

YES NO Comment: _____

18. Is the secondary containment pad in good condition?

YES NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	**Maintenance Conducted**	**Issue Status**
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: _____ 10-18-17 **TIME:** _____

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 11/1/17 **Time:** 0915 **Personnel:** AE/MW

1. Was the system running upon arrival?
(YES) NO

2. Were there any alarm conditions upon arrival?
YES (NO)

Comment: _____

3. Is the blower vacuum relief valve open?
YES (NO)

4. Is the dilution valve open?
YES (NO) % Open: _____

5. Are there any leaks or damage to system hoses?
YES (NO)

6. Is there any damage to system components?
YES (NO)

7. Are all locks and zip-ties secure?
(YES) NO

8. Was there a GAC or PPZ change out?
YES (NO) Comment: _____

9. How many GAC and PPZ units are at this location?
GAC: NEW 3 SPENT 0
PPZ: NEW 1 SPENT 0

11. Do these fall to zero when system is turned off?
Flow Gauge (YES) NO
Pressure Gauge (YES) NO
Vacuum Gauges (YES) NO

12. Do the temp. gauges fall when system is turned off?
(YES) NO

GENERAL SYSTEM MONITORING							
Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
25	36	~~46~~ 11	162	112	46	185	371734

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING						
Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C			CLOSED			
SSD-23-C	12.75	335	7.30			
SSD-30-C	19.07	472	10.3	X		
SSD-26-C	~~2.69~~ 2.69	107	2.3	X		
SSD-31-C	22.7	1489	32.5	✓		
SSD-27-C	0.95	410	8.9	X		
SSD-32-C	2.25	1051	22.9	X		
SSD-28-C	1.99	1441	31.4	✓		
SSD-33-C	7.95	1191	26.0	✓		
SSD-29-C	16.30	3559	77.6	X		
SSD-34-C	22.8	474	10.3	X		

**Flow = Velocity x 0.0218

Locks - 206
Q14 - P19

VMP VACUUM MONITORING					
VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	0.25		111-C	0.00	
135-C	0.13		155-C	0.15	
157-C	0.02		133-C	0.58	
113-C	1.59		154-C	0.06	
156-C	0.24		153-C	0.09	
151-C	0.02		158-C	0.01	
126-C	0.00		001-C	0.34	
149-C	0.15		SSD-22-C	0.04	
050-C	0.09		SSD-2-C	0.12	
141-C	-0.39		SSD-4-C	NA	COVERED
127-C	1.25		SSD-24-C	0.14	
150-C	0.02		SSD-3-C	0.01	
152-C	0.02		SSD-25-C	0.04	
060-C	NA	COVERED			

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	**C-INFLUENT**	**C-MID GAC**	**C-EFFLUENT**	**Comments**
Time	NA	NA	NA	Planned week of 11/6
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	**Contains Water?**	**Water Drained?**	**Volume Drained**	**Drain Valve Closed?**	**Comments**
Moisture Separators					
MS-1	No	-	-	Yes	
MS-2	No	"	"	Yes	
Pipe Sumps					
PS-1	No	"	"	Yes	
PS-2	No	"	"	Yes	
PS-3	No	"	"	Yes	
PS-4	No	"	"	Yes	
PS-5	No	"	"	Yes	
System Sumps					
Exhaust Stack	Yes	YES	TRACE	Yes	
GAC and PPZ Drains					
Lead GAC	No	"	"	Yes	
Lag GAC	No	"	"	Yes	
PPZ	No	-	-	Yes	

13. How many empty drums are on-site? 0

14. How many Bldg. A water drums are on-site? PART FULL 1 FULL 0

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 0 FULL 0

17. Are waste drums labeled and in good condition?

YES NO Comment: _____

18. Is the secondary containment pad in good condition?

YES NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	**Maintenance Conducted**	**Issue Status**
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: M Wilder 11-1-17 **TIME:** _____

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 11/17/17 **Time:** _____ **Personnel:** AE

1. Was the system running upon arrival?
(YES) NO

2. Were there any alarm conditions upon arrival?
YES (NO)

Comment: _____

3. Is the blower vacuum relief valve open?
YES (NO)

4. Is the dilution valve open?
YES (NO) % Open: _____

5. Are there any leaks or damage to system hoses?
YES (NO)

6. Is there any damage to system components?
YES (NO)

7. Are all locks and zip-ties secure?
(YES) NO

8. Was there a GAC or PPZ change out?
YES (NO) Comment: _____

9. How many GAC and PPZ units are at this location?
GAC: NEW _____ SPENT _____
PPZ: NEW _____ SPENT _____

11. Do these fall to zero when system is turned off?
Flow Gauge (YES) NO
Pressure Gauge (YES) NO
Vacuum Gauges (YES) NO

12. Do the temp. gauges fall when system is turned off?
(YES) NO

GENERAL SYSTEM MONITORING							
Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
24	34	10	160	110	46	190	375148

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING						
Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C	~~-5.48~~	~~359~~	CLOSED	N		
SSD-23-C	-10.23	1956	42.64	N	NO	
SSD-30-C	-16.49	388	8.5	N		
SSD-26-C	-1.66	87	1.9	N		
SSD-31-C	-19.43	2,106	45.9	N		
SSD-27-C	-0.96	940	20.5	Y		
SSD-32-C	-2.00	980	21.4	N		
SSD-28-C	-1.41	1,378	30.0	Y		
SSD-33-C	-7.13	729	15.9	Y		
SSD-29-C	-15.03	1,293	28.2	N		
SSD-34-C	-2.09	943	20.6	Y		

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING					
VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	-0.04		111-C	0.00	
135-C	-0.04		155-C	-0.11	
157-C	-0.01		133-C	-0.40	
113-C	-2.63		154-C	-0.03	
156-C	-0.19		153-C	-0.08	
151-C	-0.04		158-C	-0.03	
126-C	0.00		001-C	-0.25	
149-C	-0.16		SSD-22-C	-0.03	
050-C	-0.04		SSD-2-C	-0.08	
141-C	-0.02		SSD-4-C	NA	HVYEQP
127-C	~~-1.05~~ 1.94		SSD-24-C	-0.14	
150-C	-1.05		SSD-3-C	-0.02	
152-C	0.10		SSD-25-C	-0.12	
060-C	N/A	covered			

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time				
Summa Canister ID				
Flow Contr. ID				
Start Vacuum (in. Hg)				
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separators					
MS-1	N	-	-	Y	
MS-2	N	-	-	Y	
Pipe Sumps					
PS-1	N	-	-	Y	
PS-2	N	-	-	Y	
PS-3	N	-	-	Y	
PS-4	N	-	-	Y	
PS-5	N	-	-	Y	
System Sumps					
Exhaust Stack	Y	Y	<0.1 gal	Y	
GAC and PPZ Drains					
Lead GAC	N	-	-	Y	
Lag GAC	N	-	-	Y	
PPZ	N	-	-	Y	

13. How many empty drums are on-site? 0

14. How many Bldg. A water drums are on-site? PART FULL 1 FULL 0

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 0 FULL 0

17. Are waste drums labeled and in good condition?

YES NO Comment: _____

18. Is the secondary containment pad in good condition?

YES NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: _____ 11-17-17 **TIME:** _____

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 11/30/17 **Time:** 1039 **Personnel:** JMW

1. Was the system running upon arrival?
YES NO

2. Were there any alarm conditions upon arrival?
YES NO
Comment: _____

3. Is the blower vacuum relief valve open?
YES NO

4. Is the dilution valve open?
YES NO % Open: _____

5. Are there any leaks or damage to system hoses?
YES NO

6. Is there any damage to system components?
YES NO

7. Are all locks and zip-ties secure?
YES NO

8. Was there a GAC or PPZ change out?
YES NO Comment: _____

9. How many GAC and PPZ units are at this location?
GAC: NEW 3 SPENT 0
PPZ: NEW 1 SPENT 0

11. Do these fall to zero when system is turned off?
Flow Gauge YES NO
Pressure Gauge YES NO
Vacuum Gauges YES NO

12. Do the temp. gauges fall when system is turned off?
YES NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
25	35	10	158	112	48	185	37824.3

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C			CLOSED			
SSD-23-C	10.88	1911	41.66	X	N/A	
SSD-30-C	17.85	310	6.8	X		
SSD-26-C	1.50	120	2.6	X		
SSD-31-C	19.56	2117	46.2	X		
SSD-27-C	1.08	890	19.4	✓		
SSD-32-C	2.16	975	21.3	X		
SSD-28-C	6.83	1404	30.6	✓		
SSD-33-C	6.69	1047	22.8	X		
SSD-29-C	14.84	3082	67.2	X		
SSD-34-C	20.6	117	2.6	X		

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	0.14		111-C	0.00	
135-C	0.19		155-C	0.07	
157-C	1.00		133-C	0.49	
113-C	1.98		154-C	0.02	
156-C	0.19		153-C	0.09	
151-C	0.01		158-C	0.12	
126-C	0.00		001-C	0.22	
149-C	0.20		SSD-22-C	0.13	
050-C	0.00		SSD-2-C	0.07	
141-C	+ 0.39		SSD-4-C	N/A	
127-C	1.36		SSD-24-C	0.11	
150-C	0.00		SSD-3-C	0.00	
152-C	0.01		SSD-25-C	0.01	
060-C	N/A	WW EQP			

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	**C-INFLUENT**	**C-MID GAC**	**C-EFFLUENT**	**Comments**
Time	NA	NA	NA	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	**Contains Water?**	**Water Drained?**	**Volume Drained**	**Drain Valve Closed?**	**Comments**
Moisture Separators					
MS-1	No	-	-	Yes	
MS-2	No	-	-	Yes	
Pipe Sumps					
PS-1	No	-	-	Yes	
PS-2	No	-	-	Yes	
PS-3	No	-	-	Yes	
PS-4	No	-	-	Yes	
PS-5	No	-	-	Yes	
System Sumps					
Exhaust Stack	Yes	Yes	~100mL	Yes	
GAC and PPZ Drains					
Lead GAC	No	-	-	Yes	
Lag GAC	No	-	-	Yes	
PPZ	No	-	-	Yes	

13. How many empty drums are on-site? 0

14. How many Bldg. A water drums are on-site? PART FULL 1 FULL 2

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 0 FULL 1

17. Are waste drums labeled and in good condition?

YES NO Comment: _____

18. Is the secondary containment pad in good condition?

YES NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	**Maintenance Conducted**	**Issue Status**
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: _____ 11/30/17 **TIME:** _____

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 12-12-17 **Time:** 0900 **Personnel:** JMW

1. Was the system running upon arrival?
(YES) NO

2. Were there any alarm conditions upon arrival?
YES (NO)

Comment: _____

3. Is the blower vacuum relief valve open?
YES (NO)

4. Is the dilution valve open?
YES (NO) % Open: _____

5. Are there any leaks or damage to system hoses?
YES (NO)

6. Is there any damage to system components?
YES (NO)

7. Are all locks and zip-ties secure?
(YES) NO

8. Was there a GAC or PPZ change out?
YES (NO) Comment: _____

9. How many GAC and PPZ units are at this location?
GAC: NEW 3 SPENT 0
PPZ: NEW 1 SPENT 0

11. Do these fall to zero when system is turned off?

Flow Gauge	(YES)	NO
Pressure Gauge	(YES)	NO
Vacuum Gauges	(YES)	NO

12. Do the temp. gauges fall when system is turned off?
(YES) NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
24	34	10	152	112	48	185	38110.2

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C			CLOSED			
SSD-23-C	10.93	1948	42.47	N		
SSD-30-C	16.92	236	5.1	Y		
SSD-26-C	~~4803.85~~	89238	5.2	N	+5%	
SSD-31-C	18.59	2291	49.9	N		
SSD-27-C	1.12	875	19.1	N		
SSD-32-C	2.81	946	~~175~~ 20.6	Y		
SSD-28-C	1.90	1317	28.7	Y		
SSD-33-C	6.36	1090	23.8	N		
SSD-29-C	14.34	2968	64.7	N		
SSD-34-C	20.1	320	7.0	N		

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	0.07		111-C	0.00	
135-C	0.06		155-C	0.08	
157-C	0.00		133-C	0.47	
113-C	0.00		154-C	0.02	
156-C	0.12		153-C	0.04	
151-C	0.01		158-C	0.00	
126-C	0.00		001-C	0.17	
149-C	0.13		SSD-22-C	0.07	
050-C	0.00		SSD-2-C	0.05	
141-C	0.07		SSD-4-C	N/A	HVY EQP
127-C	0.86		SSD-24-C	0.19	
150-C	0.00		SSD-3-C	0.00	
152-C	0.01		SSD-25-C	0.00	
060-C	N/A	COVERED			

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	**C-INFLUENT**	**C-MID GAC**	**C-EFFLUENT**	**Comments**
Time	1/2018	1/2018	1/2018	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	**Contains Water?**	**Water Drained?**	**Volume Drained**	**Drain Valve Closed?**	**Comments**
Moisture Separators					
MS-1	No	-	-	Yes	
MS-2	No	-	-	Yes	
Pipe Sumps					
PS-1	No	-	-	Yes	
PS-2	No	-	-	Yes	
PS-3	No	-	-	Yes	
PS-4	No	-	-	Yes	
PS-5	No	-	-	Yes	
System Sumps					
Exhaust Stack	Yes	Yes	Trace	Yes	
GAC and PPZ Drains					
Lead GAC	No	-	-	Yes	
Lag GAC	No	-	-	Yes	
PPZ	No	-	-	Yes	

13. How many empty drums are on-site? 9

14. How many Bldg. A water drums are on-site? PART FULL 0 FULL 2

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 0 FULL 1

17. Are waste drums labeled and in good condition?

YES NO Comment: _____

18. Is the secondary containment pad in good condition?

YES NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	**Maintenance Conducted**	**Issue Status**
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: _____ 12-12-17 **TIME:** _____

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 12-28-17 **Time:** 1015 **Personnel:** JMW

1. **Was the system running upon arrival?** (YES) NO
2. **Were there any alarm conditions upon arrival?** YES (NO)
   Comment: _____
3. **Is the blower vacuum relief valve open?** YES (NO)
4. **Is the dilution valve open?** YES (NO) % Open: _____
5. **Are there any leaks or damage to system hoses?** YES (NO)
6. **Is there any damage to system components?** YES (NO)
7. **Are all locks and zip-ties secure?** (YES) NO
8. **Was there a GAC or PPZ change out?** YES (NO) Comment: _____
9. **How many GAC and PPZ units are at this location?**
   GAC: NEW 3 SPENT 0
   PPZ: NEW 1 SPENT 0
11. **Do these fall to zero when system is turned off?**
    Flow Gauge (YES) NO
    Pressure Gauge (YES) NO
    Vacuum Gauges (YES) NO
12. **Do the temp. gauges fall when system is turned off?** (YES) NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
28	38	10	152	110	56	180	38480.8

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C			(CLOSED)			
SSD-23-C	11.50	2325	50.69	X		
SSD-30-C	20.2	220	4.8	X		
SSD-26-C	11.73	238	5.2	X		
SSD-31-C	35.3	913	19.9	X		
SSD-27-C	1.45	944	20.6	✓		
SSD-32-C	2.69	926	20.2	✓		
SSD-28-C	1.86	1449	31.6	✓		
SSD-33-C	6.68	191	26.9	X		
SSD-29-C	16.62	3461	75.4	X		
SSD-34-C	23.9	185	4.1	X		

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	0.02		111-C	0.00	
135-C	0.04		155-C	0.07	
157-C	0.00		133-C	0.45	
113-C	0.09		154-C	0.02	
156-C	0.05		153-C	0.06	
151-C	0.01		158-C	0.03	
126-C	0.00		001-C	0.12	
149-C	0.04		SSD-22-C	0.02	
050-C	0.00		SSD-2-C	0.05	
141-C	-0.36		SSD-4-C	NA	(COVERED)
127-C	0.57		SSD-24-C	0.06	
150-C	0.09		SSD-3-C	0.01	
152-C	0.02		SSD-25-C	0.00	
060-C	NA	(COVERED)			

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	**C-INFLUENT**	**C-MID GAC**	**C-EFFLUENT**	**Comments**
Time	Week of 1/1			
Summa Canister ID				
Flow Contr. ID				
Start Vacuum (in. Hg)				
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING					
Location	**Contains Water?**	**Water Drained?**	**Volume Drained**	**Drain Valve Closed?**	**Comments**
Moisture Separators					
MS-1	No	-	-	Yes	
MS-2	No	-	-	Yes	
Pipe Sumps					
PS-1	No	-	-	Yes	
PS-2	No	-	-	Yes	
PS-3	No	-	-	Yes	
PS-4	No	-	-	Yes	
PS-5	No	-	-	Yes	
System Sumps					
Exhaust Stack	Yes	Yes	750mL	Yes	
GAC and PPZ Drains					
Lead GAC	No	-	-	Yes	
Lag GAC	No	-	-	Yes	
PPZ	No	-	-	Yes	

13. How many empty drums are on-site? 0

14. How many Bldg. A water drums are on-site? PART FULL 0 FULL 3

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 0 FULL 1

17. Are waste drums labeled and in good condition?

(YES) NO Comment: _____

18. Is the secondary containment pad in good condition?

(YES) NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	**Maintenance Conducted**	**Issue Status**
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: _____ 12-28-17 **TIME:** _____

1-9-18

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 1-9-18 **Time:** 1200 **Personnel:** JMW

1. **Was the system running upon arrival?** (YES) NO
2. **Were there any alarm conditions upon arrival?** YES (NO)
   Comment: _____
3. **Is the blower vacuum relief valve open?** YES (NO)
4. **Is the dilution valve open?** YES (NO) % Open: _____
5. **Are there any leaks or damage to system hoses?** YES (NO)
6. **Is there any damage to system components?** YES (NO)
7. **Are all locks and zip-ties secure?** (YES) NO
8. **Was there a GAC or PPZ change out?** YES (NO) Comment: _____
9. **How many GAC and PPZ units are at this location?**
   GAC: NEW 3 SPENT _____
   PPZ: NEW 1 SPENT _____
11. **Do these fall to zero when system is turned off?**
    Flow Gauge (YES) NO
    Pressure Gauge (YES) NO
    Vacuum Gauges (YES) NO
12. **Do the temp. gauges fall when system is turned off?** (YES) NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
28	39	11	158	110	40	175	38755.2

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C			CLOSED			
SSD-23-C	~~13.65~~	2690	58.64	X		
SSD-30-C	26.7	345	7.5	✓		
SSD-26-C	1.91	265	5.8	X	~20%	
SSD-31-C	4.45	1123	24.5	X	~20%	
SSD-27-C	3.50	1126	24.5	✓		
SSD-32-C	3.06	1255	27.4	✓		
SSD-28-C	2.55	1819	39.7	✓		
SSD-33-C	8.50	1452	31.7	✓		
SSD-29-C	2.16	978	21.3	✓		
SSD-34-C	34.6	301	6.6	✓		

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	0.01		111-C	0.00	
135-C	0.04		155-C	0.06	
157-C	0.00		133-C	0.44	
~~113-C~~ 156	0.02		154-C	0.02	
~~156-C~~ 151	0.01		153-C	0.01	
~~151-C~~ 113	0.03		158-C	0.00	
126-C	0.00		001-C	0.16	
149-C	0.00		SSD-22-C	0.04	
050-C	0.00		SSD-2-C	0.06	
141-C	-0.54		SSD-4-C	NA	COVERED
127-C	0.38		SSD-24-C	0.07	
150-C	0.00		SSD-3-C	0.02	
152-C	0.00		SSD-25-C	0.00	
060-C	NA	COVERED			

1-9-18

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	**C-INFLUENT**	**C-MID GAC**	**C-EFFLUENT**	**Comments**
Time	1156	1205	1211	
Summa Canister ID	09643	11639	10334	
Flow Contr. ID	09958	09569	10930	
Start Vacuum (in. Hg)	-29.1	-29.4	-29.9	
Stop Vacuum (in. Hg)	-4	-4	-4	

SYSTEM CONDENSATE MONITORING					
Location	**Contains Water?**	**Water Drained?**	**Volume Drained**	**Drain Valve Closed?**	**Comments**
Moisture Separators					
MS-1	No	-	-	Yes	
MS-2	No	-	-	Yes	
Pipe Sumps					
PS-1	No	-	-	Yes	
PS-2	No	-	-	Yes	
PS-3	No	-	-	Yes	
PS-4	No	-	-	Yes	
PS-5	No	-	-	Yes	
System Sumps					
Exhaust Stack	Yes	Yes	~0.3L	Yes	
GAC and PPZ Drains					
Lead GAC	No	-	-	Yes	
Lag GAC	No	-	-	Yes	
PPZ	No	-	-	Yes	

13. How many empty drums are on-site? 0

14. How many Bldg. A water drums are on-site? PART FULL 1 FULL 2

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 0 FULL 1

17. Are waste drums labeled and in good condition?

(YES) NO Comment: _____

18. Is the secondary containment pad in good condition?

(YES) NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	**Maintenance Conducted**	**Issue Status**
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: _____ 1-9-18 **TIME:** _____

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 1-23-18 **Time:** 1015 **Personnel:** JMW

1. Was the system running upon arrival?
(YES) NO

2. Were there any alarm conditions upon arrival?
YES (NO)

Comment: _____

3. Is the blower vacuum relief valve open?
YES (NO)

4. Is the dilution valve open?
YES (NO) % Open: _____

5. Are there any leaks or damage to system hoses?
YES (NO)

6. Is there any damage to system components?
YES (NO)

7. Are all locks and zip-ties secure?
(YES) NO

8. Was there a GAC or PPZ change out?
YES (NO) Comment: _____

9. How many GAC and PPZ units are at this location?
GAC: NEW 3 SPENT 0
PPZ: NEW 1 SPENT 0

11. Do these fall to zero when system is turned off?
Flow Gauge (YES) NO
Pressure Gauge (YES) NO
Vacuum Gauges (YES) NO

12. Do the temp. gauges fall when system is turned off?
(YES) NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
39	45	6	170	112	38	170	39091.1

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C			CLOSED			
SSD-23-C	14.98	2490	54.06	X		
SSD-30-C	22.9	447	10.4	X		
SSD-26-C	4.33	380	6.15	X		
SSD-31-C	5.31	1125	24.5	X		
SSD-27-C	2.62	1115	24.3	✓		
SSD-32-C	2.22	1987	43.3	X		
SSD-28-C	1.85	1724	37.6	✓		
SSD-33-C	N/A					No Access
SSD-29-C	2.23	969	21.1	X		
SSD-34-C	33.7	204	4.4	X		

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	0.01		111-C	0.00	
135-C	0.16		155-C	0.19	
157-C	0.00		133-C	0.59	
113-C	0.25		154-C	0.01	
156-C	0.04		153-C	0.02	
151-C	0.00		158-C	0.06	
126-C	0.00		001-C	0.07	
149-C	0.01		SSD-22-C	0.02	
050-C	0.00		SSD-2-C	0.09	
141-C	0.36		SSD-4-C	N/A	COVERED
127-C	NA	No Access	SSD-24-C	0.12	
150-C	0.00		SSD-3-C	0.00	
152-C	0.01		SSD-25-C	0.00	
060-C	NA	COVERED			

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	**C-INFLUENT**	**C-MID GAC**	**C-EFFLUENT**	**Comments**
Time	NA	NA	NA	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	**Contains Water?**	**Water Drained?**	**Volume Drained**	**Drain Valve Closed?**	**Comments**
Moisture Separators					
MS-1	No	~	~	Yes	
MS-2	No	~	~	Yes	
Pipe Sumps					
PS-1	No	~	~	Yes	
PS-2	No	~	~	Yes	
PS-3	No	~	~	Yes	
PS-4	No	~	~	Yes	
PS-5	No	~	~	Yes	
System Sumps					
Exhaust Stack	Yes	~	0.5	Yes	
GAC and PPZ Drains					
Lead GAC	No	~	~	Yes	
Lag GAC	No	~	~	Yes	
PPZ	No	~	~	Yes	

13. How many empty drums are on-site? 0

14. How many Bldg. A water drums are on-site? PART FULL 0 FULL 3

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 0 FULL 1

17. Are waste drums labeled and in good condition?

(YES) NO Comment: _____

18. Is the secondary containment pad in good condition?

(YES) NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	**Maintenance Conducted**	**Issue Status**
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: _____ 1-23-18 **TIME:** _____

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 2-8-18 **Time:** 1015 **Personnel:** JMW

1. Was the system running upon arrival?
(YES) NO

2. Were there any alarm conditions upon arrival?
YES (NO)
Comment: _____

3. Is the blower vacuum relief valve open?
YES (NO)

4. Is the dilution valve open?
YES (NO) % Open: _____

5. Are there any leaks or damage to system hoses?
YES (NO)

6. Is there any damage to system components?
YES (NO)

7. Are all locks and zip-ties secure?
(YES) NO

8. Was there a GAC or PPZ change out?
YES (NO) Comment: _____

9. How many GAC and PPZ units are at this location?
GAC: NEW 3 SPENT 0
PPZ: NEW 1 SPENT 0

11. Do these fall to zero when system is turned off?

Flow Gauge	(YES)	NO
Pressure Gauge	(YES)	NO
Vacuum Gauges	(YES)	NO

12. Do the temp. gauges fall when system is turned off?
(YES) NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
40	47	7	163	112	39	170	39475.2

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C			CLOSED			
SSD-23-C	2621	4,70	57,14	X		
SSD-30-C	352	2,71	7,7	✓		
SSD-26-C	382	3,84	8,3	X		
SSD-31-C	1060	5,58	23,1	X		
SSD-27-C	1164	1,95	25,4	✓		
SSD-32-C	1378	2,27	30,0	X		
SSD-28-C	1808	2,21	39,4	✓		
SSD-33-C	1516	7,21	33,0	✓		
SSD-29-C	953 OVR	2,35	20,8	X		
SSD-34-C	175	3,53	3,8	X		

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	-0,12		111-C	0,00	
135-C	0,10		155-C	0,06	
157-C	0,00		133-C	0,60	
113-C	0,22		154-C	0,03	
156-C	0,14		153-C	0,02	
151-C	0,02		158-C	0,00	
126-C	0,00		001-C	0,19	
149-C	0,02		SSD-22-C	0,02	
050-C	0,00		SSD-2-C	0,07	
141-C	-0,56		SSD-4-C	0,7	COVERED
127-C	0,71		SSD-24-C	0,1	
150-C	0,00		SSD-3-C	0,01	
152-C	0,01		SSD-25-C	0,00	
060-C	N/A	COVERED			

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	**C-INFLUENT**	**C-MID GAC**	**C-EFFLUENT**	**Comments**
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	**Contains Water?**	**Water Drained?**	**Volume Drained**	**Drain Valve Closed?**	**Comments**
Moisture Separators					
MS-1	Yes | (No)	Yes | (No)	–	(Yes) | No	
MS-2	Yes | (No)	Yes | (No)	–	(Yes) | No	
Pipe Sumps					
PS-1	Yes | (No)	Yes | (No)	–	(Yes) | No	
PS-2	Yes | (No)	Yes | (No)	–	(Yes) | No	
PS-3	Yes | (No)	Yes | (No)	–	(Yes) | No	
PS-4	Yes | (No)	Yes | (No)	–	(Yes) | No	
PS-5	Yes | (No)	Yes | (No)	–	(Yes) | No	
System Sumps					
Exhaust Stack	(Yes) | No	(Yes) | No		(Yes) | No	
GAC and PPZ Drains					
Lead GAC	Yes | (No)	Yes | (No)	–	(Yes) | No	
Lag GAC	Yes | (No)	Yes | (No)	–	(Yes) | No	
PPZ	Yes | (No)	Yes | (No)	–	(Yes) | No	

13. How many empty drums are on-site? 0

14. How many Bldg. A water drums are on-site? PART FULL 0 FULL 3

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 0 FULL 1

17. Are waste drums labeled and in good condition?

(YES) NO Comment: _____

18. Is the secondary containment pad in good condition?

(YES) NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	**Maintenance Conducted**	**Issue Status**
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: J. Walker 2-8-18 **TIME:** _____

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 2-23-18 **Time:** 1015 **Personnel:** JMW

1. Was the system running upon arrival?
YES NO

2. Were there any alarm conditions upon arrival?
YES NO
Comment: _____

3. Is the blower vacuum relief valve open?
YES NO

4. Is the dilution valve open?
YES NO % Open: _____

5. Are there any leaks or damage to system hoses?
YES NO

6. Is there any damage to system components?
YES NO

7. Are all locks and zip-ties secure?
YES NO

8. Was there a GAC or PPZ change out?
YES NO Comment: _____

9. How many GAC and PPZ units are at this location?
GAC: NEW 3 SPENT 0
1 SPENT 0

11. Do these fall to zero when system is turned off?
Flow Gauge YES NO
Pressure Gauge YES NO
Vacuum Gauges YES NO
replaced 4-10-18

12. Do the temp. gauges fall when system is turned off?
YES NO

13. Was the system running upon departure?
YES NO

GENERAL SYSTEM MONITORING							
Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
40	49	9	155	88	36	180	39715.8

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING						
Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C			CLOSED			
SSD-23-C	16.64	2471	53.87	X		
SSD-30-C	26.5	390	8.5	X		
SSD-26-C	7.23	294	6.4	X		
SSD-31-C	7.31	1052	22.9	X		
SSD-27-C	1.71	1223	26.7 ~~29.2~~	X		
SSD-32-C	2.47	1341	29.2	X		
SSD-28-C	1.93	1850	40.3	X		
SSD-33-C	8.07	1588	34.6	X		
SSD-29-C	2.45	966	21.1	X		
SSD-34-C	36.1	321	7.0	X		

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING					
VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	0.35		111-C	0.00	
135-C	0.00		155-C	0.15	
157-C	0.30		~~133-C~~ 153	0.02	
113-C	0.85		~~154-C~~ 154	0.03	
156-C	0.09		~~153-C~~ 133	0.49	
151-C	0.01		158-C	0.00	
126-C	0.00		001-C	0.18	
149-C	0.02		SSD-22-C	0.02	
050-C	0.00		SSD-2-C	0.04	
141-C	-0.56		SSD-4-C	NA	
127-C	1.07		SSD-24-C	0.14	
150-C	0.00		SSD-3-C	0.01	
152-C	0.02		SSD-25-C	0.02	
060-C	0.31				

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	**C-INFLUENT**	**C-MID GAC**	**C-EFFLUENT**	**Comments**
Time	N/A	N/A	N/A	3/1
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING					
Location	**Contains Water?**	**Water Drained?**	**Volume Drained**	**Drain Valve Closed?**	**Comments**
Moisture Separators					
MS-1	Yes | No	Yes | No	–	Yes | No	
MS-2	Yes | No	Yes | No	–	Yes | No	
Pipe Sumps					
PS-1	Yes | No	Yes | No	–	Yes | No	
PS-2	Yes | No	Yes | No	–	Yes | No	
PS-3	Yes | No	Yes | No	–	Yes | No	
PS-4	Yes | No	Yes | No	–	Yes | No	
PS-5	Yes | No	Yes | No	–	Yes | No	
System Sumps					
Exhaust Stack	Yes | No	Yes | No		Yes | No	
GAC and PPZ Drains					
Lead GAC	Yes | No	Yes | No	–	Yes | No	
Lag GAC	Yes | No	Yes | No	–	Yes | No	
PPZ	Yes | No	Yes | No	–	Yes | No	

13. How many empty drums are on-site? 0

14. How many Bldg. A water drums are on-site? PART FULL 0 FULL 0

15. How many Bldg. C water drums are on-site? PART FULL 0 FULL 0

16. How many filter drums are on-site? PART FULL 0 FULL 0

17. Are waste drums labeled and in good condition?

YES NO Comment: _____

18. Is the secondary containment pad in good condition?

YES NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	**Maintenance Conducted**	**Issue Status**
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: N. Wells 2-23-2018 **TIME:** _____

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 3-8-18 Time: 1015 Personnel: OMW

1. Was the system running upon arrival?
   (YES) NO
2. Were there any alarm conditions upon arrival?
   YES (NO)
   Comment: _____
3. Is the blower vacuum relief valve open?
   YES (NO)
4. Is the dilution valve open?
   YES (NO) % Open: _____
5. Are there any leaks or damage to system hoses?
   YES (NO)
6. Is there any damage to system components?
   YES (NO)
7. Are all locks and zip-ties secure?
   (YES) NO
8. Was there a GAC or PPZ change out?
   YES (NO) Comment: _____
9. How many GAC and PPZ units are at this location?
   GAC: NEW 3 SPENT 0
   PPZ: NEW 1 SPENT 0
11. Do these fall to zero when system is turned off?
   Flow Gauge (YES) NO
   Pressure Gauge (YES) NO
   Vacuum Gauges (YES) NO
12. Do the temp. gauges fall when system is turned off?
   (YES) NO
13. Was the system running upon departure?
   (YES) NO

GENERAL SYSTEM MONITORING							
Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
40	48	8	148	90	~34	180	4002 4.8

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING						
Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C			CLOSED			
SSD-23-C	15.40	1099	23.96	X		
SSD-30-C	29.5	464	10.1	X		
SSD-26-C	6.68	295	6.4	X		
SSD-31-C	6.76	1078	23.5	X		
SSD-27-C	1.48	1184	25.8	X		
SSD-32-C	2.61	1355	29.5	X		
SSD-28-C	2.03	1863	40.6	X		
SSD-33-C	1.50	1545	33.7	X		
SSD-29-C	2.46	949	20.7	X		
SSD-34-C	35.4	220	4.8	X		

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING					
VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	0.04		111-C	0.09	
135-C	0.17		155-C	0.14	
157-C	0.06		133-C	0.41	
113-C	0.60		154-C	0.04	
156-C	0.10		153-C	0.06	
151-C	0.01		158-C	0.01	
126-C	0.00		001-C	-0.17	
149-C	0.03		SSD-22-C	0.03	
050-C	0.00		SSD-2-C	0.08	
141-C	-0.03		SSD-4-C	NA	COVERED
127-C	0.99		SSD-24-C	0.11	
150-C	0.91		SSD-3-C	0.01	
152-C	0.01		SSD-25-C	0.14	
060-C	0.33				

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SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	**C-INFLUENT**	**C-MID GAC**	**C-EFFLUENT**	**Comments**
Time	1450/1452	1444/1446	1440/1442	
Summa Canister ID	10788	21765	11285	
Flow Contr. ID	17655/11594	10104	10911	
Start Vacuum (in. Hg)	29	31	29	
Stop Vacuum (in. Hg)	2	3	1	

SYSTEM CONDENSATE MONITORING					
Location	**Contains Water?**	**Water Drained?**	**Volume Drained**	**Drain Valve Closed?**	**Comments**
Moisture Separators					
MS-1	Yes | No	Yes | No	~2 Gal	Yes | No	
MS-2	Yes | No	Yes | No	DRY	Yes | No	
Pipe Sumps					
PS-1	Yes | No	Yes | No	-	Yes | No	
PS-2	Yes | No	Yes | No	-	Yes | No	
PS-3	Yes | No	Yes | No	-	Yes | No	
PS-4	Yes | No	Yes | No	-	Yes | No	
PS-5	Yes | No	Yes | No	-	Yes | No	
System Sumps					
Exhaust Stack	Yes | No	Yes | No	Trace	Yes | No	
GAC and PPZ Drains					
Lead GAC	Yes | No	Yes | No	-	Yes | No	
Lag GAC	Yes | No	Yes | No	-	Yes | No	
PPZ	Yes | No	Yes | No	-	Yes | No	

13. How many empty drums are on-site? 0

14. How many Bldg. A water drums are on-site? PART FULL 1 FULL 1

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 0 FULL 0

17. Are waste drums labeled and in good condition?

YES NO Comment: _____

18. Is the secondary containment pad in good condition?

YES NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	**Maintenance Conducted**	**Issue Status**
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: _____ **TIME:** 3/8

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

3-20-18 Time: 1015 Personnel: JMW

Was the system running upon arrival? (YES) NO

2. Were there any alarm conditions upon arrival? YES (NO)

Comment: _____

3. Is the blower vacuum relief valve open? YES (NO)

4. Is the dilution valve open? YES (NO) % Open: _____

5. Are there any leaks or damage to system hoses? YES (NO)

6. Is there any damage to system components? YES (NO)

7. Are all locks and zip-ties secure? (YES) NO

8. Was there a GAC or PPZ change out? YES (NO) Comment: _____

9. How many GAC and PPZ units are at this location?

GAC: NEW 3 SPENT 0

NEW 1 SPENT 0

11. Do these fall to zero when system is turned off?

Flow Gauge	(YES)	NO
Pressure Gauge	(YES)	NO
Vacuum Gauges	(YES)	NO

12. Do the temp. gauges fall when system is turned off? (YES) NO

13. Was the system running upon departure? (YES) NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
40	48	8	158	88	34	180	4031.4

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C			CLOSED			
SSD-23-C	15.64	2464	53.72	X		
SSD-30-C	23.2	282	6.1	X		
SSD-26-C	6.13	380	8.3	X		
SSD-31-C	6.75	1022	22.3	X		
SSD-27-C	1.41	1610	35.5	X		
SSD-32-C	2.54	1304	28.4	X		
SSD-28-C	6.28	1782	38.8	X		
SSD-33-C	7.31	1568	34.2	X		
SSD-29-C	2.46	943	20.6	X		
SSD-34-C	35.7	210	4.6	X		

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	0.02		111-C	0.00	
135-C	0.08		155-C	0.17	
157-C	NA	HVY EQP	133-C	0.62	
113-C	0.54		154-C	0.02	
156-C	0.07		153-C	0.10	
151-C	0.01		158-C	0.00	
126-C	0.00		001-C	0.24	
149-C	0.03		SSD-22-C	0.01	
050-C	0.01		SSD-2-C	0.06	
141-C	0.82		SSD-4-C	NA	CONCRETE
127-C	0.15		SSD-24-C	0.24	
150-C	0.00		SSD-3-C	0.01	
152-C	0.00		SSD-25-C	0.29	
060-C	0.58				

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time	NA	NA	NA	5/1
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓		

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separators					
MS-1	Yes | No	Yes | No	-	Yes | No	
MS-2	Yes | No	Yes | No	-	Yes | No	
Pipe Sumps					
PS-1	Yes | No	Yes | No	-	Yes | No	
PS-2	Yes | No	Yes | No	-	Yes | No	
PS-3	Yes | No	Yes | No	-	Yes | No	
PS-4	Yes | No	Yes | No	-	Yes | No	
PS-5	Yes | No	Yes | No	-	Yes | No	
System Sumps					
Exhaust Stack	Yes | No	Yes | No	~700mL	Yes | No	
GAC and PPZ Drains					
Lead GAC	Yes | No	Yes | No	-	Yes | No	
Lag GAC	Yes | No	Yes | No	-	Yes | No	
PPZ	Yes | No	Yes | No	-	Yes | No	

13. How many empty drums are on-site? 0

14. How many Bldg. A water drums are on-site? PART FULL 0 FULL 3

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 0 FULL 0

17. Are waste drums labeled and in good condition?

YES NO Comment: _____

18. Is the secondary containment pad in good condition?

YES NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: M Walker **TIME:** 3/20

QUARTERLY SSD SYSTEM CHECK - BUILDING C

LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Date: 12-12-17 **Time:** 0715 **Quarter:** 4 **Personnel:** JMW, MS

GENERAL SYSTEM

Checked System Components? (YES) NO Comments: _____

Checked System Pipes for Leaks? (YES) NO Comments: _____

Visually Inspected Air Filter? (YES) NO Need Replaced? YES (NO)
(replace filter when AP = 2-3 in. Hg)

Visually Inspected Intake Air Filter? (YES) NO Need Replaced? YES (NO)

Checked Vacuum Relief Valve? (YES) NO Comments: _____

Measured and Recorded Amperage Draw on Blower? Yellow = 12.00 Orange = 11.81 Brown = 11.98

Are all components returned to system operating position? (YES) NO

Vacuumed dirt/dust from Heat Exchanger vent (YES) NO

Cleaned System and Area Around System? (YES) NO Comments: _____

Checked that Fire Extinguisher Near System? (YES) NO

SYSTEM ALARM SWITCHES AND AUTO-DIALER

Checked Post-Blower Temp Switch (YES) NO Did Auto-Dialer Indicate Zone 1 Alarm? (YES) NO
Limit: 215 °F

Checked Post-HEX Temp Switch? (YES) NO Did Auto-Dialer Indicate Zone 2 Alarm? (YES) NO
Limit: 140 °F

Checked MS-1 Water Level Switch? (YES) NO Did Auto-Dialer Indicate Zone 3 Alarm? (YES) NO

Checked MS-2 Water Level Switch? (YES) NO Did Auto-Dialer Indicate Zone 4 Alarm? (YES) NO

Checked High-Pressure Switch? (YES) NO Did Auto-Dialer Indicate Zone 5 Alarm? (YES) NO
Limit: 60" WC

Checked Low-Vacuum Switch? (YES) NO Did Auto-Dialer Indicate Zone 6 Alarm? (YES) NO
Limit: 10" WC

Do the Auto-Dialer Batteries Need Replaced? YES (NO)

GRANULAR ACTIVATED-CARBON (GAC) & POTASSIUM PERMANGANATE ZEOLITE (PPZ) UNITS

Checked GAC Units for Corrosion and Leaks? YES NO Comments: _____

Checked Condition of Sample Ports? YES NO Comments: _____

Number of used GAC/PPZ Units On-site: 0 / 0 Contain Non-Haz Waste Labels? YES NO

Number of Unused GAC/PPZ Units On-site: 3 / 1

VAPOR MONITORING POINTS (VMPs)

Checked Condition of Well Lids and Bolts? YES NO Comments: _____

Checked Condition of Tubing and Seal? YES NO Comments: _____

ADDITIONAL COMMENTS

_____

_____

Personnel's Signature: [signature] Date: 12/12/17

QUARTERLY SSD SYSTEM CHECK - BUILDING C

LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Date: 3/28/18 **Time:** 1230 **Quarter:** 1 **Personnel:** JMW

GENERAL SYSTEM

Checked System Components? (YES) NO Comments: _____

Checked System Pipes for Leaks? (YES) NO Comments: _____

Visually Inspected Air Filter? (YES) NO Need Replaced? YES (NO)
(replace filter when AP = 2-3 in. Hg)

Visually Inspected Intake Air Filter? (YES) NO Need Replaced? YES (NO)

Checked Vacuum Relief Valve? (YES) NO Comments: _____

Measured and Recorded Amperage Draw on Blower? Yellow = ~~10.5~~ 11.5 / 12.87 Orange = 12.5 / 12.30 Brown = ~~10.79~~ / 13.95

Are all components returned to system operating position? YES NO

Vacuumed dirt/dust from Heat Exchanger vent (YES) NO

Cleaned System and Area Around System? (YES) NO Comments: _____

Checked that Fire Extinguisher Near System? (YES) NO

SYSTEM ALARM SWITCHES AND AUTO-DIALER

Checked Post-Blower Temp Switch? (YES) NO Did Auto-Dialer Indicate Zone 1 Alarm? (YES) NO
Limit: 215 °F

Checked Post-HEX Temp Switch? (YES) NO Did Auto-Dialer Indicate Zone 2 Alarm? (YES) NO
Limit: 140 °F

Checked MS-1 Water Level Switch? (YES) NO Did Auto-Dialer Indicate Zone 3 Alarm? (YES) NO

Checked MS-2 Water Level Switch? (YES) NO Did Auto-Dialer Indicate Zone 4 Alarm? (YES) NO

Checked High-Pressure Switch? (YES) NO Did Auto-Dialer Indicate Zone 5 Alarm? (YES) NO
Limit: 60" WC

Checked Low-Vacuum Switch? (YES) NO Did Auto-Dialer Indicate Zone 6 Alarm? (YES) NO
Limit: 10" WC

Do the Auto-Dialer Batteries Need Replaced? YES (NO)

GRANULAR ACTIVATED-CARBON (GAC) & POTASSIUM PERMANGANATE ZEOLITE (PPZ) UNITS

Checked GAC Units for Corrosion and Leaks? (YES) NO Comments: _____

Checked Condition of Sample Ports? (YES) NO Comments: _____

Number of used GAC/PPZ Units On-site: 0 / 0 Contain Non-Haz Waste Labels? YES NO NA

Number of Unused GAC/PPZ Units On-site: 3 / 1

VAPOR MONITORING POINTS (VMPs)

Checked Condition of Well Lids and Bolts? (YES) NO Comments: _____

Checked Condition of Tubing and Seal? (YES) NO Comments: _____

ADDITIONAL COMMENTS

_____

_____

Personnel's Signature: _____ Date: 3/28/18

APPENDIX B—ANALYTICAL REPORTS FOR SYSTEM SAMPLES

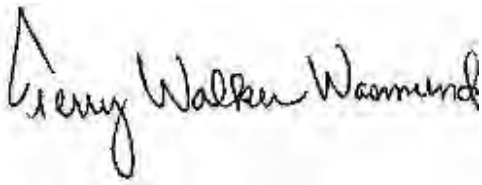
ANALYTICAL REPORT

Job Number: 140-9485-1

Job Description: LMC MRC / MRC BLDG-A

For:
Tetra Tech GEO
51 Franklin Street
Suite 400
Annapolis, MD 21401

Attention: Peter Rich



Approved for release.
Terry Walker Wasmund
Project Manager II
10/18/2017 2:07 PM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
10/18/2017
Revision: 1

cc: Belssi Chang
Amy Thomson
Michael Wilks

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Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-9485-1
Revised 10/18/17

Revision Note: This report has been revised per client request. The client requested that sample IDs be reversed for samples BLDG-A MID-GAC and BLDG-A Influent. The client stated the samples had been switched in the field.

Receipt
The samples were received on 10/5/2017 at 9:40 AM. The samples arrived in good condition and properly preserved.

Air - GC/MS VOA - Method TO-15 LL
EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

The continuing calibration verification (CCV) associated with batch 140-15018 exhibited % difference of > 30% for 2-hexanone, 2-butanone (MEK), 4-methyl-2-pentanone (MIBK), methyl methacrylate and/or naphthalene; however, the results were within the LCS acceptance limits. The EPA method requires that all target analytes in the continuing calibration verification standard be within 30% difference from the initial calibration. According to the laboratory standard operating procedure, the continuing calibration is acceptable if it meets the laboratory control sample acceptance criteria.

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

Comments
No additional comments.

Detection Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC / MRC BLDG-A

TestAmerica Job ID: 140-9485-1

Client Sample ID: BLDG-A EFFLUENT — Lab Sample ID: 140-9485-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.52		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.45		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	30		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.53		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	5.4		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	26		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.96	J	1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.1		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.56		0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	35		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	4.6		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.67	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.8		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	2.2		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	120		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.6		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	22		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	100		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.3	J	3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	4.0		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	2.2		1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	190		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	25		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.71	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.9	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-A INFLUENT — Lab Sample ID: 140-9485-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	6.8		2.0	0.58	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.72	J	2.0	0.38	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	13		2.0	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	2.6		2.0	0.25	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	17		2.0	0.35	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	4.0	J	5.0	3.3	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	54		2.0	0.30	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	140		1.0	0.35	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	22		6.4	1.8	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	2.5	J	7.1	1.3	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	52		7.9	2.4	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	10		8.1	1.0	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	66		7.9	1.4	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	14	J	17	11	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	290		11	1.6	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	750		5.4	1.9	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BLDG-A MID-GAC

Lab Sample ID: 140-9485-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.28	J	0.80	0.23	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.68	J	0.80	0.15	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.47	J	0.80	0.15	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	19		0.80	0.24	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.51	J	0.80	0.27	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	3.4		0.80	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	19		0.80	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	2.4		2.0	1.3	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.43	J	0.80	0.20	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	52		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.19	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.89	J	2.6	0.73	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	2.4	J	2.8	0.53	ug/m3	1		TO 15 LL	Total/NA
Chloroform	2.3	J	3.9	0.73	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	75		3.2	0.95	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.5	J	4.0	1.3	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	14		3.2	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	77		3.2	0.56	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	8.3		6.9	4.5	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	1.7	J	3.2	0.79	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	280		4.4	0.65	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	1.0	J	2.1	0.75	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BLDG-A EFFLUENT

Lab Sample ID: 140-9485-1

Date Collected: 10/04/17 12:20

Matrix: Air

Date Received: 10/05/17 09:40

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			10/07/17 18:36	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			10/07/17 18:36	1
Chlorodifluoromethane	**0.52**		0.40	0.075	ppb v/v			10/07/17 18:36	1
Chloroform	**0.45**		0.40	0.075	ppb v/v			10/07/17 18:36	1
cis-1,2-Dichloroethene	**30**		0.40	0.12	ppb v/v			10/07/17 18:36	1
Dichlorodifluoromethane	**0.53**		0.40	0.14	ppb v/v			10/07/17 18:36	1
1,1-Dichloroethane	**5.4**		0.40	0.050	ppb v/v			10/07/17 18:36	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			10/07/17 18:36	1
1,1-Dichloroethene	**26**		0.40	0.070	ppb v/v			10/07/17 18:36	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			10/07/17 18:36	1
Methylene Chloride	**0.96**	**J**	1.0	0.65	ppb v/v			10/07/17 18:36	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			10/07/17 18:36	1
Naphthalene	ND		0.20	0.20	ppb v/v			10/07/17 18:36	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			10/07/17 18:36	1
Toluene	**1.1**		0.60	0.60	ppb v/v			10/07/17 18:36	1
trans-1,2-Dichloroethene	**0.56**		0.40	0.10	ppb v/v			10/07/17 18:36	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			10/07/17 18:36	1
1,1,1-Trichloroethane	**35**		0.40	0.060	ppb v/v			10/07/17 18:36	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			10/07/17 18:36	1
Trichloroethene	**4.6**		0.20	0.070	ppb v/v			10/07/17 18:36	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			10/07/17 18:36	1
1,2,4-Trimethylbenzene	**0.14**	**J**	0.40	0.13	ppb v/v			10/07/17 18:36	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			10/07/17 18:36	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			10/07/17 18:36	1
Xylenes, Total	**0.67**	**J**	0.80	0.12	ppb v/v			10/07/17 18:36	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			10/07/17 18:36	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			10/07/17 18:36	1
Chlorodifluoromethane	**1.8**		1.4	0.27	ug/m3			10/07/17 18:36	1
Chloroform	**2.2**		2.0	0.37	ug/m3			10/07/17 18:36	1
cis-1,2-Dichloroethene	**120**		1.6	0.48	ug/m3			10/07/17 18:36	1
Dichlorodifluoromethane	**2.6**		2.0	0.67	ug/m3			10/07/17 18:36	1
1,1-Dichloroethane	**22**		1.6	0.20	ug/m3			10/07/17 18:36	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			10/07/17 18:36	1
1,1-Dichloroethene	**100**		1.6	0.28	ug/m3			10/07/17 18:36	1
Ethylbenzene	ND		1.7	0.59	ug/m3			10/07/17 18:36	1
Methylene Chloride	**3.3**	**J**	3.5	2.3	ug/m3			10/07/17 18:36	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			10/07/17 18:36	1
Naphthalene	ND		1.0	1.0	ug/m3			10/07/17 18:36	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			10/07/17 18:36	1
Toluene	**4.0**		2.3	2.3	ug/m3			10/07/17 18:36	1
trans-1,2-Dichloroethene	**2.2**		1.6	0.40	ug/m3			10/07/17 18:36	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			10/07/17 18:36	1
1,1,1-Trichloroethane	**190**		2.2	0.33	ug/m3			10/07/17 18:36	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			10/07/17 18:36	1
Trichloroethene	**25**		1.1	0.38	ug/m3			10/07/17 18:36	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			10/07/17 18:36	1
1,2,4-Trimethylbenzene	**0.71**	**J**	2.0	0.61	ug/m3			10/07/17 18:36	1

Client Sample ID: BLDG-A EFFLUENT

Lab Sample ID: 140-9485-1

Date Collected: 10/04/17 12:20

Matrix: Air

Date Received: 10/05/17 09:40

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			10/07/17 18:36	1
Vinyl chloride	ND		0.51	0.37	ug/m3			10/07/17 18:36	1
Xylenes, Total	**2.9**	**J**	3.5	0.52	ug/m3			10/07/17 18:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*60 - 140*		*10/07/17 18:36*	*1*

Client Sample ID: BLDG-A INFLUENT

Lab Sample ID: 140-9485-2

Date Collected: 10/04/17 12:28

Matrix: Air

Date Received: 10/05/17 09:40

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**6.8**		2.0	0.58	ppb v/v			10/07/17 19:19	1
Carbon tetrachloride	ND		2.0	0.38	ppb v/v			10/07/17 19:19	1
Chlorodifluoromethane	**0.72**	**J**	2.0	0.38	ppb v/v			10/07/17 19:19	1
Chloroform	ND		2.0	0.38	ppb v/v			10/07/17 19:19	1
cis-1,2-Dichloroethene	**13**		2.0	0.60	ppb v/v			10/07/17 19:19	1
Dichlorodifluoromethane	ND		2.0	0.68	ppb v/v			10/07/17 19:19	1
1,1-Dichloroethane	**2.6**		2.0	0.25	ppb v/v			10/07/17 19:19	1
1,2-Dichloroethane	ND		2.0	0.48	ppb v/v			10/07/17 19:19	1
1,1-Dichloroethene	**17**		2.0	0.35	ppb v/v			10/07/17 19:19	1
Ethylbenzene	ND		2.0	0.68	ppb v/v			10/07/17 19:19	1
Methylene Chloride	**4.0**	**J**	5.0	3.3	ppb v/v			10/07/17 19:19	1
Methyl tert-butyl ether	ND		10	1.7	ppb v/v			10/07/17 19:19	1
Naphthalene	ND		1.0	1.0	ppb v/v			10/07/17 19:19	1
Tetrachloroethene	ND		2.0	0.40	ppb v/v			10/07/17 19:19	1
Toluene	ND		3.0	3.0	ppb v/v			10/07/17 19:19	1
trans-1,2-Dichloroethene	ND		2.0	0.50	ppb v/v			10/07/17 19:19	1
1,2,4-Trichlorobenzene	ND		2.0	0.98	ppb v/v			10/07/17 19:19	1
1,1,1-Trichloroethane	**54**		2.0	0.30	ppb v/v			10/07/17 19:19	1
1,1,2-Trichloroethane	ND		2.0	0.53	ppb v/v			10/07/17 19:19	1
Trichloroethene	**140**		1.0	0.35	ppb v/v			10/07/17 19:19	1
1,2,3-Trimethylbenzene	ND		2.0	0.85	ppb v/v			10/07/17 19:19	1
1,2,4-Trimethylbenzene	ND		2.0	0.63	ppb v/v			10/07/17 19:19	1
1,3,5-Trimethylbenzene	ND		2.0	0.65	ppb v/v			10/07/17 19:19	1
Vinyl chloride	ND		1.0	0.73	ppb v/v			10/07/17 19:19	1
Xylenes, Total	ND		4.0	0.60	ppb v/v			10/07/17 19:19	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**22**		6.4	1.8	ug/m3			10/07/17 19:19	1
Carbon tetrachloride	ND		13	2.4	ug/m3			10/07/17 19:19	1
Chlorodifluoromethane	**2.5**	**J**	7.1	1.3	ug/m3			10/07/17 19:19	1
Chloroform	ND		9.8	1.8	ug/m3			10/07/17 19:19	1
cis-1,2-Dichloroethene	**52**		7.9	2.4	ug/m3			10/07/17 19:19	1
Dichlorodifluoromethane	ND		9.9	3.3	ug/m3			10/07/17 19:19	1
1,1-Dichloroethane	**10**		8.1	1.0	ug/m3			10/07/17 19:19	1
1,2-Dichloroethane	ND		8.1	1.9	ug/m3			10/07/17 19:19	1
1,1-Dichloroethene	**66**		7.9	1.4	ug/m3			10/07/17 19:19	1
Ethylbenzene	ND		8.7	2.9	ug/m3			10/07/17 19:19	1
Methylene Chloride	**14**	**J**	17	11	ug/m3			10/07/17 19:19	1
Methyl tert-butyl ether	ND		36	6.1	ug/m3			10/07/17 19:19	1
Naphthalene	ND		5.2	5.2	ug/m3			10/07/17 19:19	1
Tetrachloroethene	ND		14	2.7	ug/m3			10/07/17 19:19	1
Toluene	ND		11	11	ug/m3			10/07/17 19:19	1
trans-1,2-Dichloroethene	ND		7.9	2.0	ug/m3			10/07/17 19:19	1
1,2,4-Trichlorobenzene	ND		15	7.2	ug/m3			10/07/17 19:19	1
1,1,1-Trichloroethane	**290**		11	1.6	ug/m3			10/07/17 19:19	1
1,1,2-Trichloroethane	ND		11	2.9	ug/m3			10/07/17 19:19	1
Trichloroethene	**750**		5.4	1.9	ug/m3			10/07/17 19:19	1
1,2,3-Trimethylbenzene	ND		9.8	4.2	ug/m3			10/07/17 19:19	1
1,2,4-Trimethylbenzene	ND		9.8	3.1	ug/m3			10/07/17 19:19	1

Client Sample ID: BLDG-A INFLUENT

Lab Sample ID: 140-9485-2

Date Collected: 10/04/17 12:28

Matrix: Air

Date Received: 10/05/17 09:40

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		9.8	3.2	ug/m3			10/07/17 19:19	1
Vinyl chloride	ND		2.6	1.9	ug/m3			10/07/17 19:19	1
Xylenes, Total	ND		17	2.6	ug/m3			10/07/17 19:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*60 - 140*		*10/07/17 19:19*	*1*

Client Sample ID: BLDG-A MID-GAC

Lab Sample ID: 140-9485-3

Date Collected: 10/04/17 12:24

Matrix: Air

Date Received: 10/05/17 09:40

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.28**	**J**	0.80	0.23	ppb v/v			10/07/17 20:02	1
Carbon tetrachloride	ND		0.80	0.15	ppb v/v			10/07/17 20:02	1
Chlorodifluoromethane	**0.68**	**J**	0.80	0.15	ppb v/v			10/07/17 20:02	1
Chloroform	**0.47**	**J**	0.80	0.15	ppb v/v			10/07/17 20:02	1
cis-1,2-Dichloroethene	**19**		0.80	0.24	ppb v/v			10/07/17 20:02	1
Dichlorodifluoromethane	**0.51**	**J**	0.80	0.27	ppb v/v			10/07/17 20:02	1
1,1-Dichloroethane	**3.4**		0.80	0.10	ppb v/v			10/07/17 20:02	1
1,2-Dichloroethane	ND		0.80	0.19	ppb v/v			10/07/17 20:02	1
1,1-Dichloroethene	**19**		0.80	0.14	ppb v/v			10/07/17 20:02	1
Ethylbenzene	ND		0.80	0.27	ppb v/v			10/07/17 20:02	1
Methylene Chloride	**2.4**		2.0	1.3	ppb v/v			10/07/17 20:02	1
Methyl tert-butyl ether	ND		4.0	0.68	ppb v/v			10/07/17 20:02	1
Naphthalene	ND		0.40	0.40	ppb v/v			10/07/17 20:02	1
Tetrachloroethene	ND		0.80	0.16	ppb v/v			10/07/17 20:02	1
Toluene	ND		1.2	1.2	ppb v/v			10/07/17 20:02	1
trans-1,2-Dichloroethene	**0.43**	**J**	0.80	0.20	ppb v/v			10/07/17 20:02	1
1,2,4-Trichlorobenzene	ND		0.80	0.39	ppb v/v			10/07/17 20:02	1
1,1,1-Trichloroethane	**52**		0.80	0.12	ppb v/v			10/07/17 20:02	1
1,1,2-Trichloroethane	ND		0.80	0.21	ppb v/v			10/07/17 20:02	1
Trichloroethene	**0.19**	**J**	0.40	0.14	ppb v/v			10/07/17 20:02	1
1,2,3-Trimethylbenzene	ND		0.80	0.34	ppb v/v			10/07/17 20:02	1
1,2,4-Trimethylbenzene	ND		0.80	0.25	ppb v/v			10/07/17 20:02	1
1,3,5-Trimethylbenzene	ND		0.80	0.26	ppb v/v			10/07/17 20:02	1
Vinyl chloride	ND		0.40	0.29	ppb v/v			10/07/17 20:02	1
Xylenes, Total	ND		1.6	0.24	ppb v/v			10/07/17 20:02	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.89**	**J**	2.6	0.73	ug/m3			10/07/17 20:02	1
Carbon tetrachloride	ND		5.0	0.94	ug/m3			10/07/17 20:02	1
Chlorodifluoromethane	**2.4**	**J**	2.8	0.53	ug/m3			10/07/17 20:02	1
Chloroform	**2.3**	**J**	3.9	0.73	ug/m3			10/07/17 20:02	1
cis-1,2-Dichloroethene	**75**		3.2	0.95	ug/m3			10/07/17 20:02	1
Dichlorodifluoromethane	**2.5**	**J**	4.0	1.3	ug/m3			10/07/17 20:02	1
1,1-Dichloroethane	**14**		3.2	0.40	ug/m3			10/07/17 20:02	1
1,2-Dichloroethane	ND		3.2	0.77	ug/m3			10/07/17 20:02	1
1,1-Dichloroethene	**77**		3.2	0.56	ug/m3			10/07/17 20:02	1
Ethylbenzene	ND		3.5	1.2	ug/m3			10/07/17 20:02	1
Methylene Chloride	**8.3**		6.9	4.5	ug/m3			10/07/17 20:02	1
Methyl tert-butyl ether	ND		14	2.5	ug/m3			10/07/17 20:02	1
Naphthalene	ND		2.1	2.1	ug/m3			10/07/17 20:02	1
Tetrachloroethene	ND		5.4	1.1	ug/m3			10/07/17 20:02	1
Toluene	ND		4.5	4.5	ug/m3			10/07/17 20:02	1
trans-1,2-Dichloroethene	**1.7**	**J**	3.2	0.79	ug/m3			10/07/17 20:02	1
1,2,4-Trichlorobenzene	ND		5.9	2.9	ug/m3			10/07/17 20:02	1
1,1,1-Trichloroethane	**280**		4.4	0.65	ug/m3			10/07/17 20:02	1
1,1,2-Trichloroethane	ND		4.4	1.1	ug/m3			10/07/17 20:02	1
Trichloroethene	**1.0**	**J**	2.1	0.75	ug/m3			10/07/17 20:02	1
1,2,3-Trimethylbenzene	ND		3.9	1.7	ug/m3			10/07/17 20:02	1
1,2,4-Trimethylbenzene	ND		3.9	1.2	ug/m3			10/07/17 20:02	1

Client Sample ID: BLDG-A MID-GAC
Lab Sample ID: 140-9485-3
Date Collected: 10/04/17 12:24
Matrix: Air
Date Received: 10/05/17 09:40
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		3.9	1.3	ug/m3			10/07/17 20:02	1
Vinyl chloride	ND		1.0	0.74	ug/m3			10/07/17 20:02	1
Xylenes, Total	ND		6.9	1.0	ug/m3			10/07/17 20:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*60 - 140*		*10/07/17 20:02*	*1*

Default Detection Limits

Client: Tetra Tech GEO
Project/Site: LMC MRC / MRC BLDG-A

TestAmerica Job ID: 140-9485-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.20	0.13	ppb v/v	TO 15 LL
Methylene Chloride	0.69	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC / MRC BLDG-A

TestAmerica Job ID: 140-9485-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)								
		BFB								
Lab Sample ID	Client Sample ID	(60-140)								
140-9485-1	BLDG-A EFFLUENT	94								
140-9485-2	BLDG-A INFLUENT	94								
140-9485-3	BLDG-A MID-GAC	96								
LCS 140-15018/1002	Lab Control Sample	99								
MB 140-15018/5	Method Blank	94								

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-15018/5
Matrix: Air
Analysis Batch: 15018

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			10/07/17 15:03	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			10/07/17 15:03	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			10/07/17 15:03	1
Chloroform	ND		0.080	0.015	ppb v/v			10/07/17 15:03	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			10/07/17 15:03	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			10/07/17 15:03	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			10/07/17 15:03	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			10/07/17 15:03	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			10/07/17 15:03	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			10/07/17 15:03	1
Methylene Chloride	ND		0.20	0.13	ppb v/v			10/07/17 15:03	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			10/07/17 15:03	1
Naphthalene	ND		0.040	0.040	ppb v/v			10/07/17 15:03	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			10/07/17 15:03	1
Toluene	ND		0.12	0.12	ppb v/v			10/07/17 15:03	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			10/07/17 15:03	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			10/07/17 15:03	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			10/07/17 15:03	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			10/07/17 15:03	1
Trichloroethene	ND		0.040	0.014	ppb v/v			10/07/17 15:03	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			10/07/17 15:03	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			10/07/17 15:03	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			10/07/17 15:03	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			10/07/17 15:03	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			10/07/17 15:03	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.26	0.073	ug/m3			10/07/17 15:03	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			10/07/17 15:03	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			10/07/17 15:03	1
Chloroform	ND		0.39	0.073	ug/m3			10/07/17 15:03	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			10/07/17 15:03	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			10/07/17 15:03	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			10/07/17 15:03	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			10/07/17 15:03	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			10/07/17 15:03	1
Ethylbenzene	ND		0.35	0.12	ug/m3			10/07/17 15:03	1
Methylene Chloride	ND		0.69	0.45	ug/m3			10/07/17 15:03	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			10/07/17 15:03	1
Naphthalene	ND		0.21	0.21	ug/m3			10/07/17 15:03	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			10/07/17 15:03	1
Toluene	ND		0.45	0.45	ug/m3			10/07/17 15:03	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			10/07/17 15:03	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			10/07/17 15:03	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			10/07/17 15:03	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			10/07/17 15:03	1
Trichloroethene	ND		0.21	0.075	ug/m3			10/07/17 15:03	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			10/07/17 15:03	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-15018/5
Matrix: Air
Analysis Batch: 15018

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			10/07/17 15:03	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			10/07/17 15:03	1
Vinyl chloride	ND		0.10	0.074	ug/m3			10/07/17 15:03	1
Xylenes, Total	ND		0.69	0.10	ug/m3			10/07/17 15:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*60 - 140*		*10/07/17 15:03*	*1*

Lab Sample ID: LCS 140-15018/1002
Matrix: Air
Analysis Batch: 15018

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2.00	1.75		ppb v/v		87	70 - 130
Carbon tetrachloride	2.00	1.85		ppb v/v		92	70 - 130
Chlorodifluoromethane	2.00	2.33		ppb v/v		116	60 - 140
Chloroform	2.00	1.82		ppb v/v		91	70 - 130
cis-1,2-Dichloroethene	2.00	1.94		ppb v/v		97	70 - 130
Dichlorodifluoromethane	2.00	2.48		ppb v/v		124	60 - 140
1,1-Dichloroethane	2.00	1.97		ppb v/v		98	70 - 130
1,2-Dichloroethane	2.00	1.72		ppb v/v		86	70 - 130
1,1-Dichloroethene	2.00	2.40		ppb v/v		120	70 - 130
Ethylbenzene	2.00	1.48		ppb v/v		74	70 - 130
Methylene Chloride	2.00	2.17		ppb v/v		109	70 - 130
Methyl tert-butyl ether	2.00	1.60		ppb v/v		80	60 - 140
Naphthalene	2.00	1.37		ppb v/v		69	60 - 140
Tetrachloroethene	2.00	1.90		ppb v/v		95	70 - 130
Toluene	2.00	1.57		ppb v/v		79	70 - 130
trans-1,2-Dichloroethene	2.00	2.14		ppb v/v		107	70 - 130
1,2,4-Trichlorobenzene	2.00	1.63		ppb v/v		81	60 - 140
1,1,1-Trichloroethane	2.00	1.79		ppb v/v		89	70 - 130
1,1,2-Trichloroethane	2.00	1.63		ppb v/v		81	70 - 130
Trichloroethene	2.00	2.04		ppb v/v		102	70 - 130
1,2,3-Trimethylbenzene	2.00	1.55		ppb v/v		77	70 - 130
1,2,4-Trimethylbenzene	2.00	1.51		ppb v/v		75	70 - 130
1,3,5-Trimethylbenzene	2.00	1.60		ppb v/v		80	70 - 130
Vinyl chloride	2.00	2.37		ppb v/v		118	70 - 130
Xylenes, Total	6.00	4.36		ppb v/v		73	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	5.59		ug/m3		87	70 - 130
Carbon tetrachloride	13	11.6		ug/m3		92	70 - 130
Chlorodifluoromethane	7.1	8.23		ug/m3		116	60 - 140
Chloroform	9.8	8.91		ug/m3		91	70 - 130
cis-1,2-Dichloroethene	7.9	7.68		ug/m3		97	70 - 130
Dichlorodifluoromethane	9.9	12.3		ug/m3		124	60 - 140
1,1-Dichloroethane	8.1	7.96		ug/m3		98	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-15018/1002
Matrix: Air
Analysis Batch: 15018

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2-Dichloroethane			8.1	6.96		ug/m3		86	70 - 130		
1,1-Dichloroethene			7.9	9.53		ug/m3		120	70 - 130		
Ethylbenzene			8.7	6.44		ug/m3		74	70 - 130		
Methylene Chloride			7.0	7.54		ug/m3		109	70 - 130		
Methyl tert-butyl ether			7.2	5.78		ug/m3		80	60 - 140		
Naphthalene			10	7.19		ug/m3		69	60 - 140		
Tetrachloroethene			14	12.9		ug/m3		95	70 - 130		
Toluene			7.5	5.93		ug/m3		79	70 - 130		
trans-1,2-Dichloroethene			7.9	8.50		ug/m3		107	70 - 130		
1,2,4-Trichlorobenzene			15	12.1		ug/m3		81	60 - 140		
1,1,1-Trichloroethane			11	9.76		ug/m3		89	70 - 130		
1,1,2-Trichloroethane			11	8.87		ug/m3		81	70 - 130		
Trichloroethene			11	11.0		ug/m3		102	70 - 130		
1,2,3-Trimethylbenzene			9.8	7.60		ug/m3		77	70 - 130		
1,2,4-Trimethylbenzene			9.8	7.40		ug/m3		75	70 - 130		
1,3,5-Trimethylbenzene			9.8	7.86		ug/m3		80	70 - 130		
Vinyl chloride			5.1	6.05		ug/m3		118	70 - 130		
Xylenes, Total			26	18.9		ug/m3		73	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*60 - 140*

QC Association Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC / MRC BLDG-A

TestAmerica Job ID: 140-9485-1

Air - GC/MS VOA

Analysis Batch: 15018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-9485-1	BLDG-A EFFLUENT	Total/NA	Air	TO 15 LL	
140-9485-2	BLDG-A INFLUENT	Total/NA	Air	TO 15 LL	
140-9485-3	BLDG-A MID-GAC	Total/NA	Air	TO 15 LL	
MB 140-15018/5	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-15018/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: Tetra Tech GEO
Project/Site: LMC MRC / MRC BLDG-A

TestAmerica Job ID: 140-9485-1

Client Sample ID: BLDG-A EFFLUENT
Lab Sample ID: 140-9485-1
Date Collected: 10/04/17 12:20
Matrix: Air
Date Received: 10/05/17 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	15018	10/07/17 18:36	AFB	TAL KNX
	Instrument ID: MG									

Client Sample ID: BLDG-A INFLUENT
Lab Sample ID: 140-9485-2
Date Collected: 10/04/17 12:28
Matrix: Air
Date Received: 10/05/17 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	20 mL	500 mL	15018	10/07/17 19:19	AFB	TAL KNX
	Instrument ID: MG									

Client Sample ID: BLDG-A MID-GAC
Lab Sample ID: 140-9485-3
Date Collected: 10/04/17 12:24
Matrix: Air
Date Received: 10/05/17 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	50 mL	500 mL	15018	10/07/17 20:02	AFB	TAL KNX
	Instrument ID: MG									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-15018/5
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	15018	10/07/17 15:03	AFB	TAL KNX
	Instrument ID: MG									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-15018/1002
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	15018	10/07/17 11:57	AFB	TAL KNX
	Instrument ID: MG									

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC / MRC BLDG-A

TestAmerica Job ID: 140-9485-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC / MRC BLDG-A

TestAmerica Job ID: 140-9485-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-9485-1	BLDG-A EFFLUENT	Air	10/04/17 12:20	10/05/17 09:40
140-9485-2	BLDG-A INFLUENT	Air	10/04/17 12:28	10/05/17 09:40
140-9485-3	BLDG-A MID-GAC	Air	10/04/17 12:24	10/05/17 09:40

Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
BLDG-A EFFLUENT	140-9485-1	94
BLDG-A INFLUENT	140-9485-2	94
BLDG-A MID-GAC	140-9485-3	96
	MB 140-15018/5	94
	LCS 140-15018/1002	99

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1

SDG No.:

Matrix: Air Level: Low Lab File ID: GCCVJ07-LCS.d

Lab ID: LCS 140-15018/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.75	87	70-130	
Carbon tetrachloride	2.00	1.85	92	70-130	
Chlorodifluoromethane	2.00	2.33	116	60-140	
Chloroform	2.00	1.82	91	70-130	
cis-1,2-Dichloroethene	2.00	1.94	97	70-130	
Dichlorodifluoromethane	2.00	2.48	124	60-140	
1,1-Dichloroethane	2.00	1.97	98	70-130	
1,2-Dichloroethane	2.00	1.72	86	70-130	
1,1-Dichloroethene	2.00	2.40	120	70-130	
Ethylbenzene	2.00	1.48	74	70-130	
Methylene Chloride	2.00	2.17	109	70-130	
Methyl tert-butyl ether	2.00	1.60	80	60-140	
Naphthalene	2.00	1.37	69	60-140	
Tetrachloroethene	2.00	1.90	95	70-130	
Toluene	2.00	1.57	79	70-130	
trans-1,2-Dichloroethene	2.00	2.14	107	70-130	
1,2,4-Trichlorobenzene	2.00	1.63	81	60-140	
1,1,1-Trichloroethane	2.00	1.79	89	70-130	
1,1,2-Trichloroethane	2.00	1.63	81	70-130	
Trichloroethene	2.00	2.04	102	70-130	
1,2,3-Trimethylbenzene	2.00	1.55	77	70-130	
1,2,4-Trimethylbenzene	2.00	1.51	75	70-130	
1,3,5-Trimethylbenzene	2.00	1.60	80	70-130	
Vinyl chloride	2.00	2.37	118	70-130	
Xylenes, Total	6.00	4.36	73	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1

SDG No.:

Lab File ID: GMB500J07.D Lab Sample ID: MB 140-15018/5

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MG Date Analyzed: 10/07/2017 15:03

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
BLDG-A EFFLUENT	140-9485-1	GJ08P105.D	10/07/2017 18:36
BLDG-A INFLUENT	140-9485-2	GJ08P106.D	10/07/2017 19:19
BLDG-A MID-GAC	140-9485-3	GJ08P107.D	10/07/2017 20:02

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1

SDG No.:

Lab File ID: GBFBI18.D BFB Injection Date: 09/19/2017

Instrument ID: MG BFB Injection Time: 17:16

Analysis Batch No.: 14546

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.0	
75	30.0 - 60.0 % of mass 95	51.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.5	(0.6) 1
174	50.0 - 120.00 % of mass 95	85.3	
175	5.0 - 9.0 % of mass 174	6.0	(7.0) 1
176	95.0 - 101.0 % of mass 174	83.5	(97.9) 1
177	5.0 - 9.0 % of mass 176	5.5	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-14546/3	GI18ICL01.D	09/19/2017	18:30
	IC 140-14546/5	GI18ICL03.D	09/19/2017	19:54
	IC 140-14546/6	GI18ICL04.D	09/19/2017	20:37
	IC 140-14546/7	GI18ICL05.D	09/19/2017	21:20
	ICIS 140-14546/8	GI18ICL06.D	09/19/2017	22:02
	IC 140-14546/9	GI18ICL07.D	09/19/2017	22:45
	IC 140-14546/10	GI18ICL08.D	09/19/2017	23:27
	IC 140-14546/11	GI18ICL09.D	09/20/2017	00:10
	ICV 140-14546/13	GI18ICV.D	09/20/2017	01:35
	IC 140-14546/17	GI18ICL02R.D	09/20/2017	09:06

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1

SDG No.:

Lab File ID: GBFBJ07.D BFB Injection Date: 10/07/2017

Instrument ID: MG BFB Injection Time: 11:26

Analysis Batch No.: 15018

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.3	
75	30.0 - 60.0 % of mass 95	48.8	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.9	(0.8) 1
174	50.0 - 120.00 % of mass 95	102.9	
175	5.0 - 9.0 % of mass 174	7.6	(7.4) 1
176	95.0 - 101.0 % of mass 174	99.7	(96.9) 1
177	5.0 - 9.0 % of mass 176	6.3	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-15018/2	GCCVJ07.D	10/07/2017	11:57
	LCS 140-15018/1002	GCCVJ07-LCS.d	10/07/2017	11:57
	MB 140-15018/5	GMB500J07.D	10/07/2017	15:03
BLDG-A EFFLUENT	140-9485-1	GJ08P105.D	10/07/2017	18:36
BLDG-A INFLUENT	140-9485-2	GJ08P106.D	10/07/2017	19:19
BLDG-A MID-GAC	140-9485-3	GJ08P107.D	10/07/2017	20:02

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1

SDG No.:

Sample No.: ICIS 140-14546/8 Date Analyzed: 09/19/2017 22:02

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): GI18ICL06.D Heated Purge: (Y/N) N

Calibration ID: 1242

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		516294	7.65	2697030	9.79	2607815	14.73
UPPER LIMIT		722812	7.98	3775842	10.12	3650941	15.06
LOWER LIMIT		309776	7.32	1618218	9.46	1564689	14.40
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-14546/13		527662	7.66	2864967	9.80	2784192	14.73

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1

SDG No.:

Sample No.: CCVIS 140-15018/2 Date Analyzed: 10/07/2017 11:57

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): GCCVJ07.D Heated Purge: (Y/N) N

Calibration ID: 1242

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		486502	7.62	2659165	9.77	2566436	14.72
UPPER LIMIT		681103	7.95	3722831	10.10	3593010	15.05
LOWER LIMIT		291901	7.29	1595499	9.44	1539862	14.39
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-15018/1002		486502	7.62	2659165	9.77	2566436	14.72
MB 140-15018/5		511984	7.61	2707979	9.76	2458217	14.72
140-9485-1	BLDG-A EFFLUENT	463561	7.62	2353986	9.77	2214197	14.72
140-9485-2	BLDG-A INFLUENT	437666	7.62	1995135	9.77	1972394	14.72
140-9485-3	BLDG-A MID-GAC	504206	7.63	2593862	9.78	2433610	14.72

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9485-1

SDG No.:

Client Sample ID: BLDG-A EFFLUENT | Lab Sample ID: 140-9485-1

Matrix: Air | Lab File ID: GJ08P105.D

Analysis Method: TO 15 LL | Date Collected: 10/04/2017 12:20

Sample wt/vol: 100(mL) | Date Analyzed: 10/07/2017 18:36

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15018 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.52		0.40	0.075
67-66-3	Chloroform	119.38	0.45		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	30		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.53		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	5.4		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	26		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.96	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.56		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	35		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	4.6		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.67	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9485-1

SDG No.:

Client Sample ID: BLDG-A EFFLUENT | Lab Sample ID: 140-9485-1

Matrix: Air | Lab File ID: GJ08P105.D

Analysis Method: TO 15 LL | Date Collected: 10/04/2017 12:20

Sample wt/vol: 100(mL) | Date Analyzed: 10/07/2017 18:36

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15018 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.8		1.4	0.27
67-66-3	Chloroform	119.38	2.2		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	120		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	22		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	100		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	2.2		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	190		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	25		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.71	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.9	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P105.D				
Lims ID:	140-9485-A-1				
Client ID:	BLDG-A EFFLUENT				
Sample Type:	Client				
Inject. Date:	07-Oct-2017 18:36:30	ALS Bottle#:	5	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006279-010				
Misc. Info.:	140-9485-a-1				
Operator ID:	403648	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	09-Oct-2017 10:32:49	Calib Date:	20-Sep-2017 09:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL02R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				
First Level Reviewer: barlozhetskayaa		Date:	09-Oct-2017 10:04:18		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.620	7.620	0.000	83	463561	4.00	
* 2 1,4-Difluorobenzene	114	9.766	9.766	0.000	94	2353986	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.716	14.716	0.000	86	2214197	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.398	16.404	-0.006	95	1571957	3.74	
6 Chlorodifluoromethane	67	3.306	3.306	0.000	71	4485	0.1035	
8 Dichlorodifluoromethane	85	3.354	3.354	0.000	100	46694	0.1067	
26 1,1-Dichloroethene	96	5.069	5.069	0.000	99	735906	5.14	
30 Methylene Chloride	84	5.355	5.355	0.000	91	26282	0.1914	
33 trans-1,2-Dichloroethene	96	6.061	6.067	-0.005	91	16752	0.1124	
35 1,1-Dichloroethane	63	6.428	6.433	-0.005	99	293015	1.09	
40 cis-1,2-Dichloroethene	96	7.323	7.328	-0.005	89	1001772	6.02	
42 Chloroform	83	7.647	7.646	0.001	89	33308	0.0909	
44 1,1,1-Trichloroethane	97	8.606	8.612	-0.006	94	2833887	7.03	
46 Benzene	78	9.173	9.183	-0.010	93	9930	0.0225	
55 Trichloroethene	130	10.515	10.521	-0.006	98	214236	0.9261	
64 Toluene	91	12.683	12.688	-0.005	93	110164	0.2122	
73 m-Xylene & p-Xylene	91	15.250	15.255	-0.005	100	48794	0.0939	
77 o-Xylene	91	15.778	15.784	-0.006	94	22063	0.0410	
88 1,2,4-Trimethylbenzene	105	17.671	17.671	0.000	95	17513	0.0288	
S 111 Xylenes, Total	100				0		0.1348	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

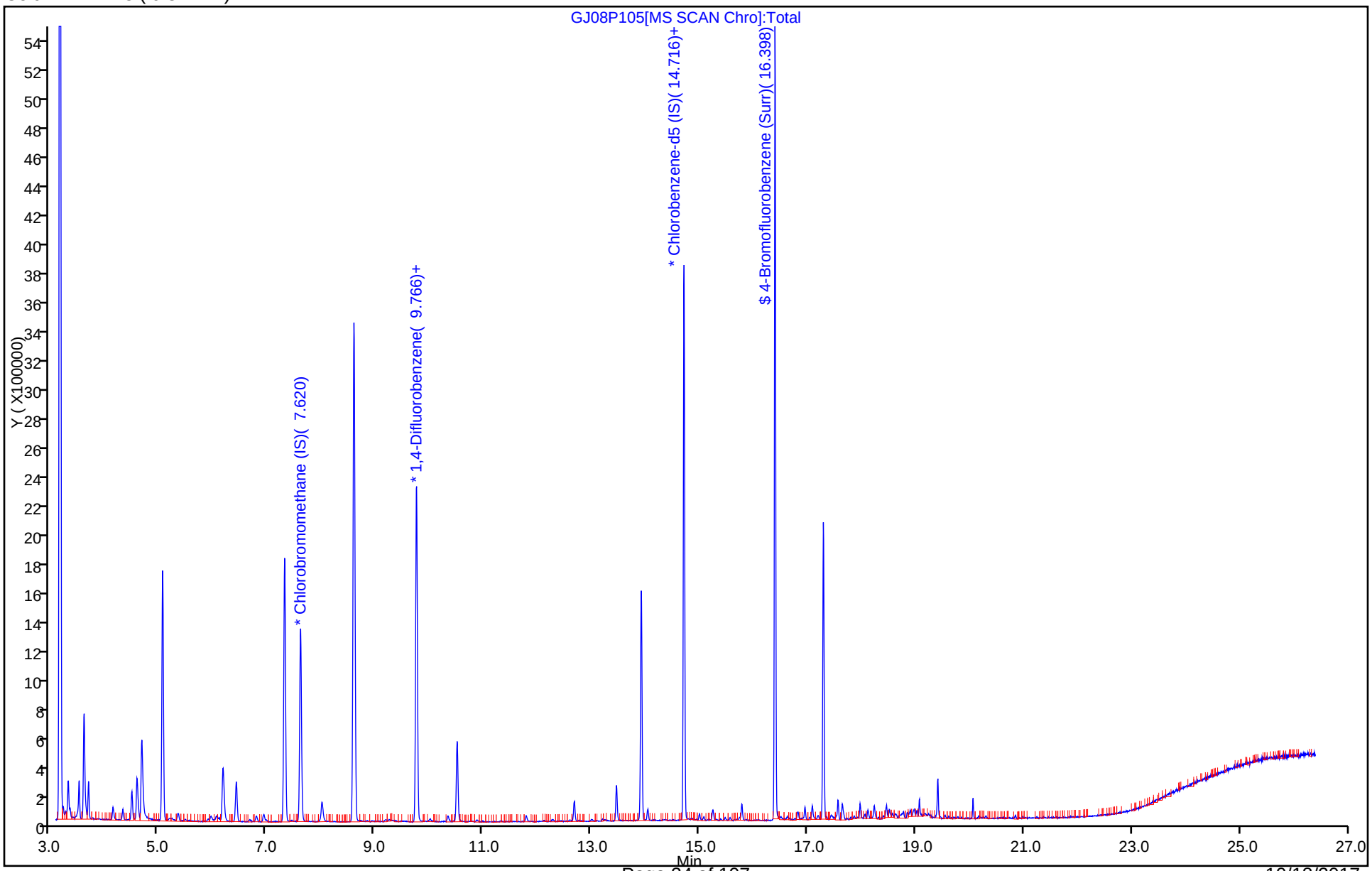
Report Date: 09-Oct-2017 10:33:38 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P105.D

Injection Date:	07-Oct-2017 18:36:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	140-9485-A-1	Lab Sample ID:	140-9485-1	Worklist Smp#:	10
Client ID:	BLDG-A EFFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P105.D				
Lims ID:	140-9485-A-1				
Client ID:	BLDG-A EFFLUENT				
Sample Type:	Client				
Inject. Date:	07-Oct-2017 18:36:30	ALS Bottle#:	5	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006279-010				
Misc. Info.:	140-9485-a-1				
Operator ID:	403648	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	09-Oct-2017 10:32:49	Calib Date:	20-Sep-2017 09:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL02R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				

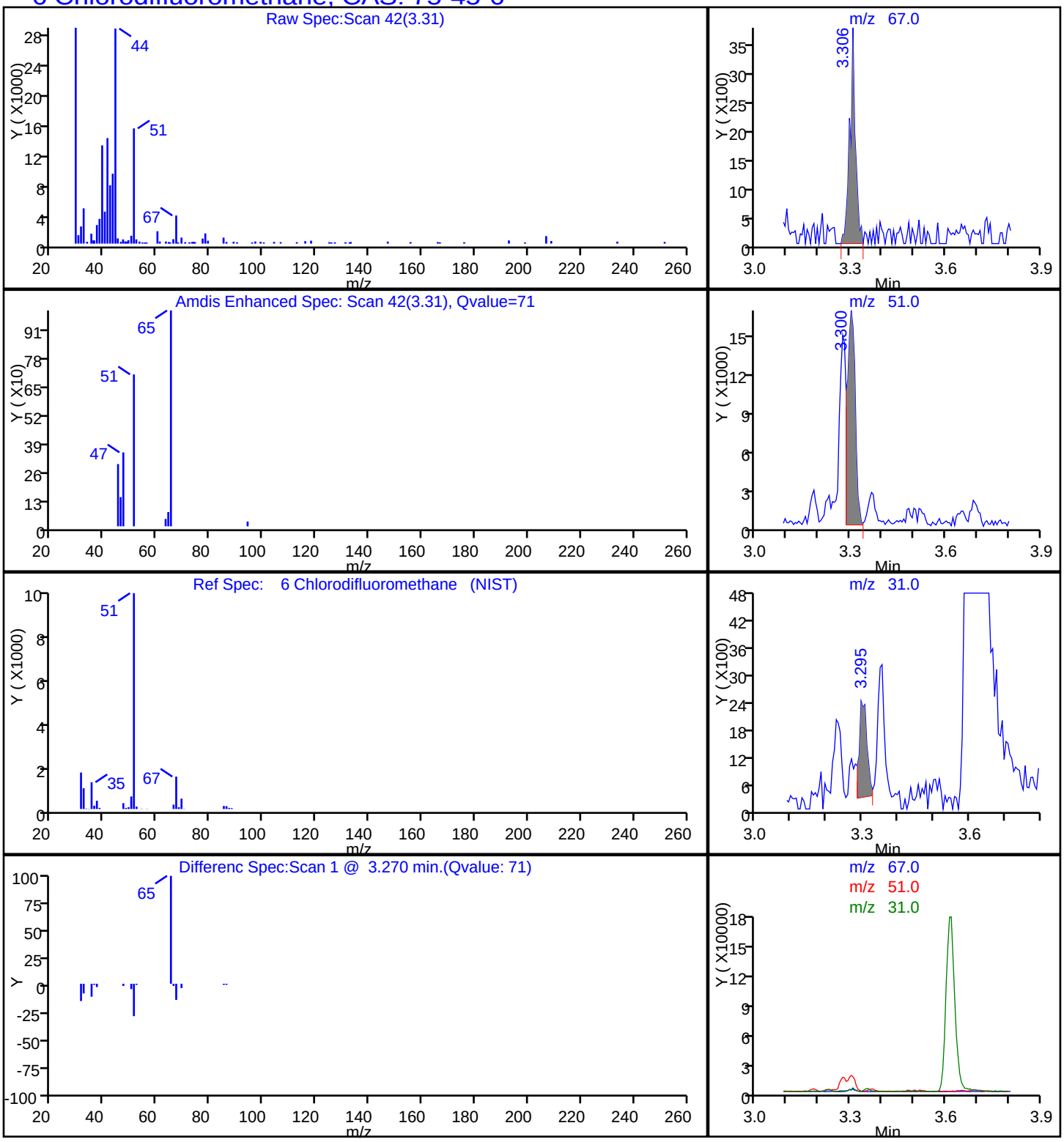
First Level Reviewer: barlozhetskayaa Date: 09-Oct-2017 10:04:18

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.74	93.52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P105.D				
Injection Date:	07-Oct-2017 18:36:30	Instrument ID:	MG		
Lims ID:	140-9485-A-1	Lab Sample ID:	140-9485-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	403648	ALS Bottle#:	5	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

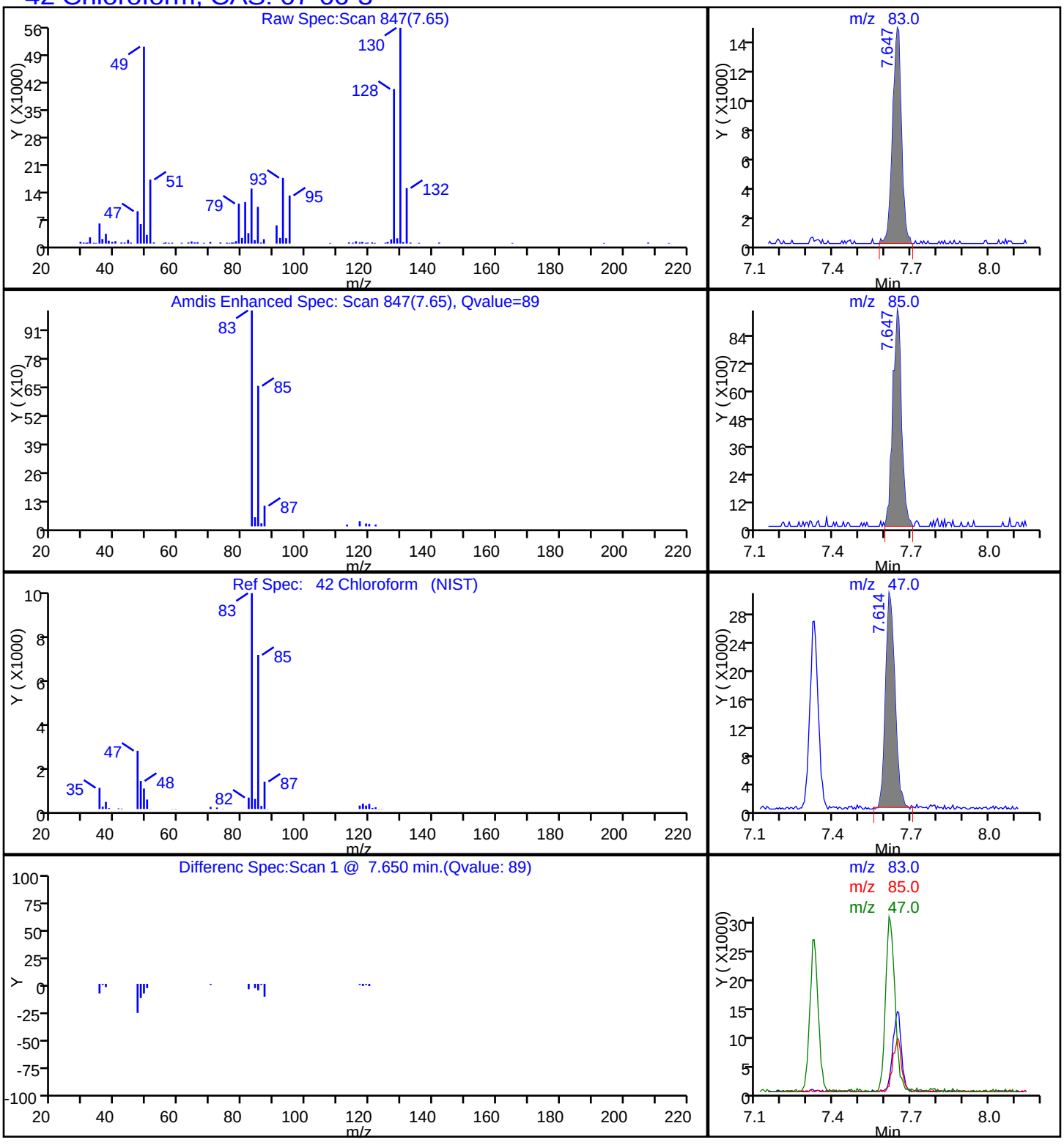
6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P105.D				
Injection Date:	07-Oct-2017 18:36:30	Instrument ID:	MG		
Lims ID:	140-9485-A-1	Lab Sample ID:	140-9485-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	403648	ALS Bottle#:	5	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

42 Chloroform, CAS: 67-66-3



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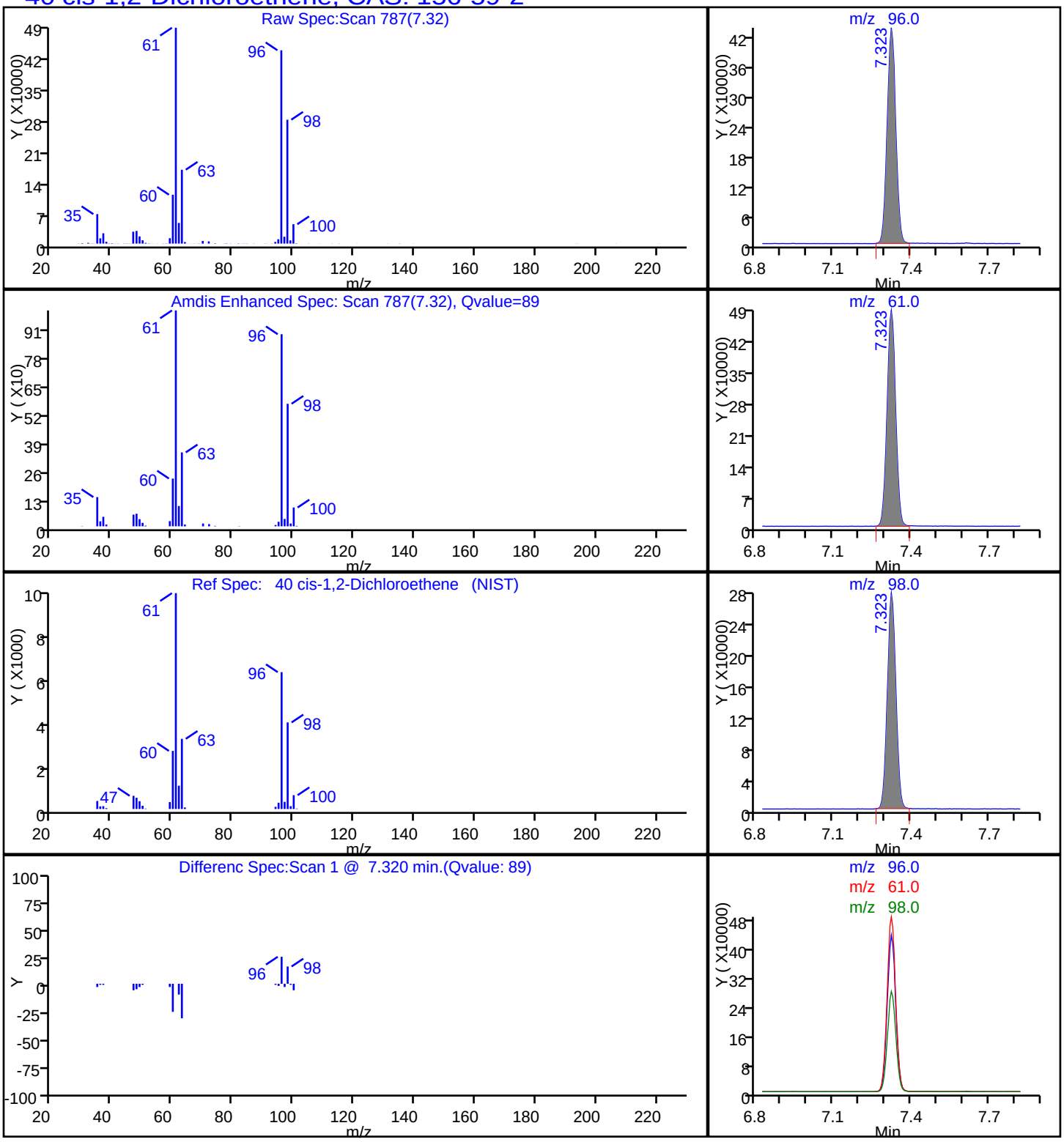
Injection Date: 07-Oct-2017 18:36:30 Instrument ID: MG
Lims ID: 140-9485-A-1 Lab Sample ID: 140-9485-1
Client ID: BLDG-A EFFLUENT
Operator ID: 403648 ALS Bottle#: 5 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

40 cis-1,2-Dichloroethene, CAS: 156-59-2



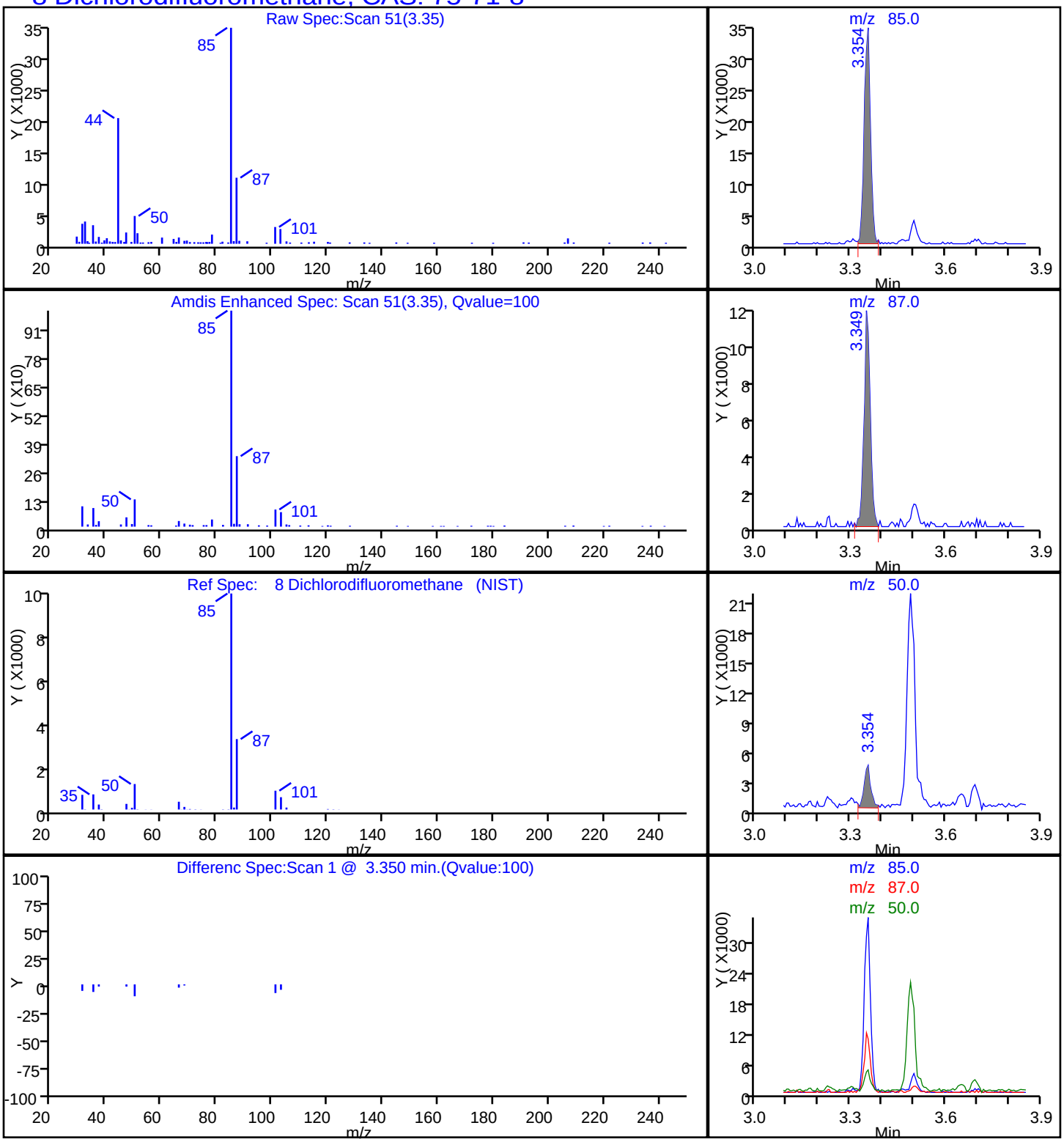
Report Date: 09-Oct-2017 10:33:39 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P105.D

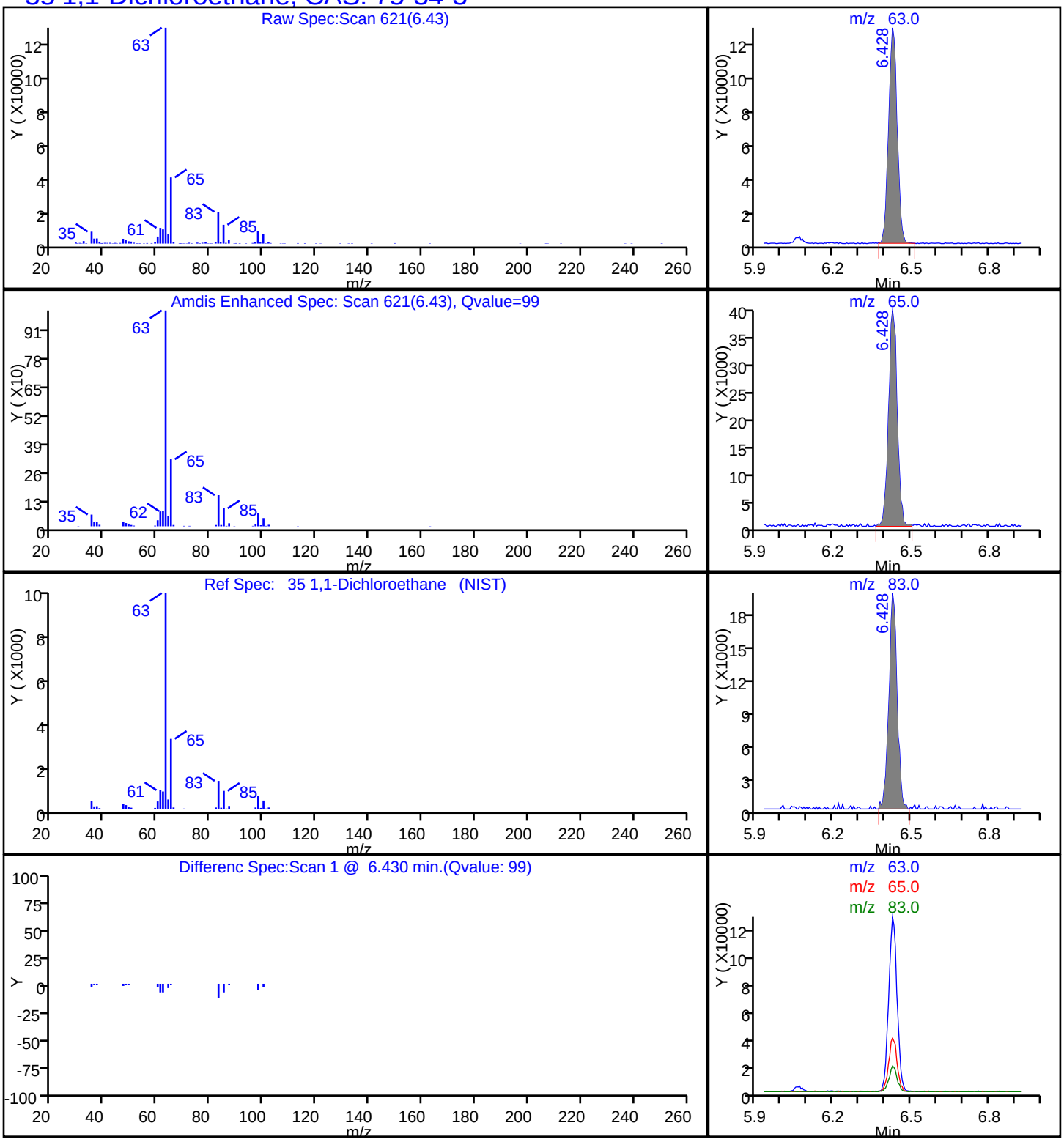
Injection Date:	07-Oct-2017 18:36:30	Instrument ID:	MG		
Lims ID:	140-9485-A-1	Lab Sample ID:	140-9485-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	403648	ALS Bottle#:	5	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

8 Dichlorodifluoromethane, CAS: 75-71-8



Data File: \\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P105.D
Injection Date: 07-Oct-2017 18:36:30 Instrument ID: MG
Lims ID: 140-9485-A-1 Lab Sample ID: 140-9485-1
Client ID: BLDG-A EFFLUENT
Operator ID: 403648 ALS Bottle#: 5 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

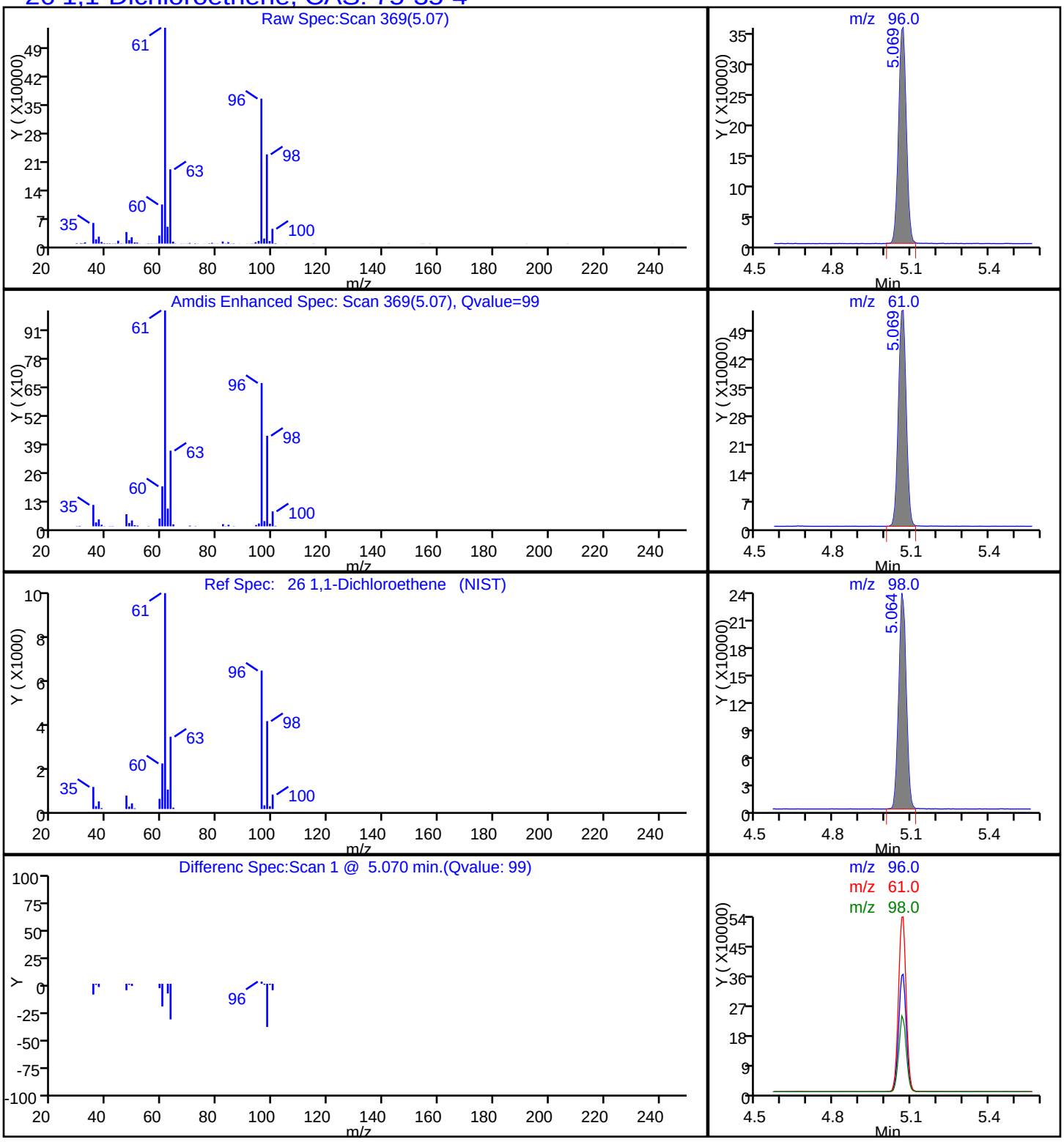
35 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P105.D				
Injection Date:	07-Oct-2017 18:36:30	Instrument ID:	MG		
Lims ID:	140-9485-A-1	Lab Sample ID:	140-9485-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	403648	ALS Bottle#:	5	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

26 1,1-Dichloroethene, CAS: 75-35-4



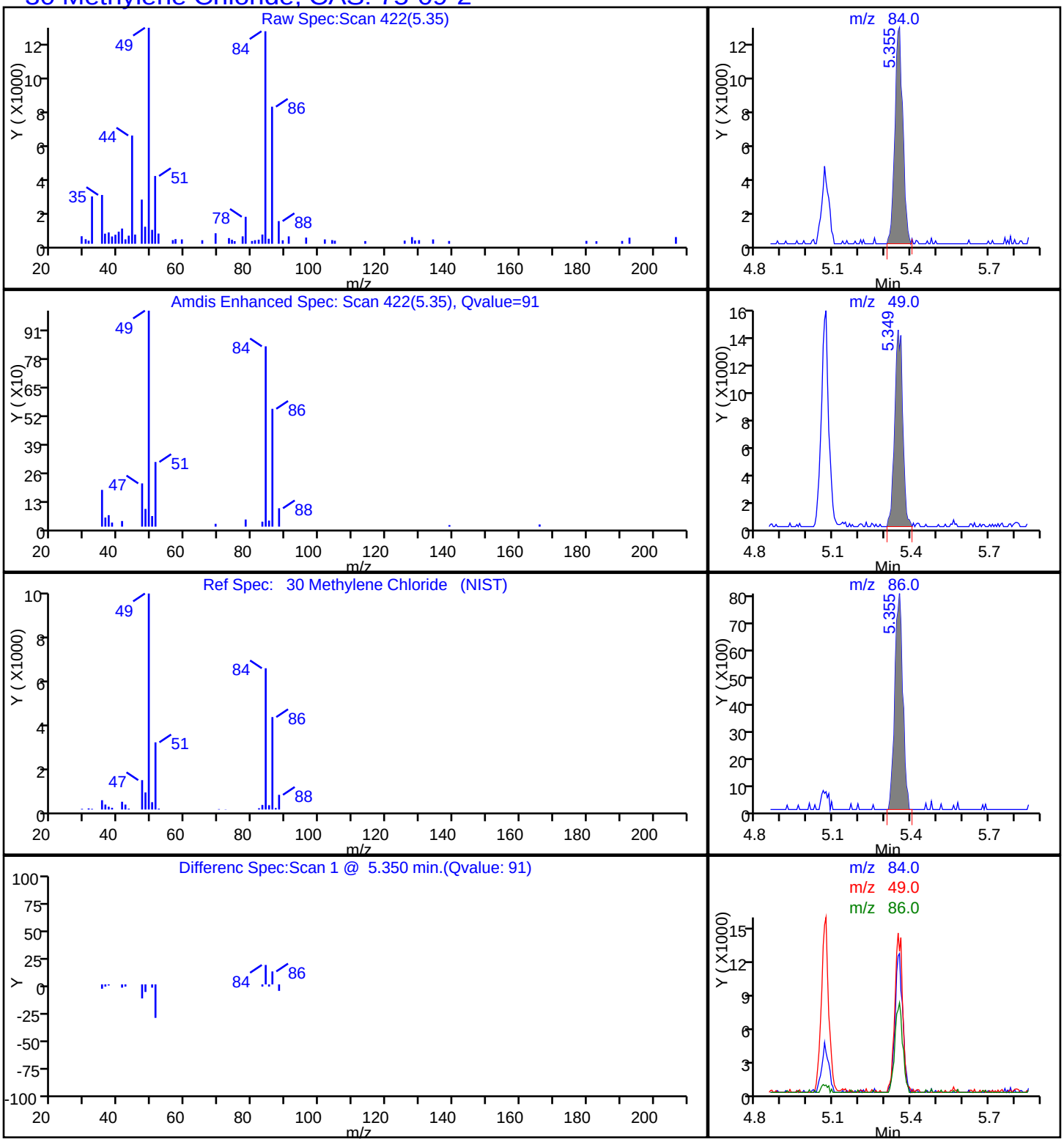
Report Date: 09-Oct-2017 10:33:39 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P105.D

Injection Date:	07-Oct-2017 18:36:30	Instrument ID:	MG		
Lims ID:	140-9485-A-1	Lab Sample ID:	140-9485-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	403648	ALS Bottle#:	5	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

30 Methylene Chloride, CAS: 75-09-2



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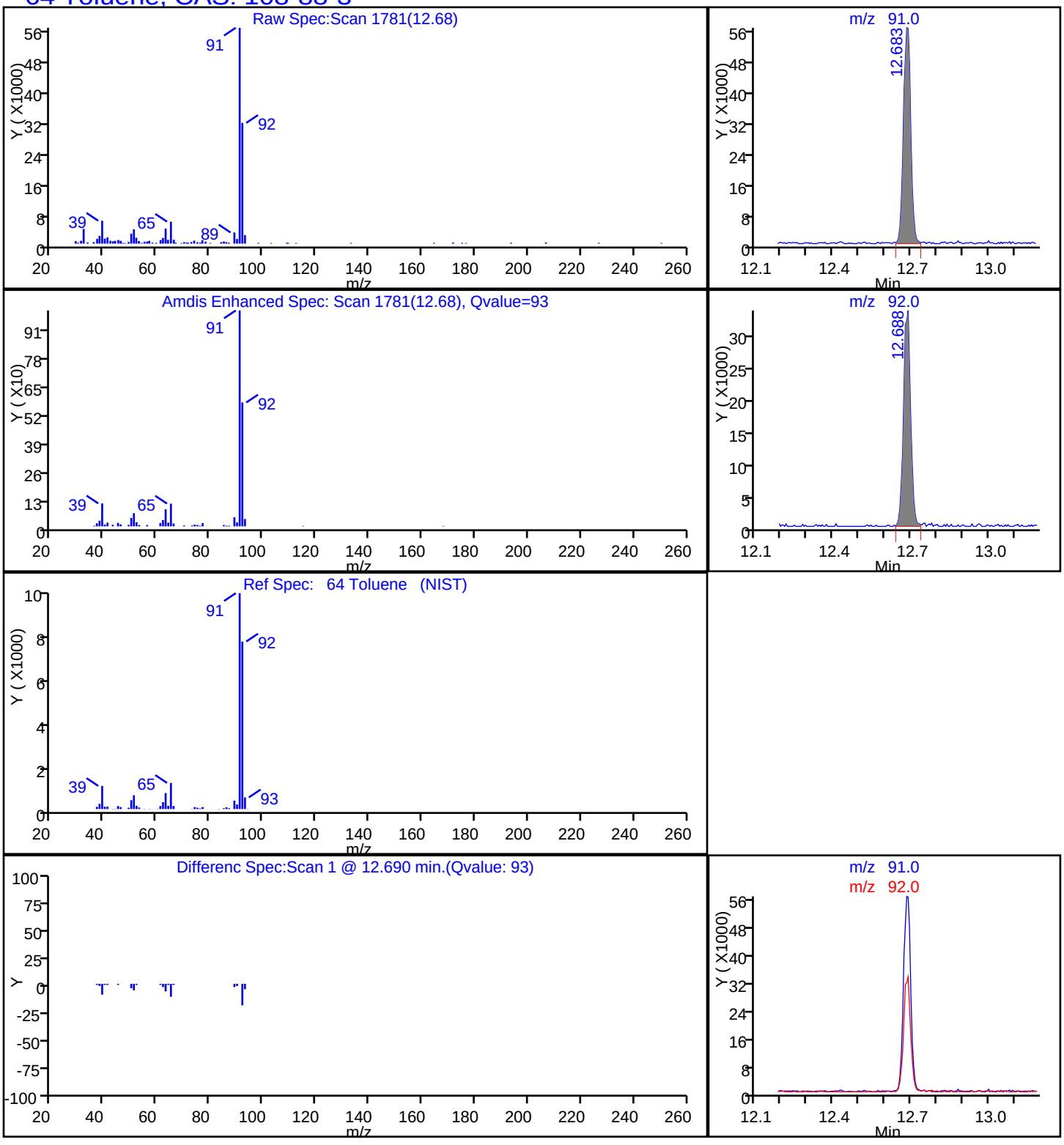
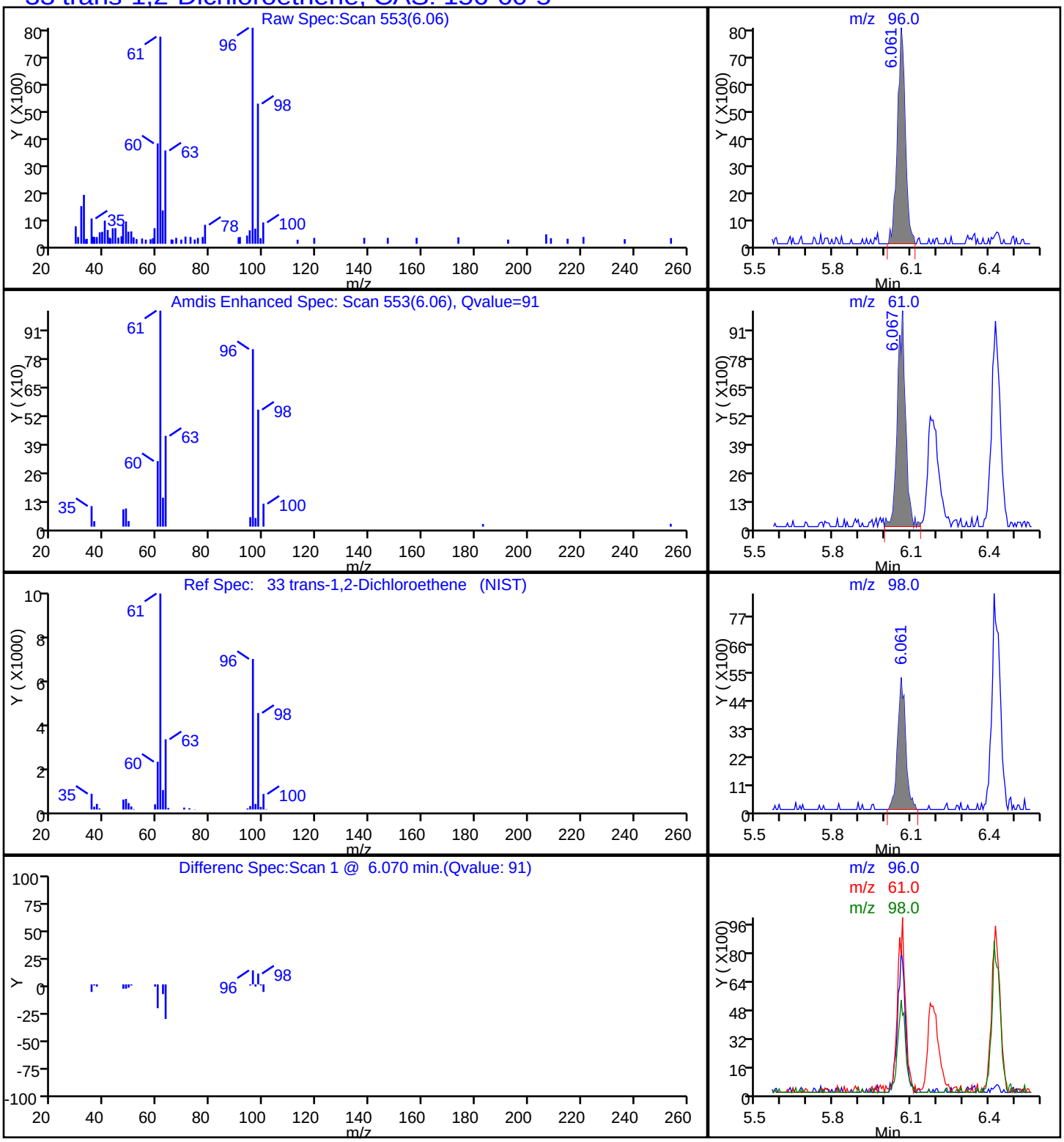
Injection Date: 07-Oct-2017 18:36:30 Instrument ID: MG
Lims ID: 140-9485-A-1 Lab Sample ID: 140-9485-1
Client ID: BLDG-A EFFLUENT
Operator ID: 403648 ALS Bottle#: 5 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

64 Toluene, CAS: 108-88-3



Data File: \\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P105.D
Injection Date: 07-Oct-2017 18:36:30 Instrument ID: MG
Lims ID: 140-9485-A-1 Lab Sample ID: 140-9485-1
Client ID: BLDG-A EFFLUENT
Operator ID: 403648 ALS Bottle#: 5 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

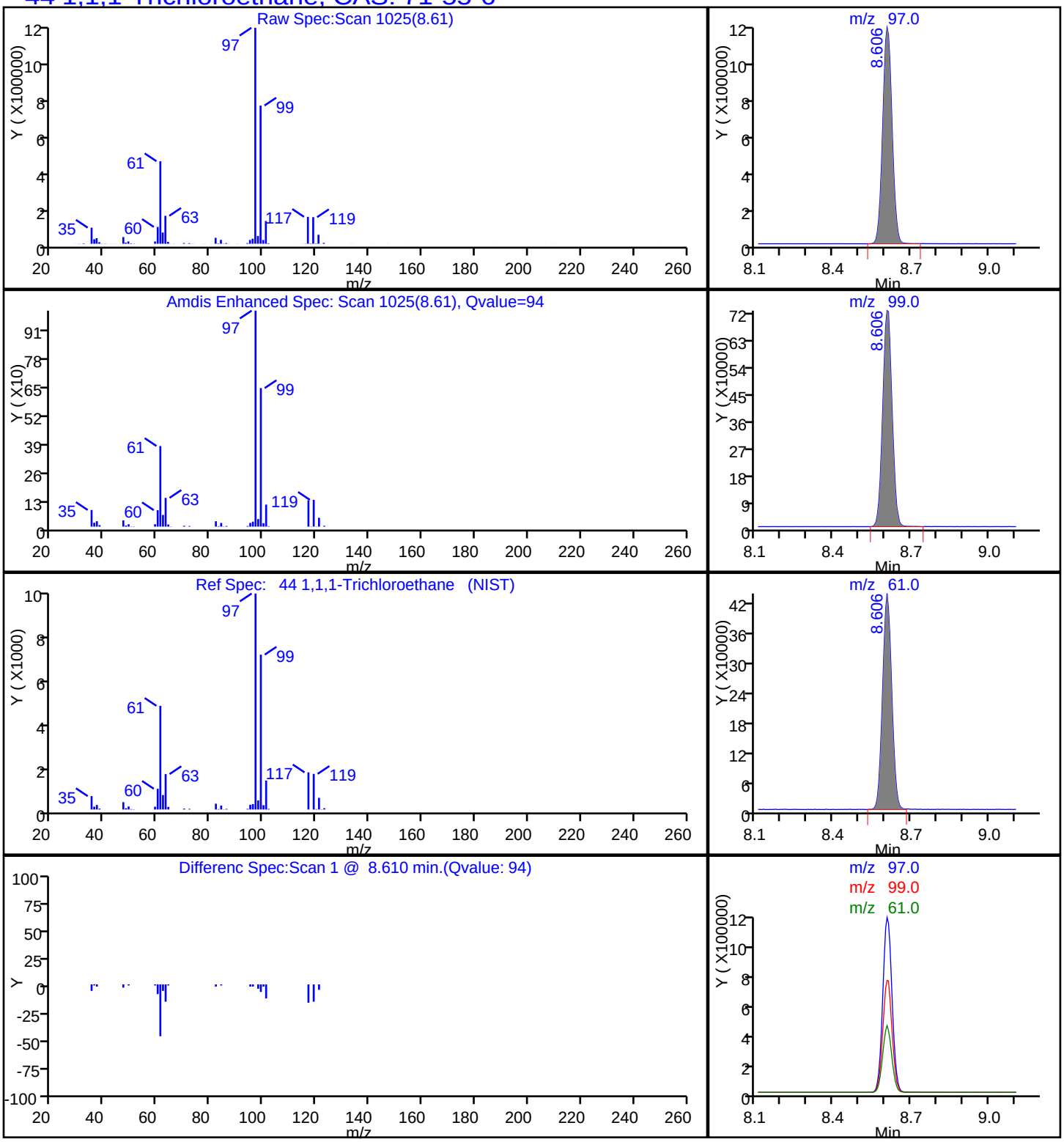
33 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P105.D				
Injection Date:	07-Oct-2017 18:36:30	Instrument ID:	MG		
Lims ID:	140-9485-A-1	Lab Sample ID:	140-9485-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	403648	ALS Bottle#:	5	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

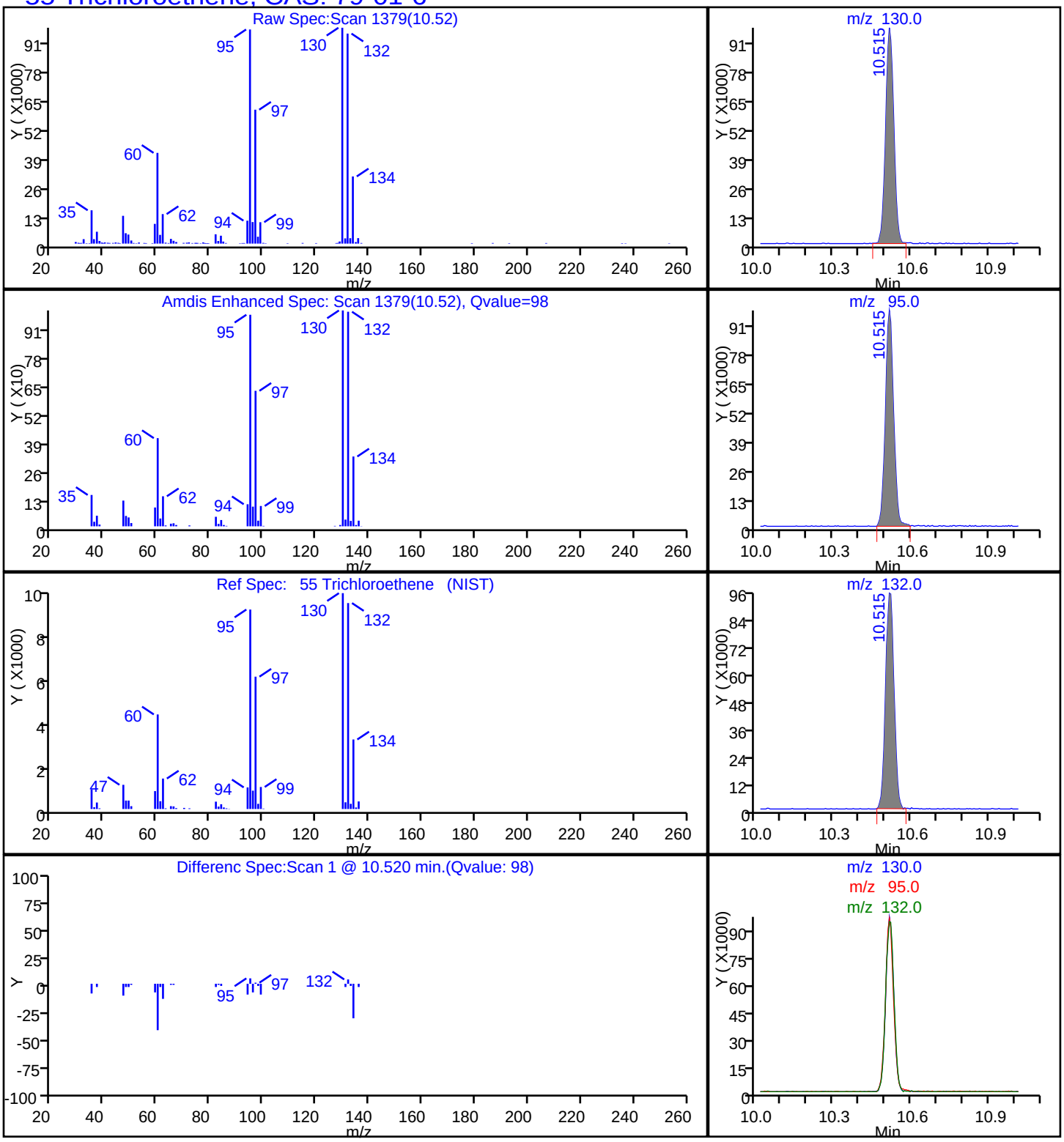
44 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P105.D				
Injection Date:	07-Oct-2017 18:36:30	Instrument ID:	MG		
Lims ID:	140-9485-A-1	Lab Sample ID:	140-9485-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	403648	ALS Bottle#:	5	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

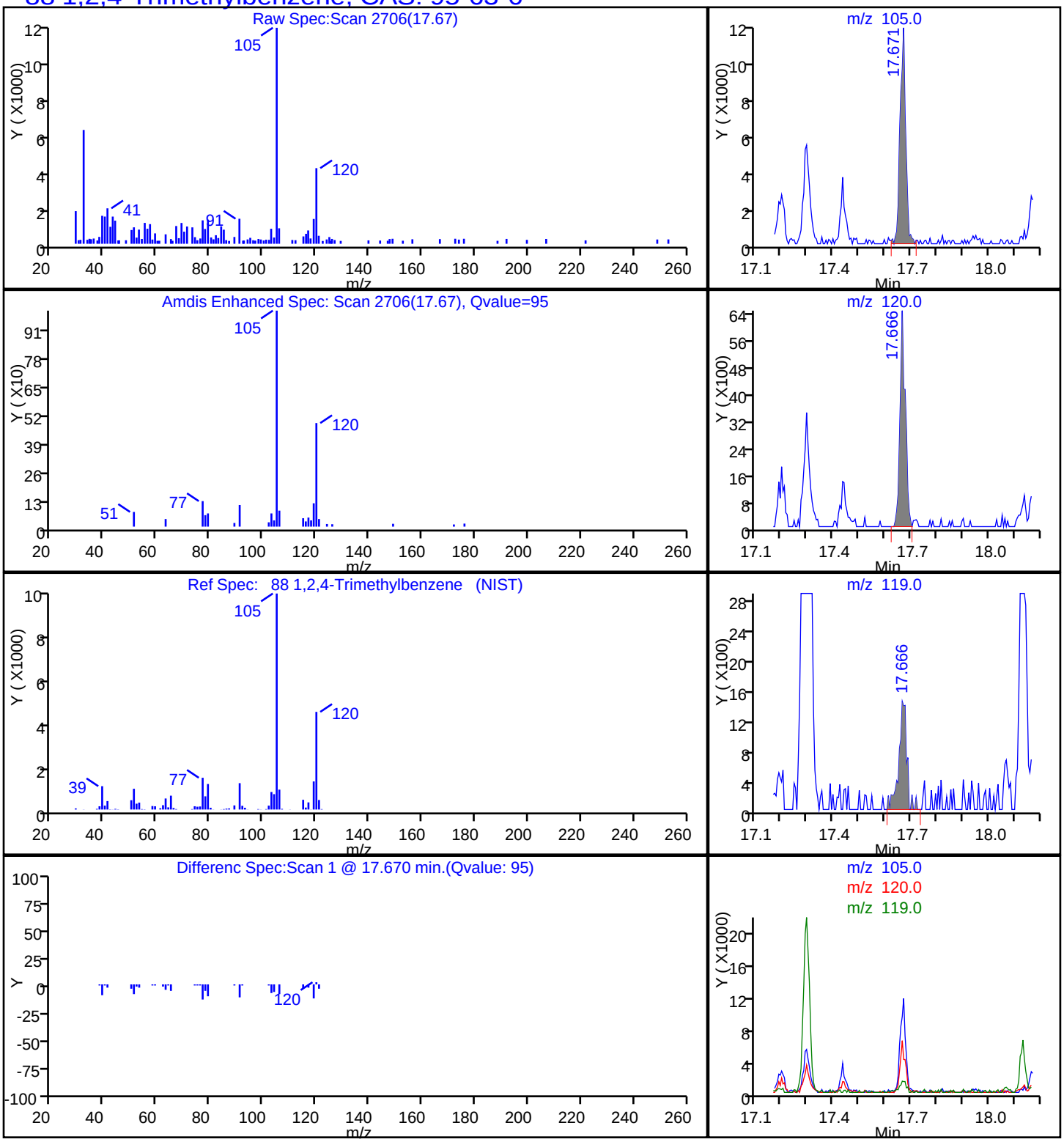
55 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

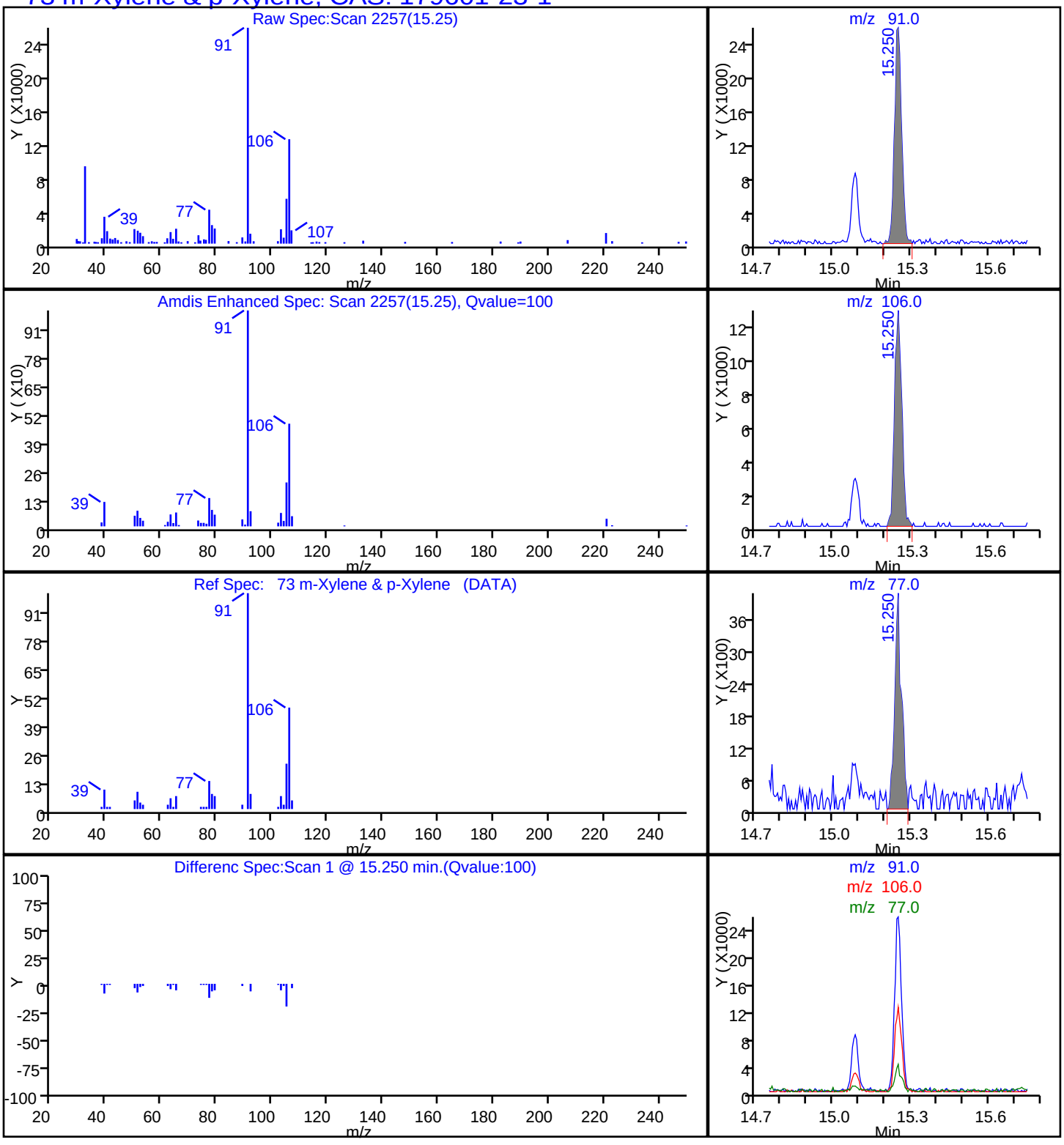
Data File:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P105.D				
Injection Date:	07-Oct-2017 18:36:30	Instrument ID:	MG		
Lims ID:	140-9485-A-1	Lab Sample ID:	140-9485-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	403648	ALS Bottle#:	5	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

88 1,2,4-Trimethylbenzene, CAS: 95-63-6



Data File: \\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P105.D
Injection Date: 07-Oct-2017 18:36:30 Instrument ID: MG
Lims ID: 140-9485-A-1 Lab Sample ID: 140-9485-1
Client ID: BLDG-A EFFLUENT
Operator ID: 403648 ALS Bottle#: 5 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

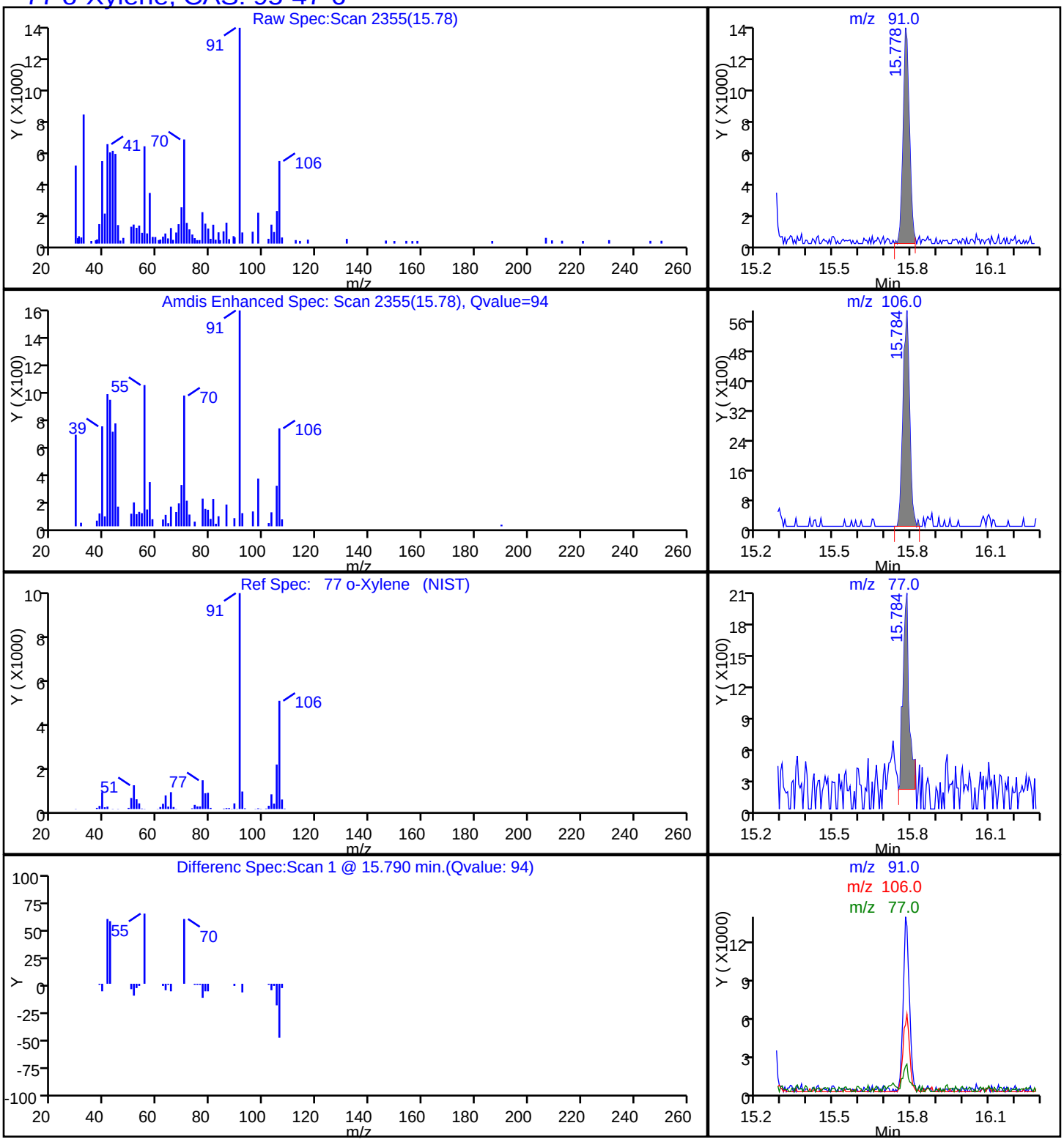
73 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P105.D				
Injection Date:	07-Oct-2017 18:36:30	Instrument ID:	MG		
Lims ID:	140-9485-A-1	Lab Sample ID:	140-9485-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	403648	ALS Bottle#:	5	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

77 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1

SDG No.:

Client Sample ID: BLDG-A INFLUENT Lab Sample ID: 140-9485-2

Matrix: Air Lab File ID: GJ08P106.D

Analysis Method: TO 15 LL Date Collected: 10/04/2017 12:28

Sample wt/vol: 20(mL) Date Analyzed: 10/07/2017 19:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 15018 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	6.8		2.0	0.58
56-23-5	Carbon tetrachloride	153.81	ND		2.0	0.38
75-45-6	Chlorodifluoromethane	86.47	0.72	J	2.0	0.38
67-66-3	Chloroform	119.38	ND		2.0	0.38
156-59-2	cis-1,2-Dichloroethene	96.94	13		2.0	0.60
75-71-8	Dichlorodifluoromethane	120.91	ND		2.0	0.68
75-34-3	1,1-Dichloroethane	98.96	2.6		2.0	0.25
107-06-2	1,2-Dichloroethane	98.96	ND		2.0	0.48
75-35-4	1,1-Dichloroethene	96.94	17		2.0	0.35
100-41-4	Ethylbenzene	106.17	ND		2.0	0.68
75-09-2	Methylene Chloride	84.93	4.0	J	5.0	3.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		10	1.7
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.0	0.40
108-88-3	Toluene	92.14	ND		3.0	3.0
156-60-5	trans-1,2-Dichloroethene	96.94	ND		2.0	0.50
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		2.0	0.98
71-55-6	1,1,1-Trichloroethane	133.41	54		2.0	0.30
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.0	0.53
79-01-6	Trichloroethene	131.39	140		1.0	0.35
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.85
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.63
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.65
75-01-4	Vinyl chloride	62.50	ND		1.0	0.73
1330-20-7	Xylenes, Total	106.17	ND		4.0	0.60

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9485-1

SDG No.:

Client Sample ID: BLDG-A INFLUENT | Lab Sample ID: 140-9485-2

Matrix: Air | Lab File ID: GJ08P106.D

Analysis Method: TO 15 LL | Date Collected: 10/04/2017 12:28

Sample wt/vol: 20(mL) | Date Analyzed: 10/07/2017 19:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15018 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	22		6.4	1.8
56-23-5	Carbon tetrachloride	153.81	ND		13	2.4
75-45-6	Chlorodifluoromethane	86.47	2.5	J	7.1	1.3
67-66-3	Chloroform	119.38	ND		9.8	1.8
156-59-2	cis-1,2-Dichloroethene	96.94	52		7.9	2.4
75-71-8	Dichlorodifluoromethane	120.91	ND		9.9	3.3
75-34-3	1,1-Dichloroethane	98.96	10		8.1	1.0
107-06-2	1,2-Dichloroethane	98.96	ND		8.1	1.9
75-35-4	1,1-Dichloroethene	96.94	66		7.9	1.4
100-41-4	Ethylbenzene	106.17	ND		8.7	2.9
75-09-2	Methylene Chloride	84.93	14	J	17	11
1634-04-4	Methyl tert-butyl ether	88.15	ND		36	6.1
91-20-3	Naphthalene	128.17	ND		5.2	5.2
127-18-4	Tetrachloroethene	165.83	ND		14	2.7
108-88-3	Toluene	92.14	ND		11	11
156-60-5	trans-1,2-Dichloroethene	96.94	ND		7.9	2.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		15	7.2
71-55-6	1,1,1-Trichloroethane	133.41	290		11	1.6
79-00-5	1,1,2-Trichloroethane	133.41	ND		11	2.9
79-01-6	Trichloroethene	131.39	750		5.4	1.9
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		9.8	4.2
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		9.8	3.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		9.8	3.2
75-01-4	Vinyl chloride	62.50	ND		2.6	1.9
1330-20-7	Xylenes, Total	106.17	ND		17	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P106.D				
Lims ID:	140-9485-A-2				
Client ID:	BLDG-A INFLUENT				
Sample Type:	Client				
Inject. Date:	07-Oct-2017 19:19:30	ALS Bottle#:	6	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006279-011				
Misc. Info.:	140-9485-a-2				
Operator ID:	403648	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	18-Oct-2017 12:31:41	Calib Date:	20-Sep-2017 09:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL02R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK018				
First Level Reviewer: barlozhetskayaa		Date:	18-Oct-2017 12:30:41		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.620	7.620	0.000	83	437666	4.00	
* 2 1,4-Difluorobenzene	114	9.766	9.766	0.000	94	1995135	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.716	14.716	0.000	86	1972394	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.398	16.404	-0.006	95	1410342	3.77	
6 Chlorodifluoromethane	67	3.306	3.306	0.000	94	1171	0.0286	
26 1,1-Dichloroethene	96	5.064	5.069	-0.005	99	90649	0.6700	
30 Methylene Chloride	84	5.360	5.355	0.005	88	20933	0.1614	
35 1,1-Dichloroethane	63	6.428	6.433	-0.005	100	25995	0.1022	
40 cis-1,2-Dichloroethene	96	7.328	7.328	0.000	88	82555	0.5256	
44 1,1,1-Trichloroethane	97	8.601	8.612	-0.011	94	818259	2.15	
46 Benzene	78	9.183	9.183	0.000	96	102261	0.2739	
55 Trichloroethene	130	10.515	10.521	-0.006	98	1094076	5.58	
64 Toluene	91	12.683	12.688	-0.005	92	24582	0.0532	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

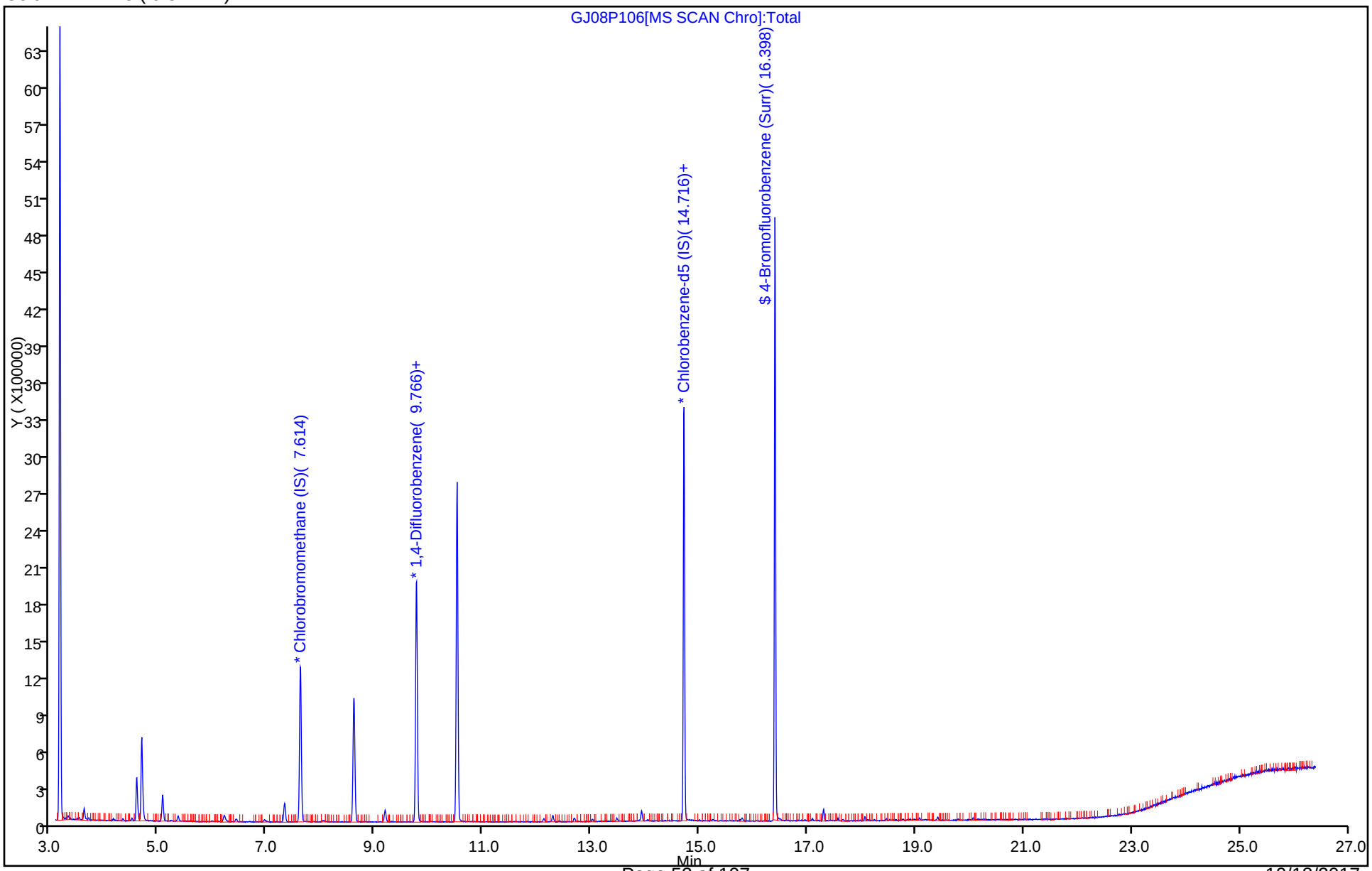
Report Date: 18-Oct-2017 12:34:50 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P106.D

Injection Date:	07-Oct-2017 19:19:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	140-9485-A-2	Lab Sample ID:	140-9485-2	Worklist Smp#:	11
Client ID:	BLDG-A INFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P106.D				
Lims ID:	140-9485-A-2				
Client ID:	BLDG-A INFLUENT				
Sample Type:	Client				
Inject. Date:	07-Oct-2017 19:19:30	ALS Bottle#:	6	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006279-011				
Misc. Info.:	140-9485-a-2				
Operator ID:	403648	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	18-Oct-2017 12:31:41	Calib Date:	20-Sep-2017 09:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL02R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK018				

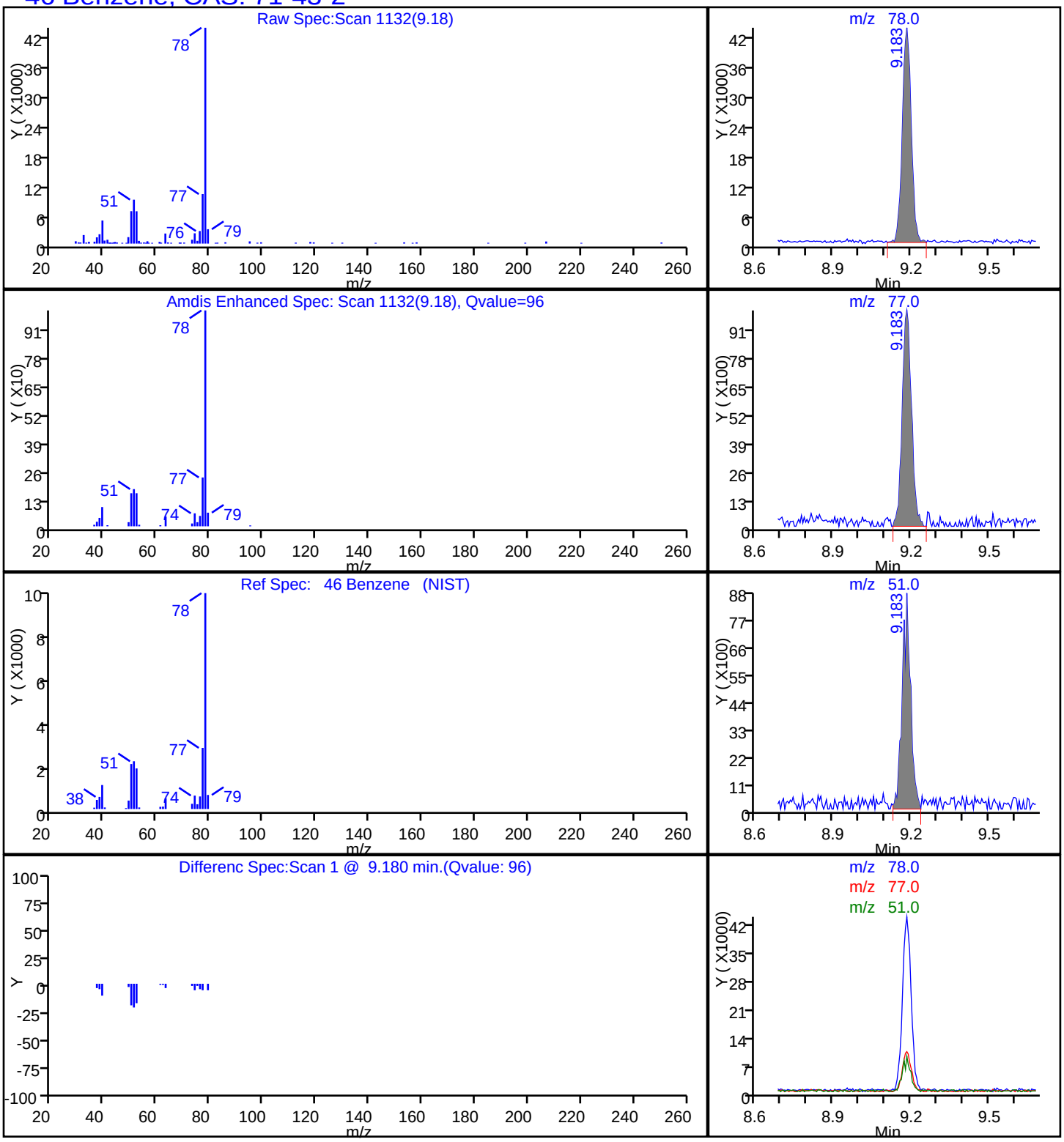
First Level Reviewer: barlozhetskayaa Date: 18-Oct-2017 12:30:41

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.77	94.19

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P106.D				
Injection Date:	07-Oct-2017 19:19:30	Instrument ID:	MG		
Lims ID:	140-9485-A-2	Lab Sample ID:	140-9485-2		
Client ID:	BLDG-A INFLUENT				
Operator ID:	403648	ALS Bottle#:	6	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

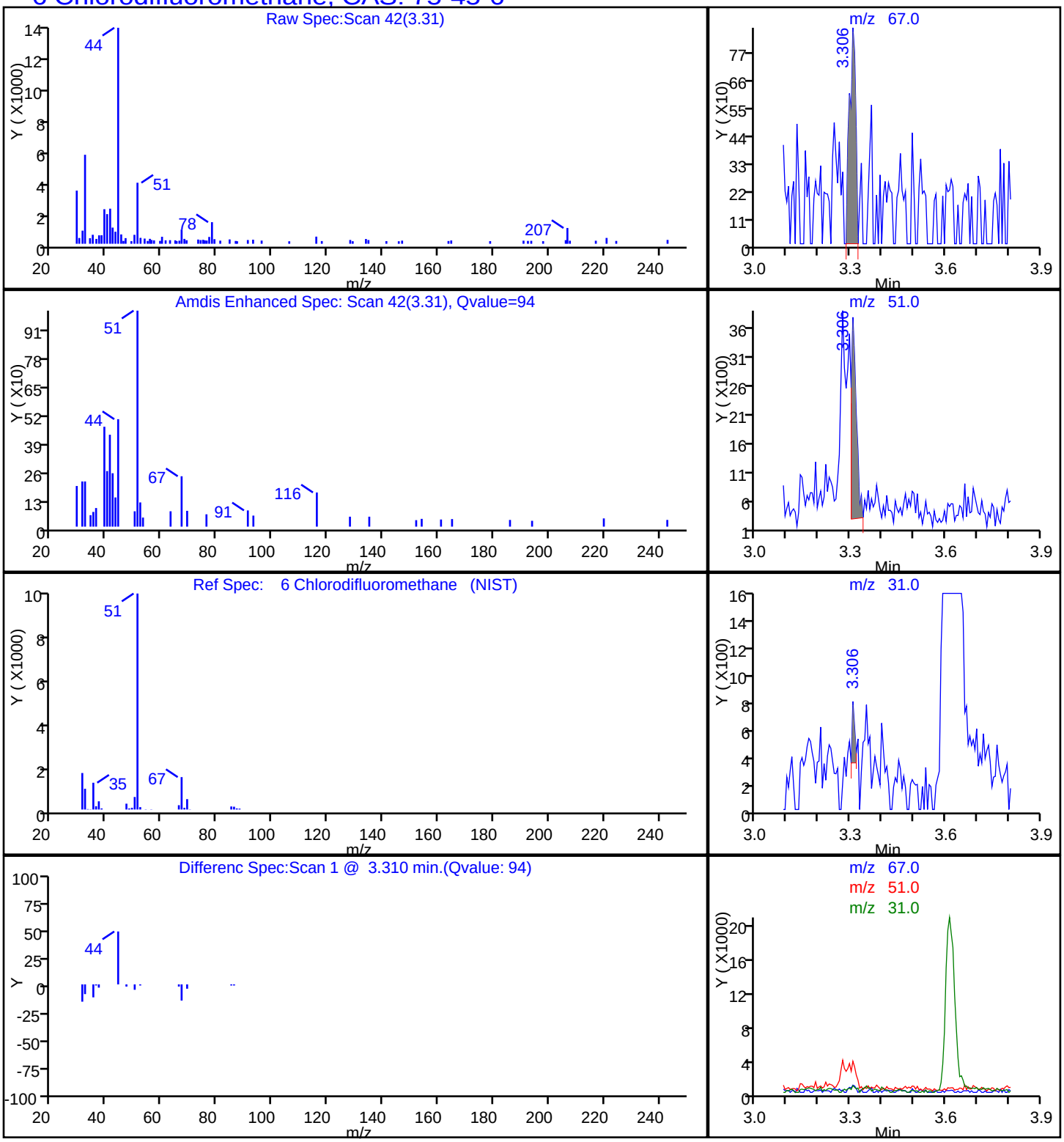
46 Benzene, CAS: 71-43-2



TestAmerica Knoxville

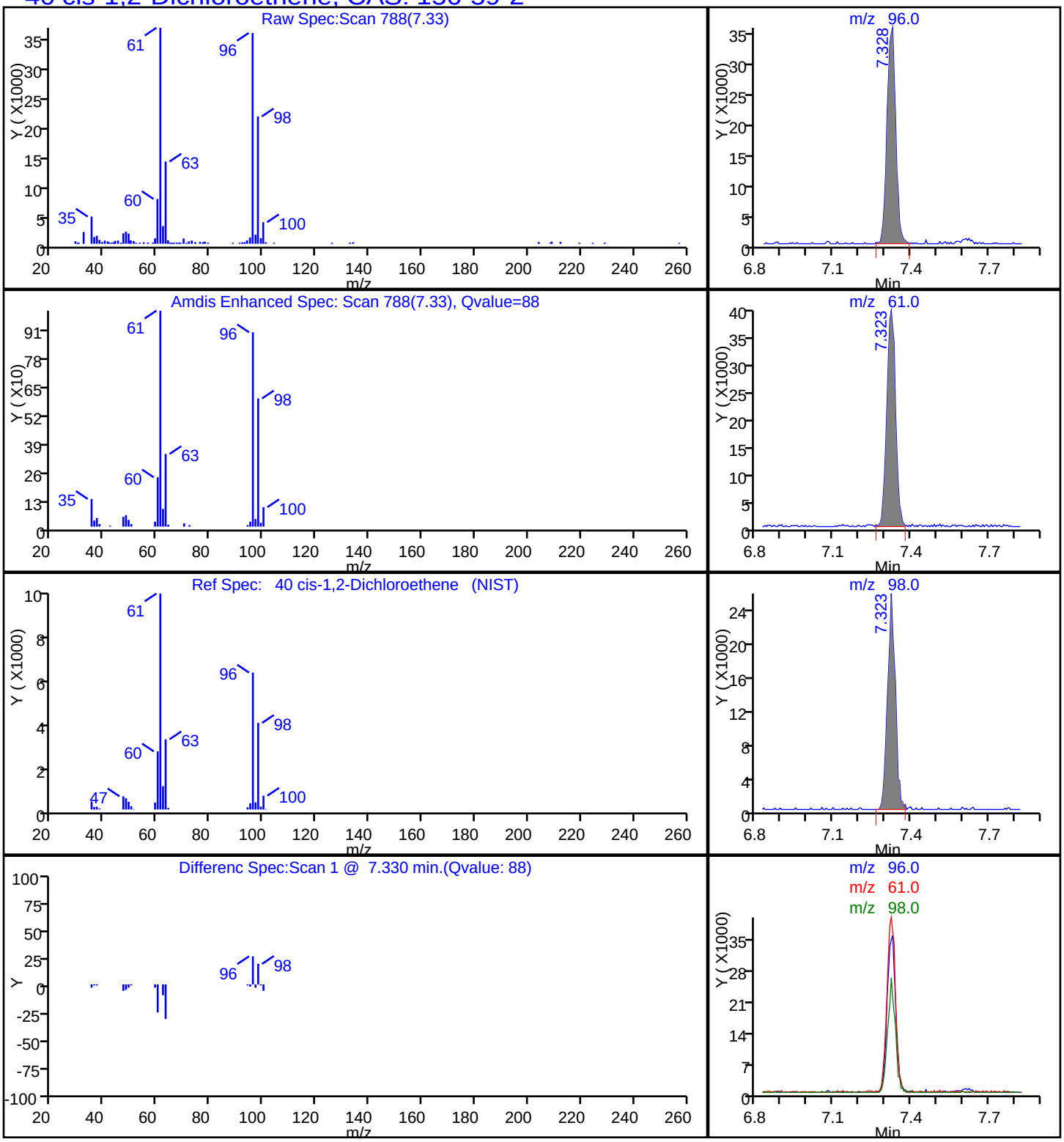
Data File:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P106.D				
Injection Date:	07-Oct-2017 19:19:30	Instrument ID:	MG		
Lims ID:	140-9485-A-2	Lab Sample ID:	140-9485-2		
Client ID:	BLDG-A INFLUENT				
Operator ID:	403648	ALS Bottle#:	6	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

6 Chlorodifluoromethane, CAS: 75-45-6



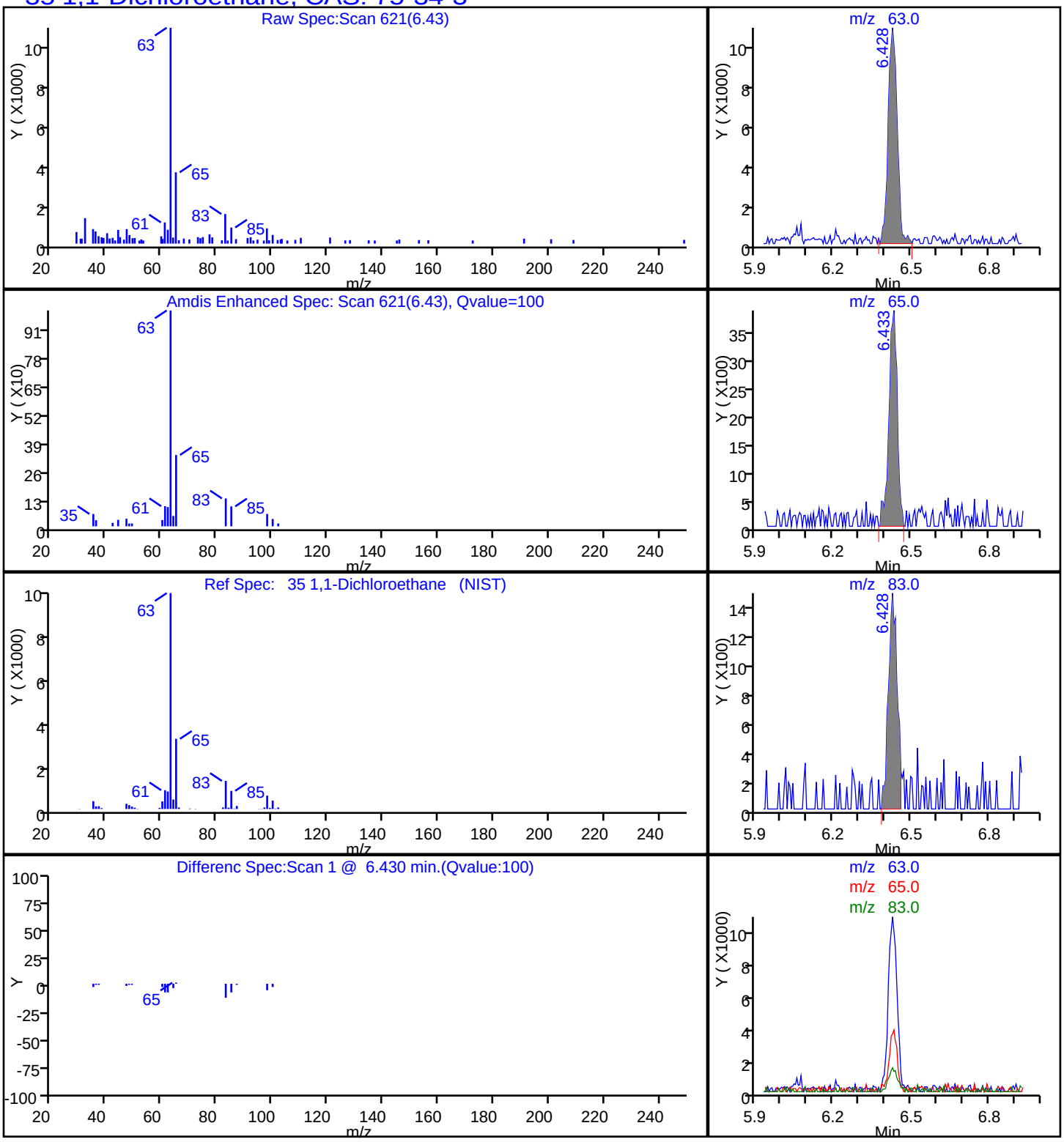
Data File: \\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P106.D
Injection Date: 07-Oct-2017 19:19:30 Instrument ID: MG
Lims ID: 140-9485-A-2 Lab Sample ID: 140-9485-2
Client ID: BLDG-A INFLUENT
Operator ID: 403648 ALS Bottle#: 6 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

40 cis-1,2-Dichloroethene, CAS: 156-59-2



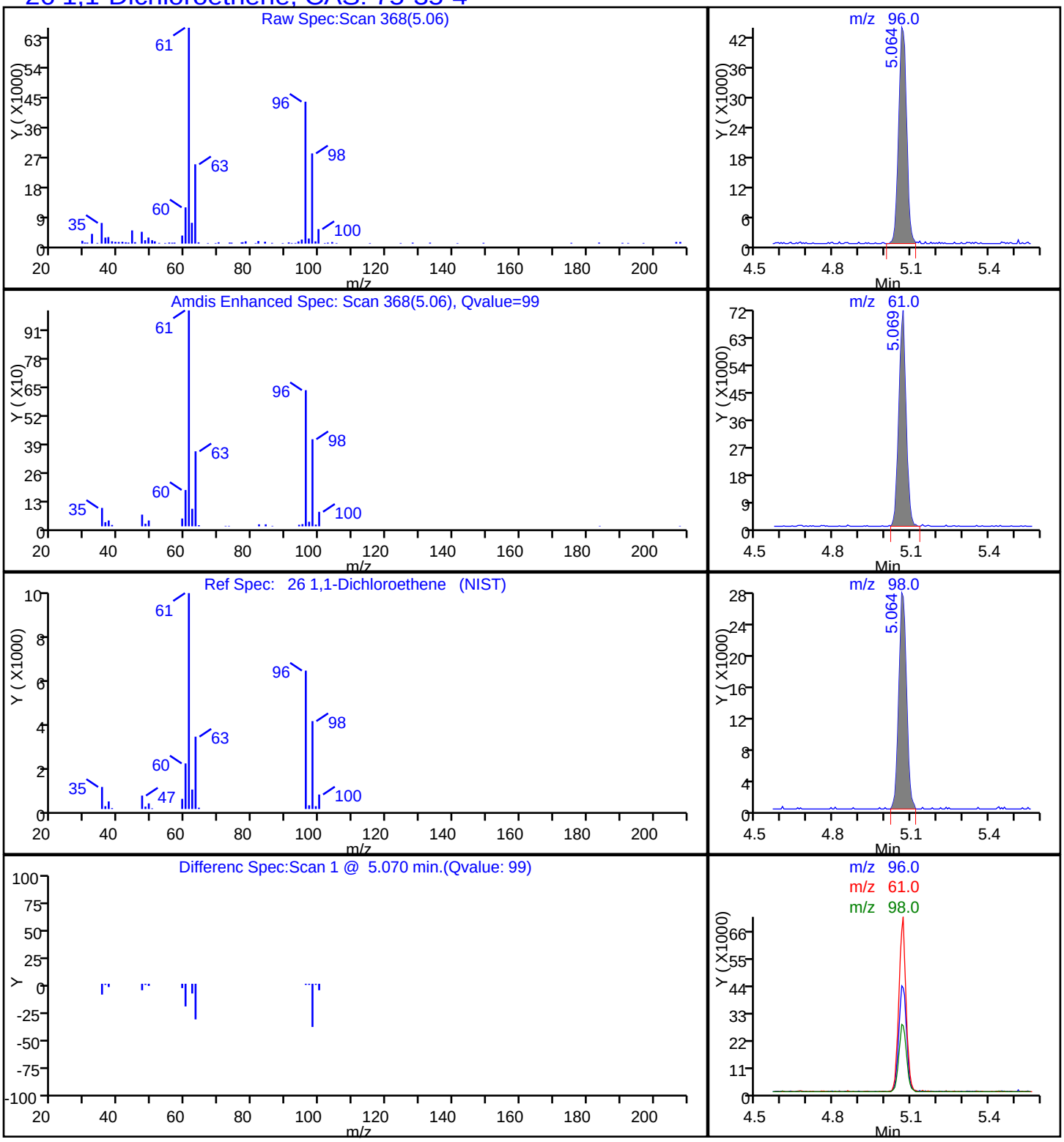
Data File: \\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P106.D
Injection Date: 07-Oct-2017 19:19:30 Instrument ID: MG
Lims ID: 140-9485-A-2 Lab Sample ID: 140-9485-2
Client ID: BLDG-A INFLUENT
Operator ID: 403648 ALS Bottle#: 6 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

35 1,1-Dichloroethane, CAS: 75-34-3



Data File: \\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P106.D
Injection Date: 07-Oct-2017 19:19:30 Instrument ID: MG
Lims ID: 140-9485-A-2 Lab Sample ID: 140-9485-2
Client ID: BLDG-A INFLUENT
Operator ID: 403648 ALS Bottle#: 6 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

26 1,1-Dichloroethene, CAS: 75-35-4



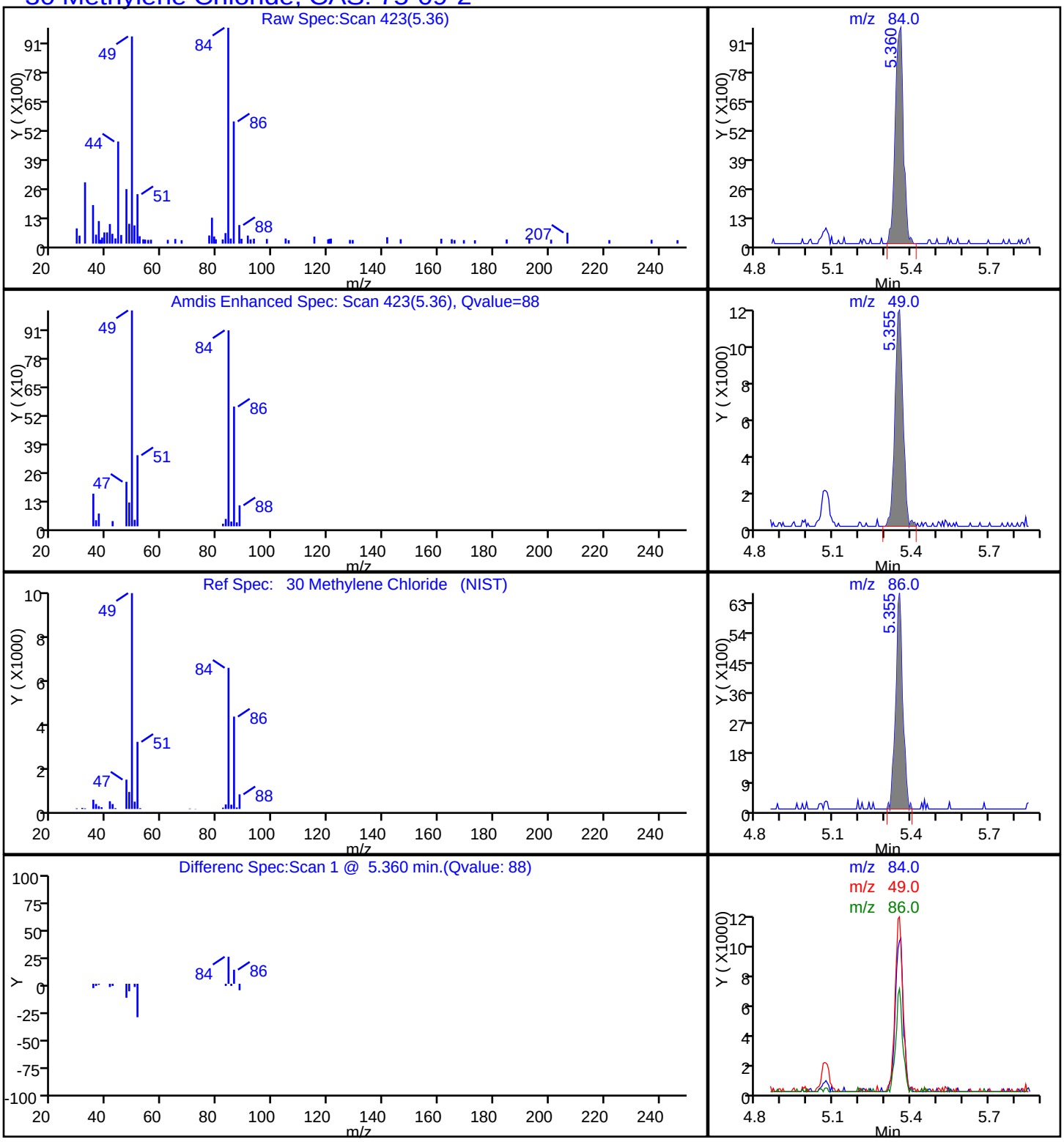
Report Date: 18-Oct-2017 12:34:51 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P106.D

Injection Date:	07-Oct-2017 19:19:30	Instrument ID:	MG		
Lims ID:	140-9485-A-2	Lab Sample ID:	140-9485-2		
Client ID:	BLDG-A INFLUENT				
Operator ID:	403648	ALS Bottle#:	6	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

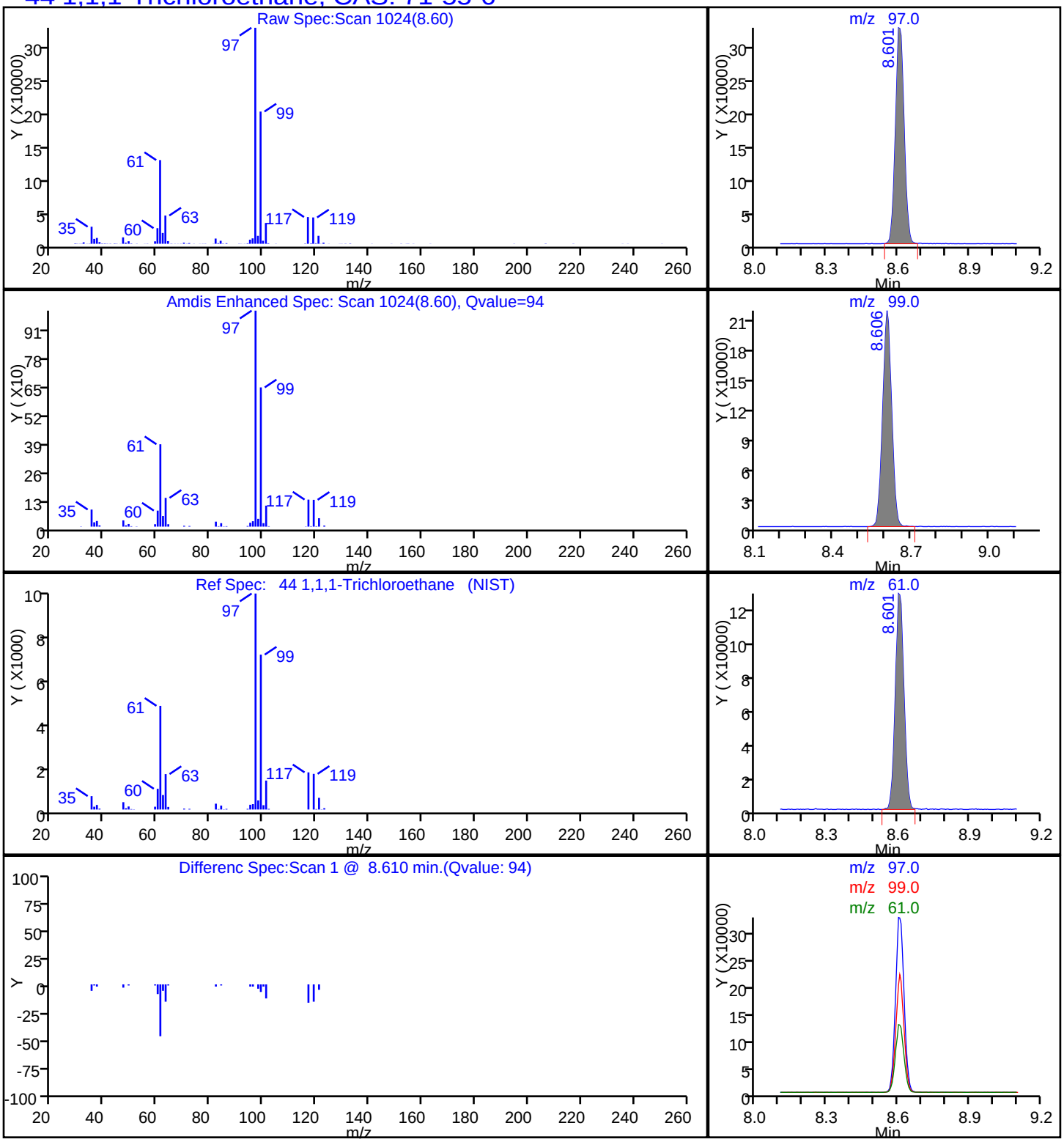
30 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P106.D				
Injection Date:	07-Oct-2017 19:19:30	Instrument ID:	MG		
Lims ID:	140-9485-A-2	Lab Sample ID:	140-9485-2		
Client ID:	BLDG-A INFLUENT				
Operator ID:	403648	ALS Bottle#:	6	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

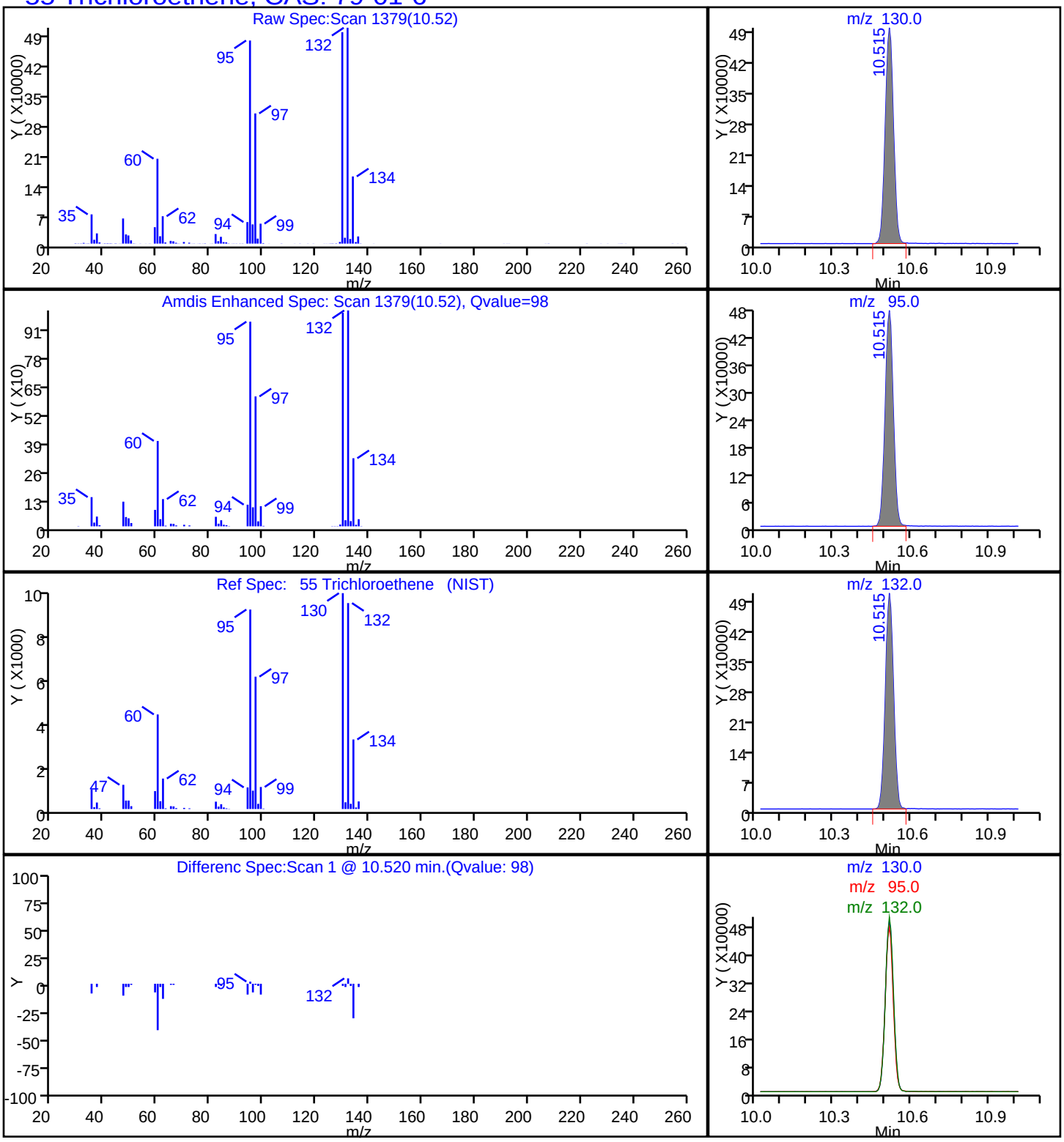
44 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P106.D				
Injection Date:	07-Oct-2017 19:19:30	Instrument ID:	MG		
Lims ID:	140-9485-A-2	Lab Sample ID:	140-9485-2		
Client ID:	BLDG-A INFLUENT				
Operator ID:	403648	ALS Bottle#:	6	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

55 Trichloroethene, CAS: 79-01-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9485-1

SDG No.:

Client Sample ID: BLDG-A MID-GAC | Lab Sample ID: 140-9485-3

Matrix: Air | Lab File ID: GJ08P107.D

Analysis Method: TO 15 LL | Date Collected: 10/04/2017 12:24

Sample wt/vol: 50(mL) | Date Analyzed: 10/07/2017 20:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15018 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.28	J	0.80	0.23
56-23-5	Carbon tetrachloride	153.81	ND		0.80	0.15
75-45-6	Chlorodifluoromethane	86.47	0.68	J	0.80	0.15
67-66-3	Chloroform	119.38	0.47	J	0.80	0.15
156-59-2	cis-1,2-Dichloroethene	96.94	19		0.80	0.24
75-71-8	Dichlorodifluoromethane	120.91	0.51	J	0.80	0.27
75-34-3	1,1-Dichloroethane	98.96	3.4		0.80	0.10
107-06-2	1,2-Dichloroethane	98.96	ND		0.80	0.19
75-35-4	1,1-Dichloroethene	96.94	19		0.80	0.14
100-41-4	Ethylbenzene	106.17	ND		0.80	0.27
75-09-2	Methylene Chloride	84.93	2.4		2.0	1.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		4.0	0.68
91-20-3	Naphthalene	128.17	ND		0.40	0.40
127-18-4	Tetrachloroethene	165.83	ND		0.80	0.16
108-88-3	Toluene	92.14	ND		1.2	1.2
156-60-5	trans-1,2-Dichloroethene	96.94	0.43	J	0.80	0.20
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.80	0.39
71-55-6	1,1,1-Trichloroethane	133.41	52		0.80	0.12
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.80	0.21
79-01-6	Trichloroethene	131.39	0.19	J	0.40	0.14
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.80	0.34
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.80	0.25
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.80	0.26
75-01-4	Vinyl chloride	62.50	ND		0.40	0.29
1330-20-7	Xylenes, Total	106.17	ND		1.6	0.24

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9485-1

SDG No.:

Client Sample ID: BLDG-A MID-GAC | Lab Sample ID: 140-9485-3

Matrix: Air | Lab File ID: GJ08P107.D

Analysis Method: TO 15 LL | Date Collected: 10/04/2017 12:24

Sample wt/vol: 50(mL) | Date Analyzed: 10/07/2017 20:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15018 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.89	J	2.6	0.73
56-23-5	Carbon tetrachloride	153.81	ND		5.0	0.94
75-45-6	Chlorodifluoromethane	86.47	2.4	J	2.8	0.53
67-66-3	Chloroform	119.38	2.3	J	3.9	0.73
156-59-2	cis-1,2-Dichloroethene	96.94	75		3.2	0.95
75-71-8	Dichlorodifluoromethane	120.91	2.5	J	4.0	1.3
75-34-3	1,1-Dichloroethane	98.96	14		3.2	0.40
107-06-2	1,2-Dichloroethane	98.96	ND		3.2	0.77
75-35-4	1,1-Dichloroethene	96.94	77		3.2	0.56
100-41-4	Ethylbenzene	106.17	ND		3.5	1.2
75-09-2	Methylene Chloride	84.93	8.3		6.9	4.5
1634-04-4	Methyl tert-butyl ether	88.15	ND		14	2.5
91-20-3	Naphthalene	128.17	ND		2.1	2.1
127-18-4	Tetrachloroethene	165.83	ND		5.4	1.1
108-88-3	Toluene	92.14	ND		4.5	4.5
156-60-5	trans-1,2-Dichloroethene	96.94	1.7	J	3.2	0.79
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		5.9	2.9
71-55-6	1,1,1-Trichloroethane	133.41	280		4.4	0.65
79-00-5	1,1,2-Trichloroethane	133.41	ND		4.4	1.1
79-01-6	Trichloroethene	131.39	1.0	J	2.1	0.75
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		3.9	1.7
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		3.9	1.2
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		3.9	1.3
75-01-4	Vinyl chloride	62.50	ND		1.0	0.74
1330-20-7	Xylenes, Total	106.17	ND		6.9	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P107.D				
Lims ID:	140-9485-A-3				
Client ID:	BLDG-A MID-GAC				
Sample Type:	Client				
Inject. Date:	07-Oct-2017 20:02:30	ALS Bottle#:	7	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006279-012				
Misc. Info.:	140-9485-a-3				
Operator ID:	403648	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	18-Oct-2017 12:31:41	Calib Date:	20-Sep-2017 09:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL02R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK018				
First Level Reviewer: barlozhetskayaa		Date:	09-Oct-2017 10:04:59		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.630	7.620	0.010	83	504206	4.00	
* 2 1,4-Difluorobenzene	114	9.776	9.766	0.010	94	2593862	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.716	14.716	0.000	87	2433610	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.404	16.404	0.000	96	1773868	3.84	
6 Chlorodifluoromethane	67	3.316	3.306	0.010	94	3207	0.0680	
8 Dichlorodifluoromethane	85	3.360	3.354	0.006	99	24281	0.0510	
26 1,1-Dichloroethene	96	5.080	5.069	0.011	99	300801	1.93	
30 Methylene Chloride	84	5.371	5.355	0.016	90	35678	0.2389	
33 trans-1,2-Dichloroethene	96	6.077	6.067	0.011	93	6942	0.0428	
35 1,1-Dichloroethane	63	6.444	6.433	0.011	100	99267	0.3389	
40 cis-1,2-Dichloroethene	96	7.339	7.328	0.011	88	340388	1.88	
42 Chloroform	83	7.668	7.646	0.022	90	18928	0.0475	
44 1,1,1-Trichloroethane	97	8.622	8.612	0.010	94	2285893	5.21	
46 Benzene	78	9.199	9.183	0.016	93	13555	0.0279	
55 Trichloroethene	130	10.526	10.521	0.005	92	4840	0.0190	
64 Toluene	91	12.688	12.688	0.000	96	36932	0.0647	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

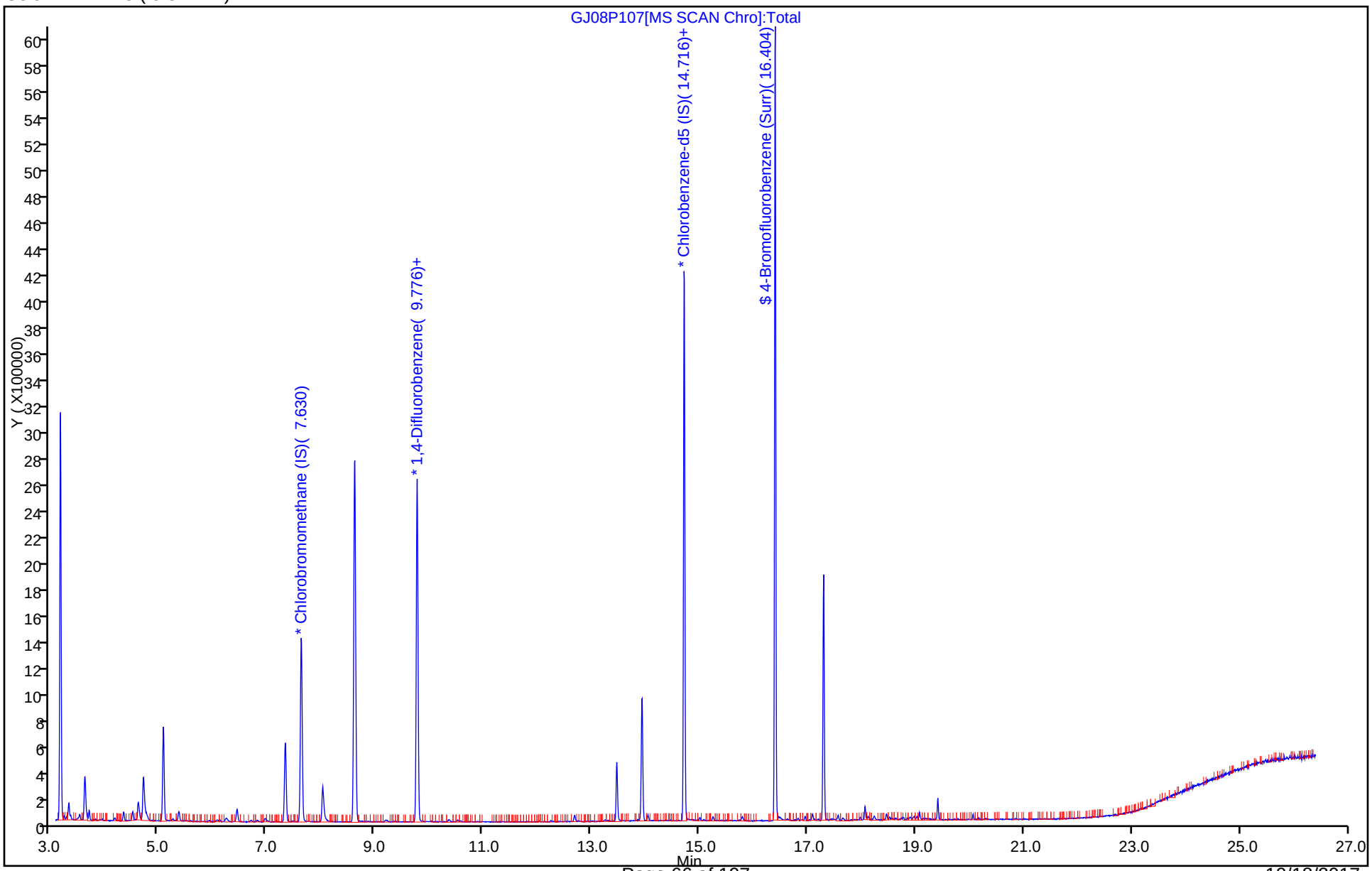
Report Date: 18-Oct-2017 12:34:54 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P107.D

Injection Date:	07-Oct-2017 20:02:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	140-9485-A-3	Lab Sample ID:	140-9485-3	Worklist Smp#:	12
Client ID:	BLDG-A MID-GAC				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P107.D				
Lims ID:	140-9485-A-3				
Client ID:	BLDG-A MID-GAC				
Sample Type:	Client				
Inject. Date:	07-Oct-2017 20:02:30	ALS Bottle#:	7	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006279-012				
Misc. Info.:	140-9485-a-3				
Operator ID:	403648	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	18-Oct-2017 12:31:41	Calib Date:	20-Sep-2017 09:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL02R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK018				

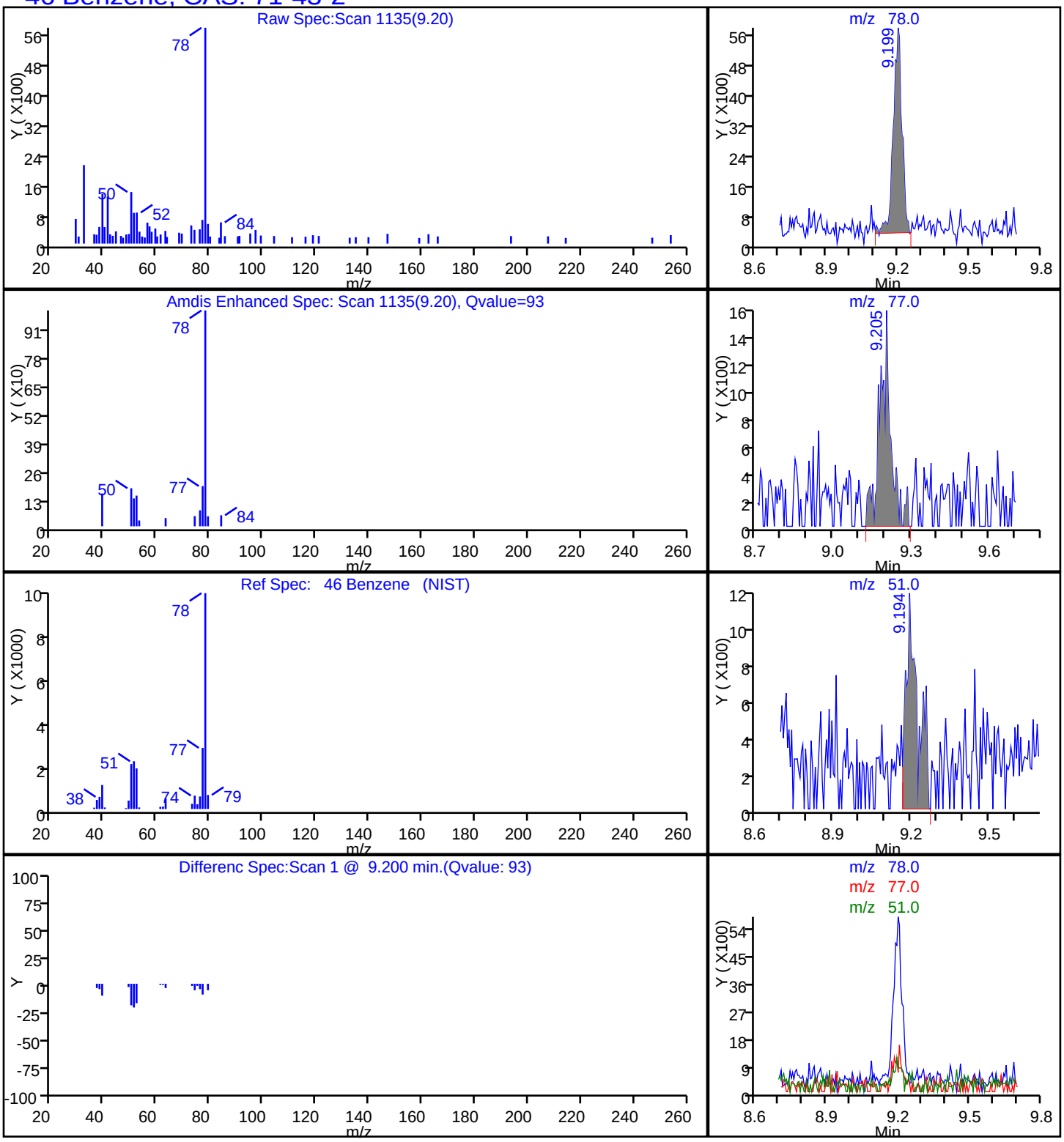
First Level Reviewer: barlozhetskayaa Date: 09-Oct-2017 10:04:59

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.84	96.01

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P107.D				
Injection Date:	07-Oct-2017 20:02:30	Instrument ID:	MG		
Lims ID:	140-9485-A-3	Lab Sample ID:	140-9485-3		
Client ID:	BLDG-A MID-GAC				
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

46 Benzene, CAS: 71-43-2



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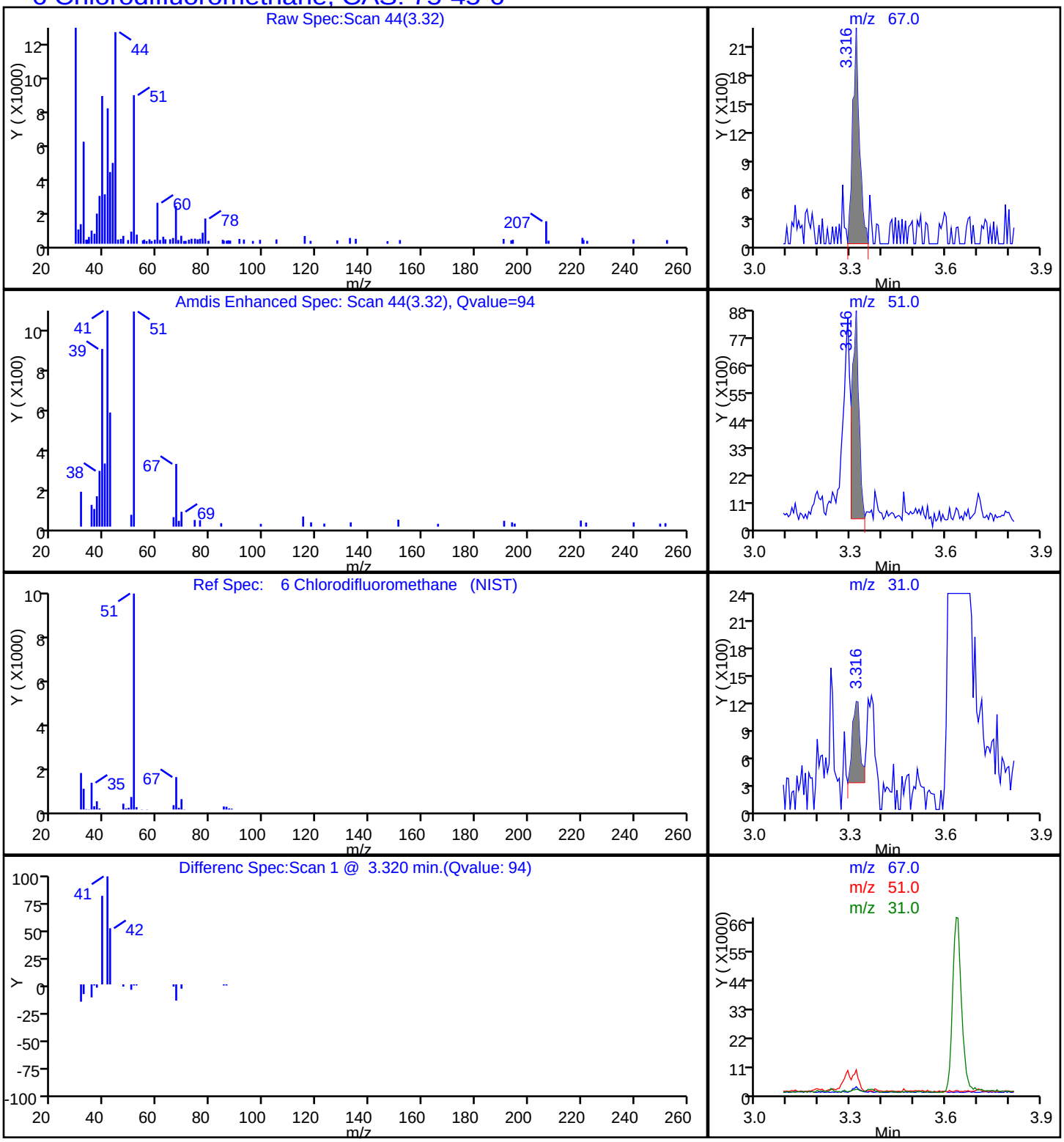
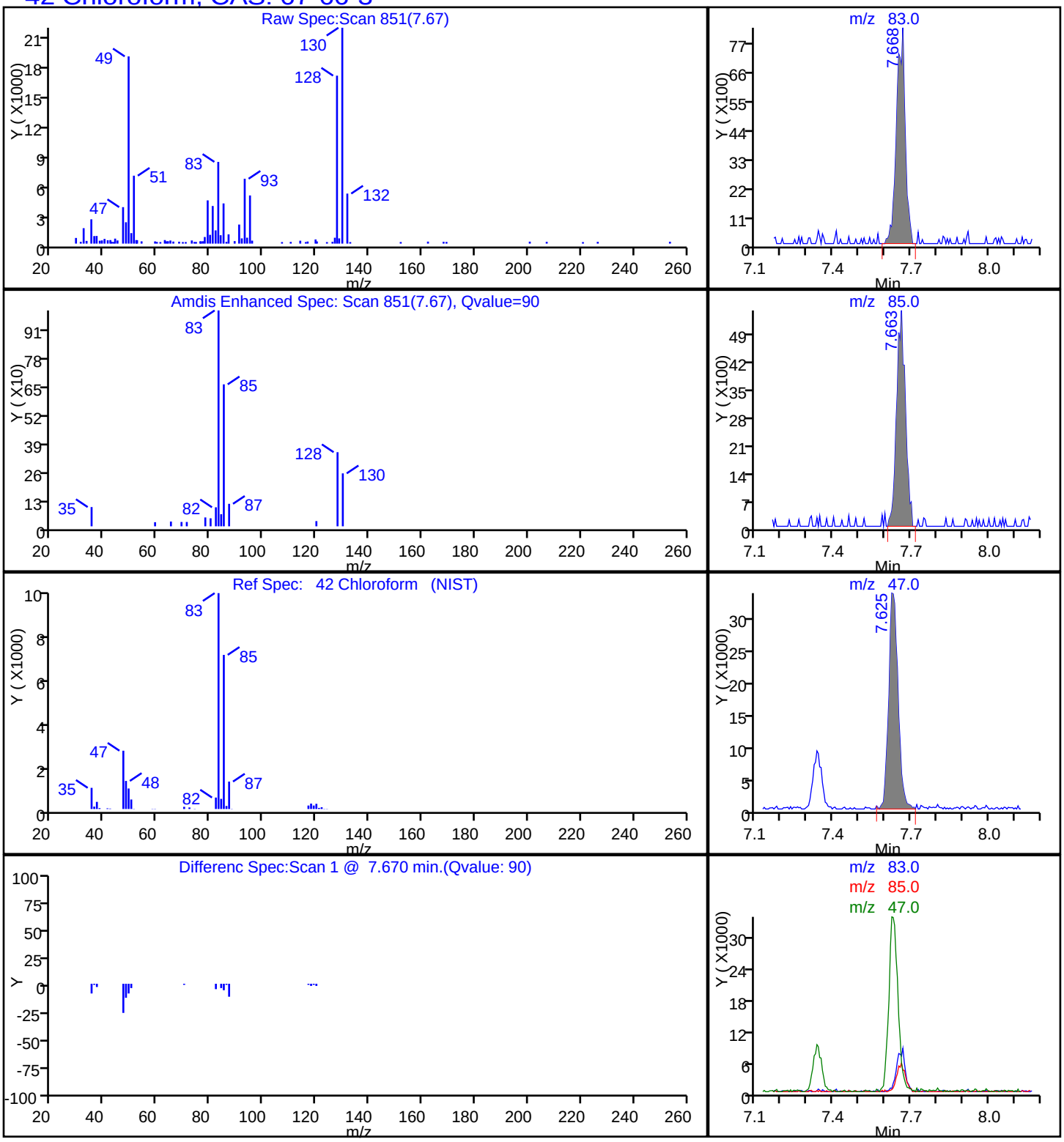
Injection Date: 07-Oct-2017 20:02:30 Instrument ID: MG
Lims ID: 140-9485-A-3 Lab Sample ID: 140-9485-3
Client ID: BLDG-A MID-GAC
Operator ID: 403648 ALS Bottle#: 7 Worklist Smp#: 12
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



Data File: \\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P107.D
Injection Date: 07-Oct-2017 20:02:30 Instrument ID: MG
Lims ID: 140-9485-A-3 Lab Sample ID: 140-9485-3
Client ID: BLDG-A MID-GAC
Operator ID: 403648 ALS Bottle#: 7 Worklist Smp#: 12
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

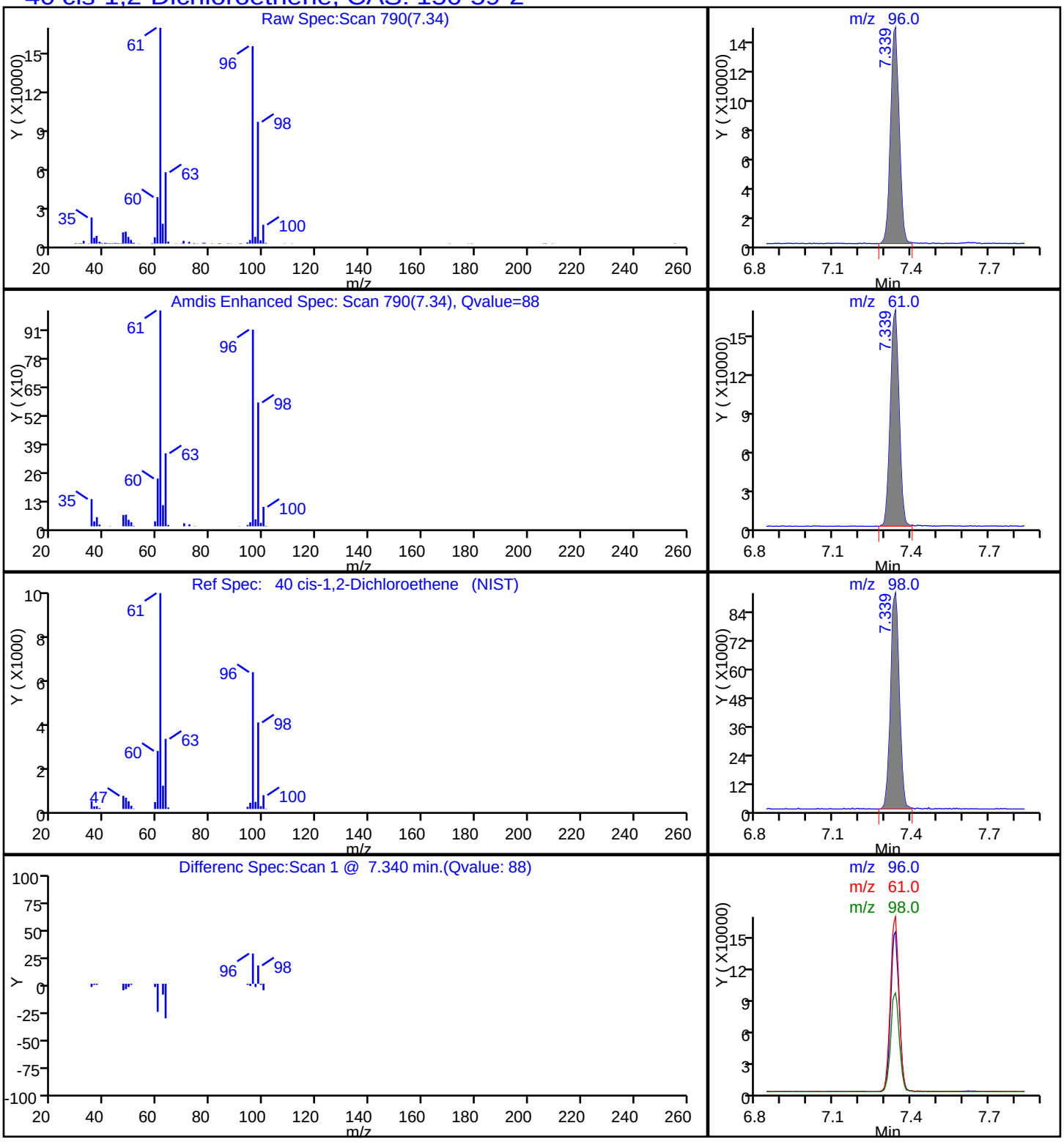
42 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P107.D				
Injection Date:	07-Oct-2017 20:02:30	Instrument ID:	MG		
Lims ID:	140-9485-A-3	Lab Sample ID:	140-9485-3		
Client ID:	BLDG-A MID-GAC				
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

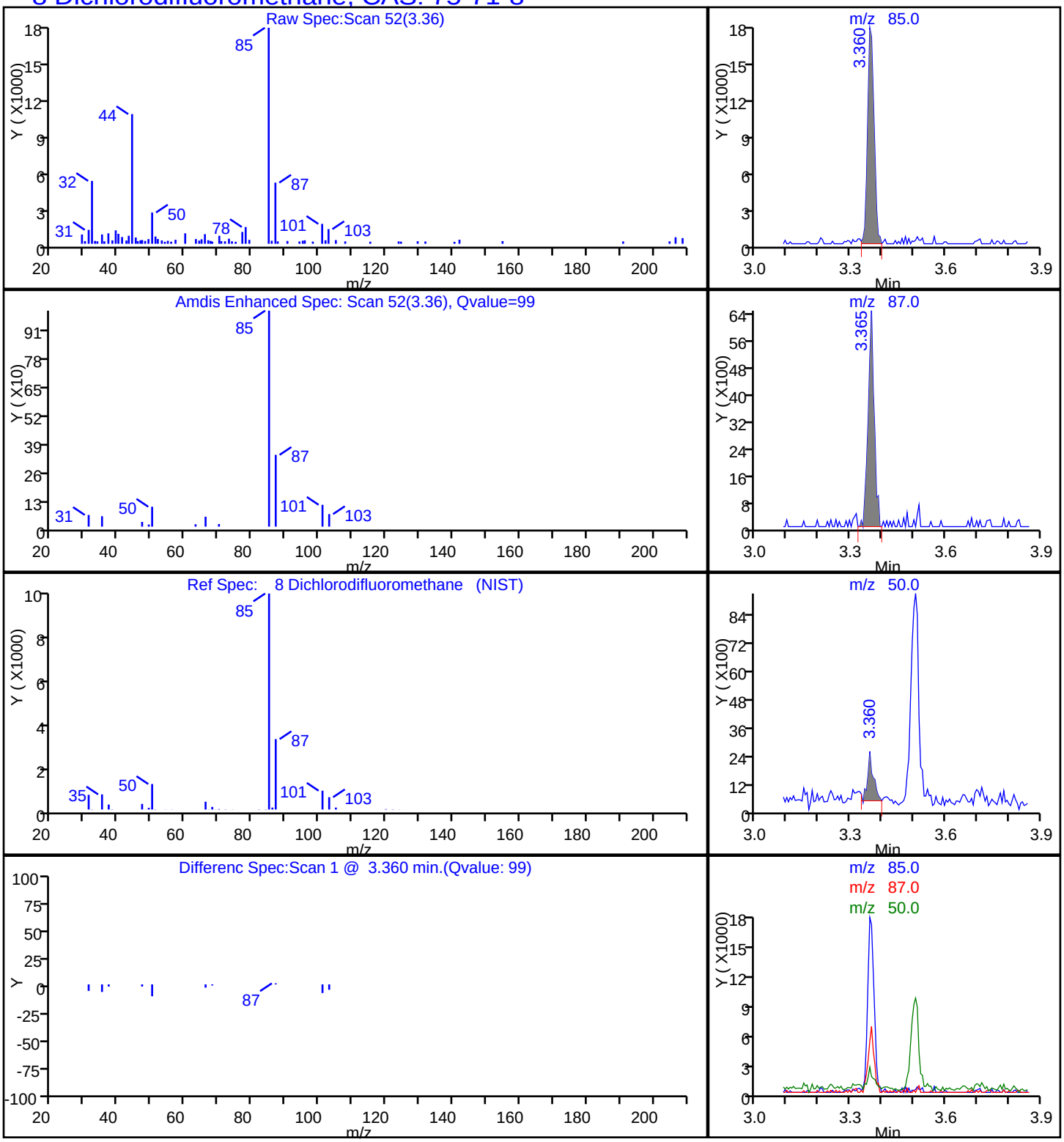
40 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P107.D				
Injection Date:	07-Oct-2017 20:02:30	Instrument ID:	MG		
Lims ID:	140-9485-A-3	Lab Sample ID:	140-9485-3		
Client ID:	BLDG-A MID-GAC				
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

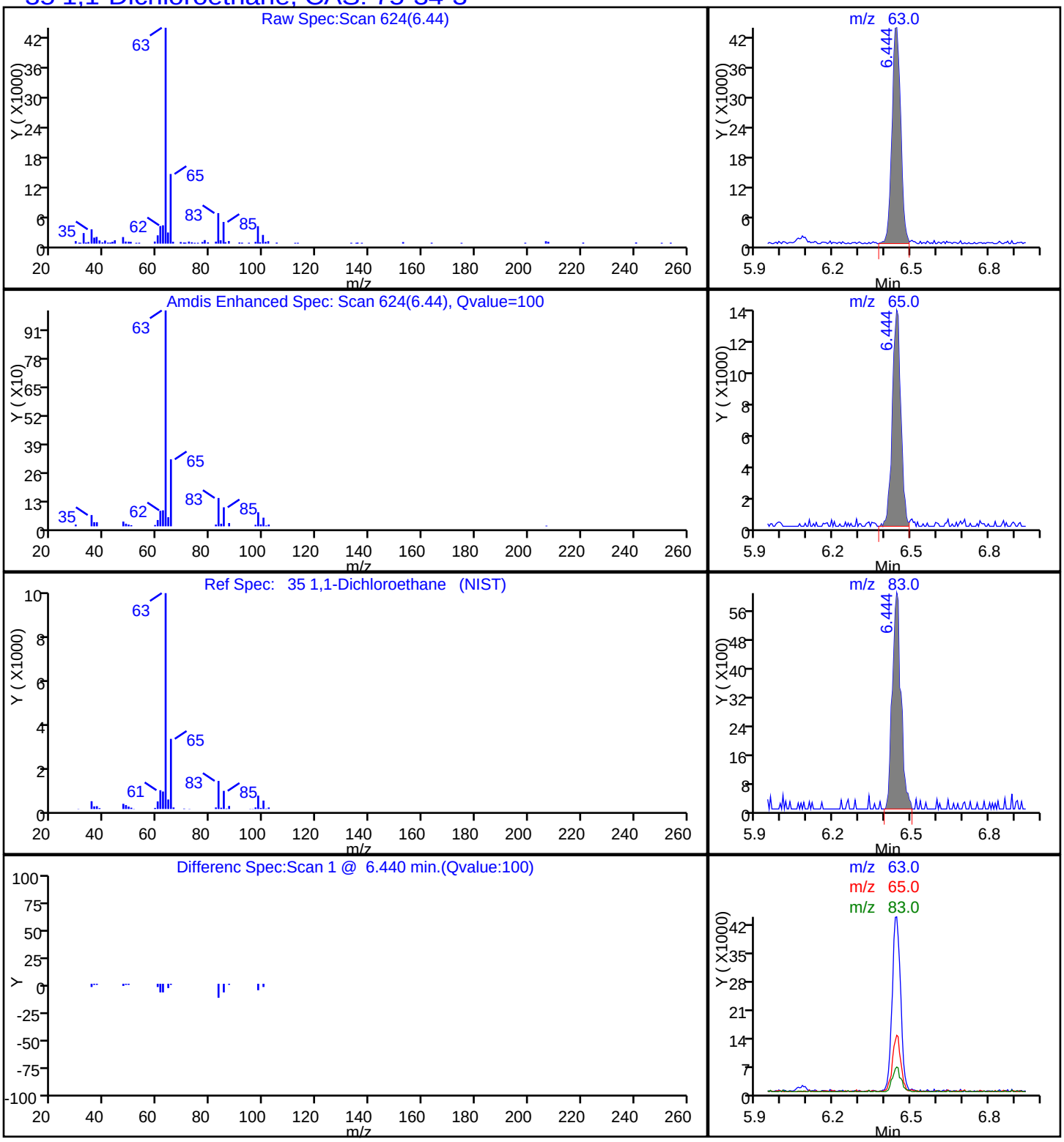
8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P107.D				
Injection Date:	07-Oct-2017 20:02:30	Instrument ID:	MG		
Lims ID:	140-9485-A-3	Lab Sample ID:	140-9485-3		
Client ID:	BLDG-A MID-GAC				
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

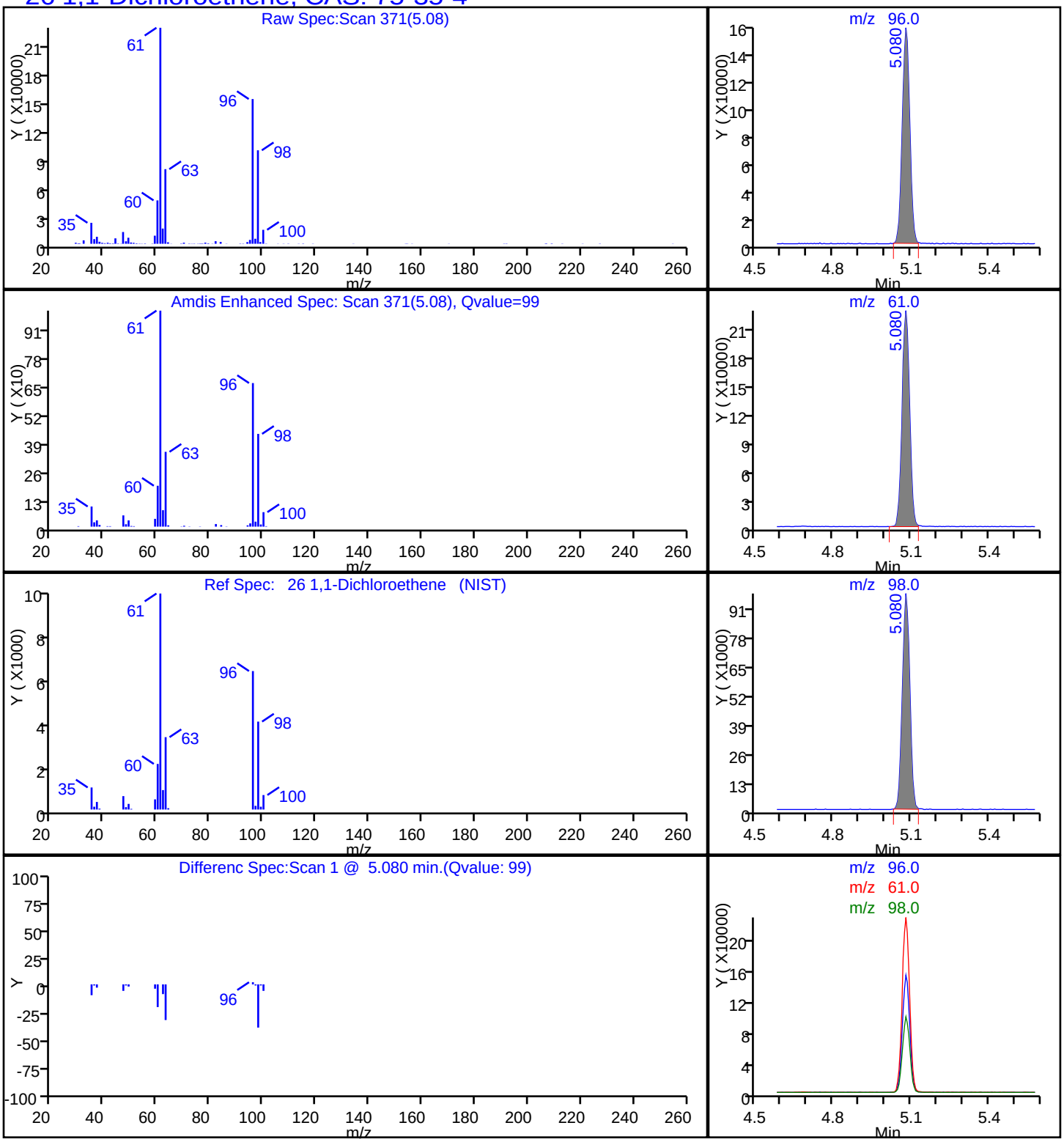
35 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P107.D				
Injection Date:	07-Oct-2017 20:02:30	Instrument ID:	MG		
Lims ID:	140-9485-A-3	Lab Sample ID:	140-9485-3		
Client ID:	BLDG-A MID-GAC				
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

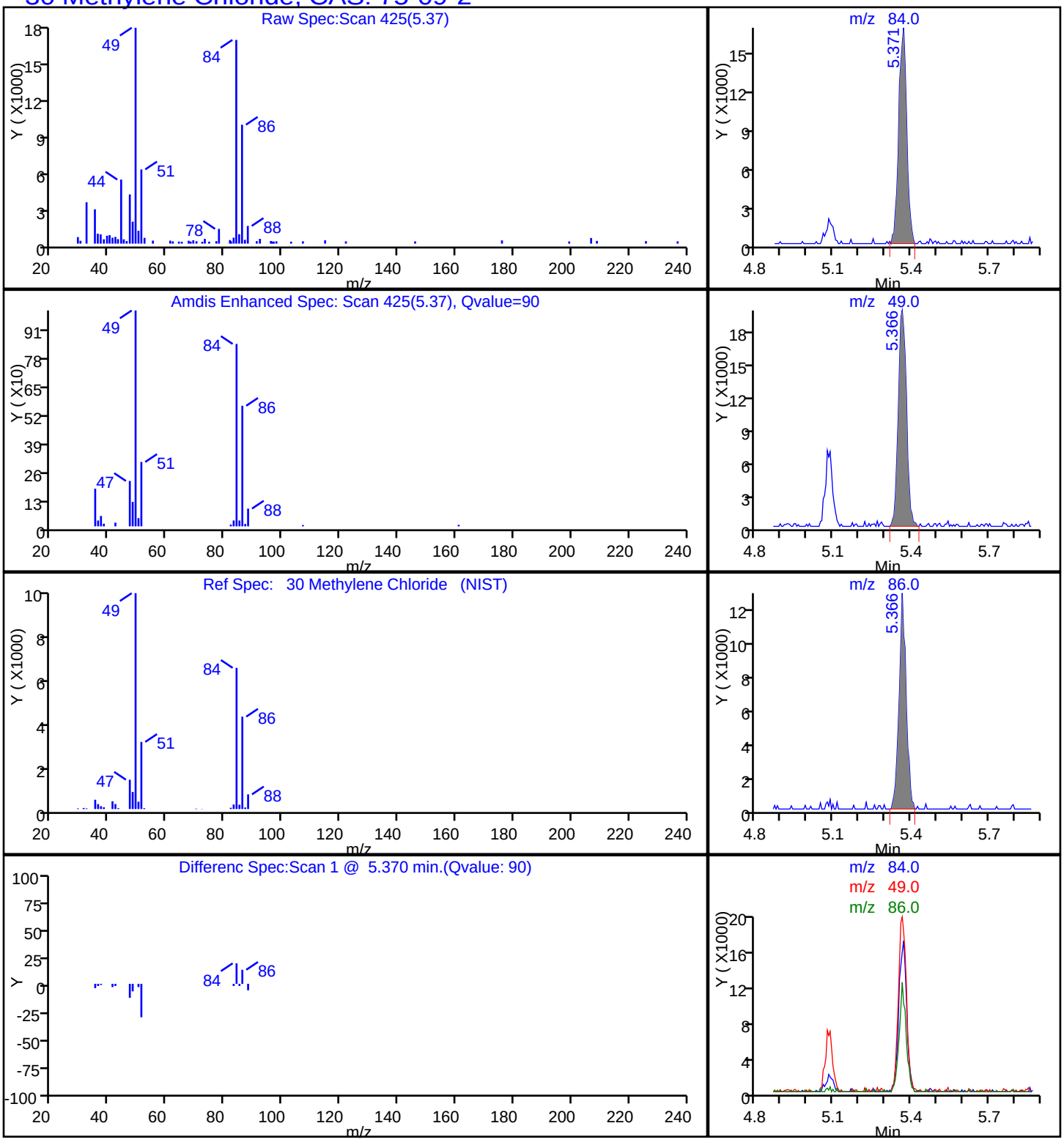
26 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

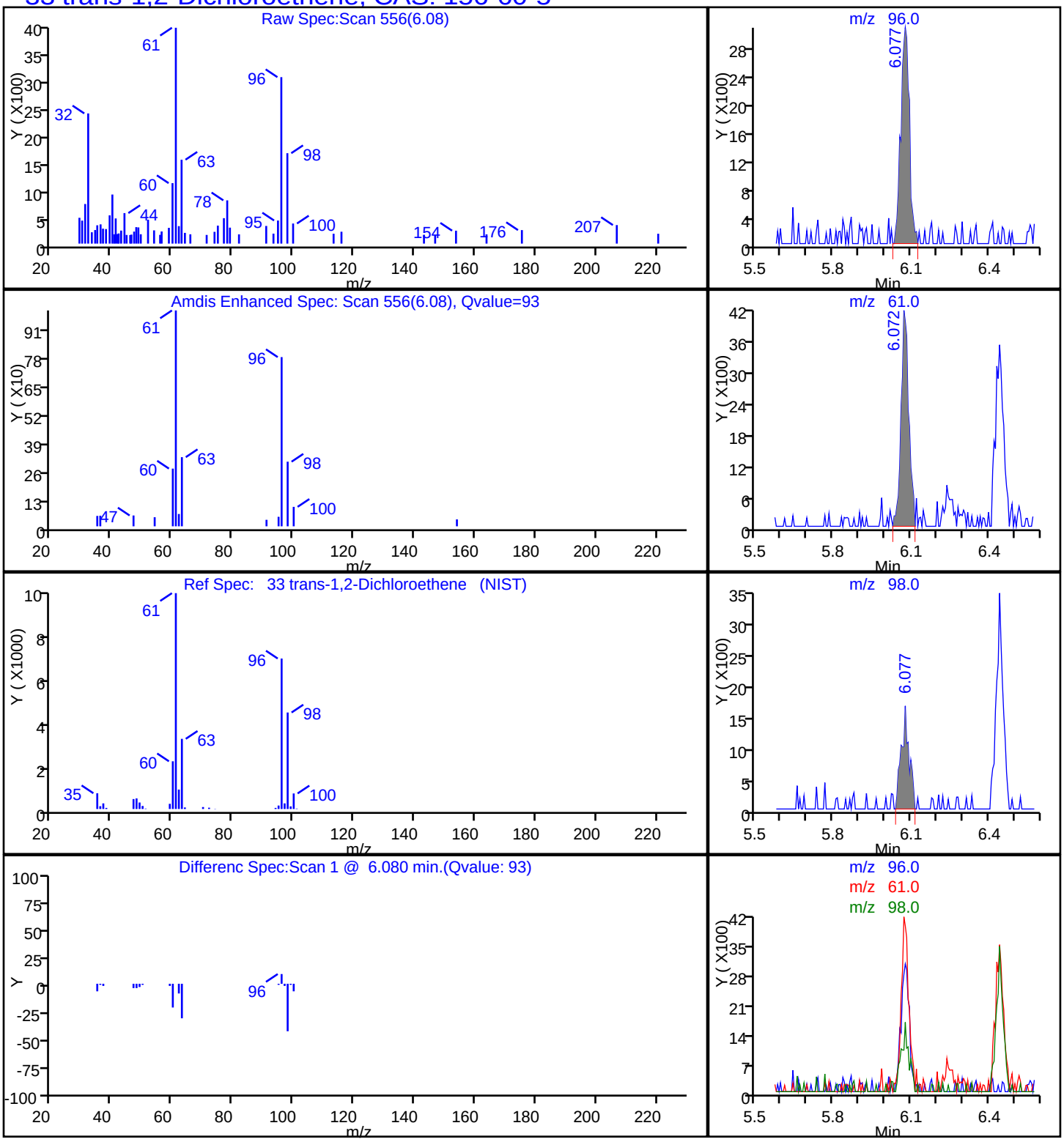
Data File:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P107.D				
Injection Date:	07-Oct-2017 20:02:30	Instrument ID:	MG		
Lims ID:	140-9485-A-3	Lab Sample ID:	140-9485-3		
Client ID:	BLDG-A MID-GAC				
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

30 Methylene Chloride, CAS: 75-09-2



Data File: \\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P107.D
Injection Date: 07-Oct-2017 20:02:30 Instrument ID: MG
Lims ID: 140-9485-A-3 Lab Sample ID: 140-9485-3
Client ID: BLDG-A MID-GAC
Operator ID: 403648 ALS Bottle#: 7 Worklist Smp#: 12
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

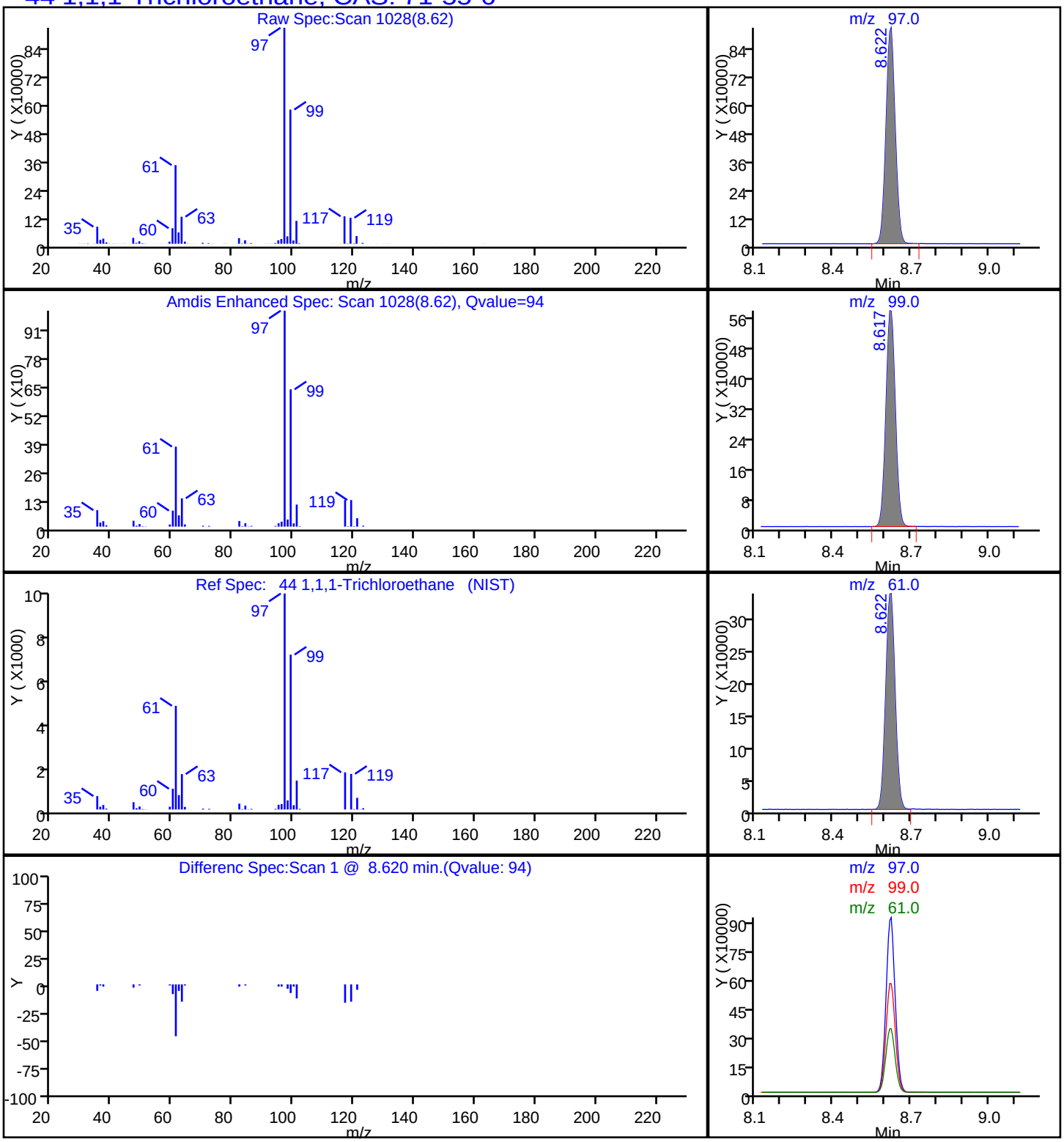
33 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P107.D				
Injection Date:	07-Oct-2017 20:02:30	Instrument ID:	MG		
Lims ID:	140-9485-A-3	Lab Sample ID:	140-9485-3		
Client ID:	BLDG-A MID-GAC				
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

44 1,1,1-Trichloroethane, CAS: 71-55-6



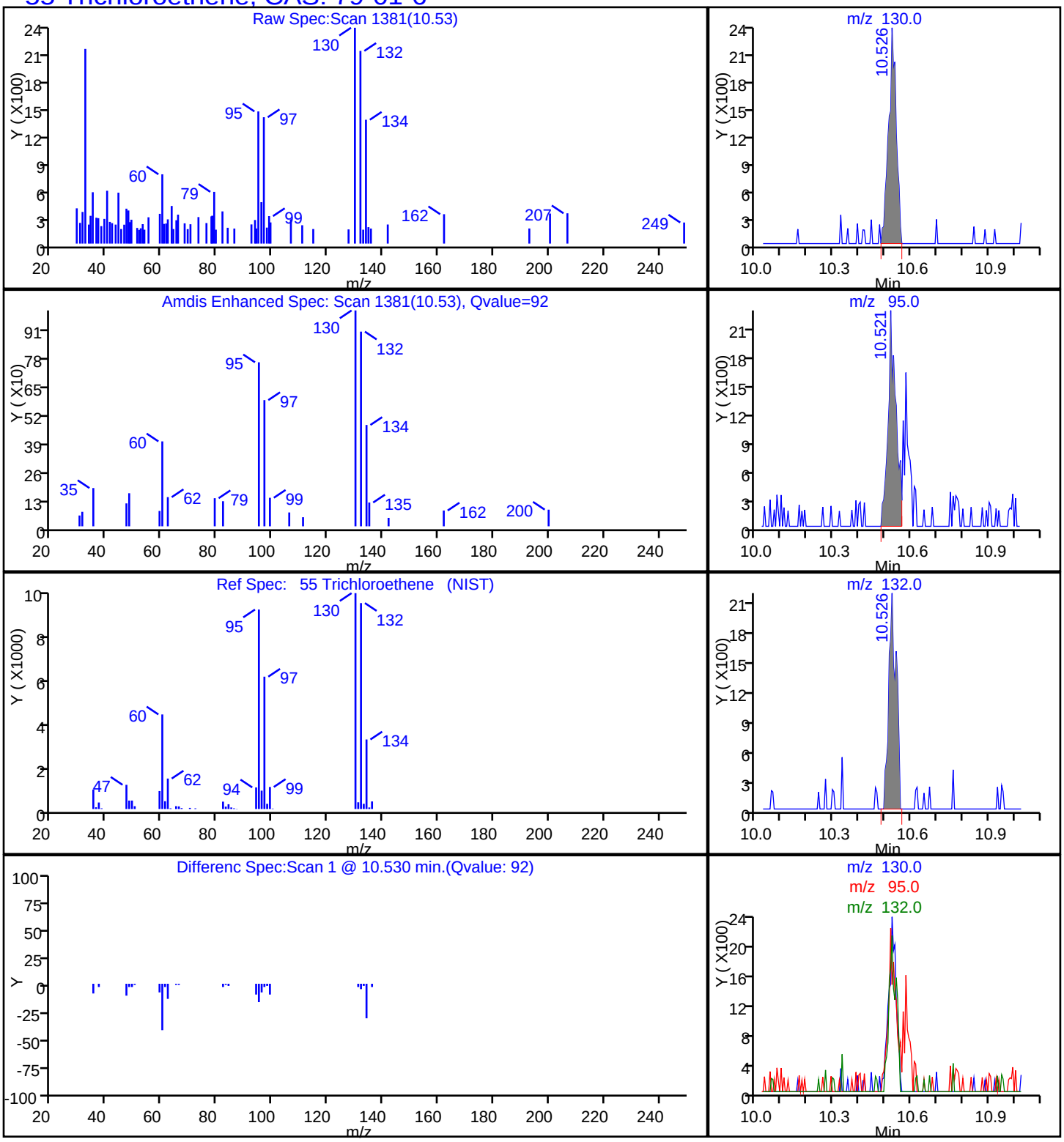
Report Date: 18-Oct-2017 12:34:54 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GJ08P107.D

Injection Date:	07-Oct-2017 20:02:30	Instrument ID:	MG		
Lims ID:	140-9485-A-3	Lab Sample ID:	140-9485-3		
Client ID:	BLDG-A MID-GAC				
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

55 Trichloroethene, CAS: 79-01-6



FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1 Analy Batch No.: 14546

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/19/2017 18:30 Calibration End Date: 09/20/2017 09:06 Calibration ID: 1242

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-14546/3	GI18ICL01.D
Level 2	IC 140-14546/17	GI18ICL02R.D
Level 3	IC 140-14546/5	GI18ICL03.D
Level 4	IC 140-14546/6	GI18ICL04.D
Level 5	IC 140-14546/7	GI18ICL05.D
Level 6	ICIS 140-14546/8	GI18ICL06.D
Level 7	IC 140-14546/9	GI18ICL07.D
Level 8	IC 140-14546/10	GI18ICL08.D
Level 9	IC 140-14546/11	GI18ICL09.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	+++++ 0.3580	0.4584 0.3694	0.3609 0.3671	0.3371 0.3862	0.3552	Ave		0.3740				9.8		30.0			
Propene	+++++ 1.0358	+++++ 1.0608	1.1643 0.9953	1.0233 0.9869	1.0872	Ave		1.0505				5.8		30.0			
Dichlorodifluoromethane	4.0088 3.8127	3.6833 3.8933	3.5971 3.8584	3.4415 3.9504	3.7402	Ave		3.7762				4.8		30.0			
Chloromethane	+++++ 0.3499	+++++ 0.3500	0.4237 0.3415	0.3336 0.3181	0.3477	Ave		0.3521				9.5		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	2.9119 2.5532	2.5150 2.5810	2.5291 2.4721	2.3769 2.4155	2.5099	Ave		2.5405				6.0		30.0			
Vinyl chloride	1.4080 1.2625	1.3636 1.2715	1.2129 1.2475	1.1955 1.2281	1.2584	Ave		1.2720				5.5		30.0			
1,3-Butadiene	+++++ 0.9606	1.0204 0.9507	0.9167 0.9304	0.8844 0.8893	0.9245	Ave		0.9346				4.7		30.0			
Butane	+++++ 1.9525	+++++ 1.9631	1.9655 1.8799	1.8625 1.7827	1.9022	Ave		1.9012				3.5		30.0			
Bromomethane	1.5672 1.3499	1.4061 1.3661	1.3162 1.3707	1.2294 1.3294	1.3491	Ave		1.3649				6.6		30.0			
Chloroethane	+++++ 0.6990	0.7218 0.6953	0.6662 0.6882	0.6671 0.6756	0.6978	Ave		0.6889				2.7		30.0			
Ethanol	+++++ 0.6490	0.6041 0.6038	0.6696 0.6138	0.6040 0.5649	0.6652	Ave		0.6218				5.8		30.0			
Vinyl bromide	1.3226 1.2612	1.3553 1.2818	1.2391 1.2997	1.2008 1.2450	1.2548	Ave		1.2734				3.7		30.0			
2-Methylbutane	+++++ 1.4322	+++++ 1.4272	1.4109 1.4453	1.3888 1.3857	1.4477	Ave		1.4197				1.8		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1 Analy Batch No.: 14546

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/19/2017 18:30 Calibration End Date: 09/20/2017 09:06 Calibration ID: 1242

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Trichlorofluoromethane	4.1045 3.8808	3.9611 3.9176	3.7333 4.0526	3.6072 4.0663	3.7786	Ave		3.9002				4.3		30.0			
Acrolein	+++++ 0.2033	+++++ 0.2211	0.2573 0.2104	0.2235 0.2391	0.2355	Ave		0.2272				8.1		30.0			
Acetonitrile	+++++ 0.4903	+++++ 0.4175	+++++ 0.4232	0.4449 0.4146	0.5157	Ave		0.4510				9.4		30.0			
Acetone	+++++ 0.5030	+++++ 0.4284	+++++ 0.3942	0.7402 0.3873	0.5614	Ave		0.5024				26.8		30.0			
Pentane	+++++ 0.2488	+++++ 0.2373	0.2665 0.2516	0.2466 0.2385	0.2337	Ave		0.2462				4.5		30.0			
Isopropyl alcohol	+++++ 1.4269	1.5907 1.3609	1.5585 1.4901	1.4339 1.2594	1.4804	Ave		1.4501				7.3		30.0			
Ethyl ether	+++++ 1.2641	1.1762 1.1360	1.2654 1.2240	1.2137 1.1761	1.2738	Ave		1.2162				4.1		30.0			
1,1-Dichloroethene	+++++ 1.2346	1.2778 1.1816	1.2522 1.2794	1.2439 1.1755	1.2473	Ave		1.2366				3.2		30.0			
Acrylonitrile	+++++ 0.6555	+++++ 0.5663	0.7207 0.6078	0.6423 0.5855	0.6925	Ave		0.6387				8.8		30.0			
tert-Butyl alcohol	+++++ 1.9726	+++++ 1.9088	1.9725 2.1624	1.9370 1.9395	2.0252	Ave		1.9883				4.3		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	2.7332 2.4753	2.7774 2.3864	2.4370 2.5670	2.5355 2.4001	2.4551	Ave		2.5297				5.6		30.0			
Methylene Chloride	+++++ 1.0493	+++++ 0.9457	1.8152 1.0438	1.3695 0.9347	1.1369	Ave		1.1850				26.5		30.0			
3-Chloropropene	+++++ 1.1664	1.2402 1.0988	1.2015 1.1984	1.1477 1.1887	1.1262	Ave		1.1710				3.9		30.0			
Carbon disulfide	+++++ 3.0261	+++++ 2.8240	3.5035 3.2434	3.3055 2.8808	3.0115	Ave		3.1136				7.9		30.0			
trans-1,2-Dichloroethene	1.3786 1.2668	1.4333 1.2195	1.2176 1.3076	1.2582 1.2245	1.2638	Ave		1.2856				5.9		30.0			
Methyl tert-butyl ether	+++++ 3.2479	2.9437 2.8304	3.1710 3.0795	3.0913 2.9561	3.1696	Ave		3.0612				4.6		30.0			
1,1-Dichloroethane	2.5070 2.3089	2.3813 2.2190	2.2839 2.3661	2.2735 2.2834	2.2915	Ave		2.3239				3.6		30.0			
Vinyl acetate	+++++ 3.0158	2.5181 2.5427	2.8135 2.6041	2.7388 2.6431	2.9451	Ave		2.7276				6.8		30.0			
2-Butanone (MEK)	+++++ 0.5692	0.6616 0.4931	0.7539 0.4952	0.6181 0.4893	0.5687	Ave		0.5811				16.1		30.0			
Hexane	+++++ 0.9160	1.1453 0.8767	0.9854 0.9340	0.9277 0.8902	0.8965	Ave		0.9465				9.2		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1 Analy Batch No.: 14546

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/19/2017 18:30 Calibration End Date: 09/20/2017 09:06 Calibration ID: 1242

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
cis-1,2-Dichloroethene	1.6342 1.4318	1.4621 1.3718	1.3564 1.4559	1.4081 1.3960	1.4039	Ave		1.4356				5.7		30.0			
Ethyl acetate	2.4476 2.6152	2.0166 2.2189	2.4479 2.2818	2.2021 2.2672	2.4243	Ave		2.3246				7.6		30.0			
Chloroform	3.4960 3.1044	3.3378 3.0237	3.1156 3.1992	2.9723 3.1409	3.0653	Ave		3.1617				5.2		30.0			
Tetrahydrofuran	+++++ 1.3202	1.0947 1.1360	1.2797 1.2171	1.1656 1.1690	1.2516	Ave		1.2042				6.4		30.0			
1,1,1-Trichloroethane	3.8954 3.4490	3.4216 3.4395	3.2759 3.6383	3.2013 3.6595	3.3296	Ave		3.4789				6.2		30.0			
1,2-Dichloroethane	0.3704 0.3671	0.3547 0.3429	0.3409 0.3706	0.3356 0.3651	0.3447	Ave		0.3547				3.9		30.0			
Benzene	0.8461 0.7663	0.8108 0.6941	0.7318 0.7380	0.7207 0.6824	0.7459	Ave		0.7484				7.0		30.0			
Cyclohexane	+++++ 0.1312	+++++ 0.1200	0.1430 0.1252	0.1263 0.1146	0.1274	Ave		0.1268				7.1		30.0			
Carbon tetrachloride	0.6570 0.6587	0.6111 0.6141	0.6132 0.6612	0.5704 0.6659	0.5996	Ave		0.6279				5.4		30.0			
1-Butanol	+++++ 0.1044	+++++ 0.0987	+++++ 0.1149	0.0955 0.1025	0.0973	Ave		0.1022				6.9		30.0			
2,2,4-Trimethylpentane	+++++ 1.2508	1.2178 1.1380	1.1784 1.2051	1.1282 1.1310	1.1610	Ave		1.1763				3.8		30.0			
Heptane	+++++ 0.3022	0.2920 0.2715	0.2873 0.2869	0.2665 0.2667	0.2748	Ave		0.2810				4.6		30.0			
1,2-Dichloropropane	+++++ 0.2899	0.2912 0.2616	0.2799 0.2727	0.2575 0.2544	0.2715	Ave		0.2723				5.2		30.0			
Trichloroethene	0.4482 0.4050	0.3944 0.3893	0.3788 0.4114	0.3585 0.3827	0.3694	Ave		0.3931				6.7		30.0			
Dibromomethane	+++++ 0.3430	0.3480 0.3121	0.3450 0.3342	0.3048 0.3230	0.3186	Ave		0.3286				5.0		30.0			
Bromodichloromethane	0.6930 0.6765	0.5733 0.6256	0.6077 0.6698	0.5811 0.6443	0.6182	Ave		0.6322				6.7		30.0			
1,4-Dioxane	+++++ 0.1209	0.1044 0.1051	0.1270 0.1126	0.1077 0.0947	0.1109	Ave		0.1104				9.1		30.0			
Methyl methacrylate	+++++ 0.3380	0.2558 0.2794	0.2976 0.3112	0.2732 0.2925	0.2974	Ave		0.2931				8.5		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.5255	+++++ 0.4954	0.5383 0.5728	0.4693 0.5138	0.4831	Ave		0.5140				6.9		30.0			
cis-1,3-Dichloropropene	0.4895 0.4887	0.4345 0.4645	0.4343 0.4913	0.4233 0.4730	0.4466	Ave		0.4606				5.8		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1 Analy Batch No.: 14546

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/19/2017 18:30 Calibration End Date: 09/20/2017 09:06 Calibration ID: 1242

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
trans-1,3-Dichloropropene	0.5291 0.4790	0.4053 0.4520	0.4366 0.4618	0.4212 0.4612	0.4495	Ave		0.4551				7.8		30.0			
Toluene	1.0975 0.9722	0.9546 0.8885	0.9639 0.8861	0.8908 0.8612	0.9265	Ave		0.9379				7.6		30.0			
1,1,2-Trichloroethane	0.3697 0.3006	0.2907 0.2775	0.2966 0.2764	0.2755 0.2651	0.2854	Ave		0.2931				10.5		30.0			
2-Hexanone	+++++ 0.2636	0.2320 0.2607	0.2894 0.2988	0.2578 0.2679	0.2601	Ave		0.2663				7.7		30.0			
Dibromochloromethane	0.6477 0.6736	0.5423 0.6575	0.5675 0.6844	0.5809 0.6443	0.6375	Ave		0.6262				8.0		30.0			
Octane	+++++ 0.3523	0.3301 0.3208	0.3283 0.3263	0.3064 0.2953	0.3229	Ave		0.3228				5.2		30.0			
1,2-Dibromoethane (EDB)	0.5615 0.5821	0.5243 0.5476	0.5485 0.5497	0.5149 0.5336	0.5426	Ave		0.5450				3.6		30.0			
Tetrachloroethene	0.3954 0.3788	0.3970 0.3537	0.3778 0.3604	0.3417 0.3420	0.3549	Ave		0.3669				5.8		30.0			
Chlorobenzene	0.8763 0.7885	0.7894 0.7474	0.7705 0.7535	0.7227 0.7178	0.7602	Ave		0.7696				6.1		30.0			
Ethylbenzene	1.3232 1.3059	1.1367 1.1591	1.2206 1.1838	1.1199 1.1246	1.2201	Ave		1.1993				6.3		30.0			
m-Xylene & p-Xylene	1.1125 1.0175	0.8936 0.8919	0.9571 0.9106	0.8675 0.8573	0.9444	Ave		0.9391				8.7		30.0			
Bromoform	0.7100 0.8052	0.5678 0.7717	0.5834 0.8075	0.6676 0.7410	0.7501	Ave		0.7116				12.5		30.0			
Styrene	0.7531 0.7666	0.5901 0.6828	0.6496 0.6882	0.6277 0.6302	0.7038	Ave		0.6769				8.7		30.0			
Nonane	+++++ 0.6120	0.5371 0.5806	0.6015 0.5738	0.5482 0.4968	0.5752	Ave		0.5657				6.6		30.0			
o-Xylene	1.1709 1.0609	0.9051 0.9276	1.0037 0.9316	0.9115 0.8557	0.9908	Ave		0.9731				9.9		30.0			
1,1,2,2-Tetrachloroethane	0.7838 0.7680	0.6273 0.6603	0.6737 0.6825	0.6293 0.6090	0.7097	Ave		0.6826				9.0		30.0			
1,2,3-Trichloropropane	+++++ 0.2444	0.2070 0.2096	0.2205 0.2198	0.1972 0.2017	0.2231	Ave		0.2154				7.0		30.0			
Isopropylbenzene	+++++ 1.4363	1.2327 1.2407	1.3723 1.2753	1.2353 1.1582	1.3390	Ave		1.2862				7.0		30.0			
Propylbenzene	0.4241 0.4171	0.3454 0.3553	0.3814 0.3664	0.3497 0.3281	0.3896	Ave		0.3730				8.8		30.0			
2-Chlorotoluene	0.4013 0.3737	0.3318 0.3352	0.3651 0.3326	0.3154 0.3012	0.3466	Ave		0.3448				8.9		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1 Analy Batch No.: 14546

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/19/2017 18:30 Calibration End Date: 09/20/2017 09:06 Calibration ID: 1242

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
4-Ethyltoluene	+++++ 1.4892	1.2260 1.2555	1.3504 1.3144	1.2053 1.1752	1.3630	Ave		1.2974				7.9		30.0			
1,3,5-Trimethylbenzene	+++++ 0.6209	0.4952 0.5164	0.5651 0.5391	0.5122 0.4752	0.5742	Ave		0.5373				8.8		30.0			
Alpha Methyl Styrene	+++++ 0.6202	+++++ 0.5374	0.4558 0.5599	0.4574 0.4980	0.5512	Ave		0.5257				11.3		30.0			
Decane	+++++ 0.7632	0.6262 0.6877	0.6929 0.6788	0.6424 0.5892	0.7091	Ave		0.6737				8.0		30.0			
tert-Butylbenzene	+++++ 1.3991	1.1004 1.1753	1.2774 1.2120	1.1605 1.0575	1.2904	Ave		1.2091				9.1		30.0			
1,2,4-Trimethylbenzene	1.2597 1.2544	0.9849 1.0508	1.1381 1.0976	1.0066 0.9509	1.1501	Ave		1.0992				10.2		30.0			
1,3-Dichlorobenzene	0.9779 0.9423	0.8764 0.8349	0.8799 0.8196	0.7916 0.7310	0.8887	Ave		0.8603				8.8		30.0			
sec-Butylbenzene	+++++ 1.8052	1.4309 1.5040	1.6183 1.5342	1.4711 1.3077	1.6630	Ave		1.5418				9.9		30.0			
Benzyl chloride	+++++ 1.2186	0.7806 1.0291	0.8243 1.0796	0.8852 0.9097	1.0627	Ave		0.9737				15.2		30.0			
1,4-Dichlorobenzene	0.9828 0.9476	0.9208 0.8402	0.8509 0.8111	0.8114 0.7006	0.9090	Ave		0.8638				10.0		30.0			
4-Isopropyltoluene	1.6204 1.6401	1.3157 1.3493	1.4654 1.3994	1.2776 1.1627	1.5021	Ave		1.4147				11.2		30.0			
1,2,3-Trimethylbenzene	+++++ 1.1250	0.8887 0.9232	0.9828 0.9387	0.8778 0.7829	1.0094	Ave		0.9411				10.8		30.0			
1,2-Dichlorobenzene	0.9719 0.9151	0.8458 0.7932	0.8565 0.7678	0.7737 0.6462	0.8634	Ave		0.8260				11.4		30.0			
Butylbenzene	+++++ 1.4908	1.1465 1.2414	1.3215 1.2669	1.1282 1.0303	1.3420	Ave		1.2459				11.6		30.0			
Undecane	+++++ 0.8453	0.6238 0.7189	0.7771 0.6943	0.6407 0.5588	0.7717	Ave		0.7038				13.3		30.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.4027	0.3079 0.3529	0.3211 0.3631	0.3130 0.2893	0.3761	Ave		0.3408				11.4		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 1.7961	1.4810 1.5589	1.7199 1.5072	1.4276 +++++	1.6765	LinF		1.5324							0.9970		0.9900
Dodecane	+++++ 0.7416	0.6770 0.7117	0.8564 0.5159	0.5738 0.5516	0.7464	Ave		0.6718				17.3		30.0			
1,2,4-Trichlorobenzene	+++++ 0.8683	1.0732 0.7591	0.9813 0.6112	0.7058 0.6470	0.8778	Ave		0.8155				20.0		30.0			
Naphthalene	2.2037 1.6791	1.8745 1.5143	1.7774 1.3591	1.2945 1.1366	1.6625	Ave		1.6113				20.3		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1 Analy Batch No.: 14546

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/19/2017 18:30 Calibration End Date: 09/20/2017 09:06 Calibration ID: 1242

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Hexachlorobutadiene	1.0466 0.9142	0.8720 0.7546	0.9814 0.5886	0.7660 0.7251	0.9287	Ave		0.8419				17.1		30.0			
1,2,3-Trichlorobenzene	+++++ 0.7941	+++++ 0.7130	+++++ 0.5195	0.6504 0.5572	0.8372	Ave		0.6786				18.7		30.0			
2-Methylnaphthalene	+++++ 0.3999	+++++ 0.4070	+++++ 0.2537	0.2667 0.2682	0.4501	Ave		0.3409				25.6		50.0			
1-Methylnaphthalene	+++++ 0.3406	+++++ 0.3451	+++++ 0.2140	0.2247 0.2056	0.3948	Ave		0.2875				28.6		50.0			
4-Bromofluorobenzene (Surr)	0.7357 0.7866	0.7540 0.7918	0.7532 0.7497	0.7562 0.7334	0.7720	Ave		0.7592				2.7		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1 Analy Batch No.: 14546

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/19/2017 18:30 Calibration End Date: 09/20/2017 09:06 Calibration ID: 1242

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-14546/3	GI18ICL01.D
Level 2	IC 140-14546/17	GI18ICL02R.D
Level 3	IC 140-14546/5	GI18ICL03.D
Level 4	IC 140-14546/6	GI18ICL04.D
Level 5	IC 140-14546/7	GI18ICL05.D
Level 6	ICIS 140-14546/8	GI18ICL06.D
Level 7	IC 140-14546/9	GI18ICL07.D
Level 8	IC 140-14546/10	GI18ICL08.D
Level 9	IC 140-14546/11	GI18ICL09.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	+++++ 92301	5231 180482	7406 346186	18534 682533	48230	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Propene	CBM	Ave	+++++ 267028	+++++ 518281	23890 938668	56266 1744122	147623	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Dichlorodifluoromethane	CBM	Ave	19340 982925	42036 1902128	73811 3638851	189230 6981572	507863	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Chloromethane	CBM	Ave	+++++ 90205	+++++ 170979	8695 322056	18344 562214	47211	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	14048 658215	28703 1260955	51897 2331487	130693 4268913	340801	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Vinyl chloride	CBM	Ave	6793 325476	15562 621197	24888 1176554	65734 2170487	170873	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Butadiene	CBM	Ave	+++++ 247641	11645 464480	18810 877448	48630 1571645	125538	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Butane	CBM	Ave	+++++ 503368	+++++ 959088	40331 1772911	102409 3150606	258294	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Bromomethane	CBM	Ave	7561 348010	16047 667430	27007 1292692	67601 2349428	183191	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Chloroethane	CBM	Ave	+++++ 180198	8238 339678	13671 649085	36682 1193962	94756	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Ethanol	CBM	Ave	+++++ 836551	34469 1474868	68701 2894457	166057 4991543	451623	+++++ 9.99	0.397 20.0	0.793 40.0	2.00 80.0	5.01
Vinyl bromide	CBM	Ave	6381 325129	15467 626223	25426 1225729	66026 2200243	170386	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylbutane	CBM	Ave	+++++ 369233	+++++ 697274	28951 1363043	76366 2448943	196577	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Trichlorofluoromethane	CBM	Ave	19802 1000475	45206 1913987	76605 3822071	198344 7186342	513071	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1 Analy Batch No.: 14546

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/19/2017 18:30 Calibration End Date: 09/20/2017 09:06 Calibration ID: 1242

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Acrolein	CBM	Ave	+++++ 52401	+++++ 108019	5280 198428	12288 422593	31973	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetonitrile	CBM	Ave	+++++ 126393	+++++ 203960	+++++ 399117	24464 732744	70020	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
Acetone	CBM	Ave	+++++ 389049	+++++ 627904	+++++ 1115325	122108 2053359	228724	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.20 48.0	3.01
Pentane	CBM	Ave	+++++ 64152	+++++ 115952	5468 237317	13557 421502	31738	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Isopropyl alcohol	CBM	Ave	+++++ 1103619	54466 1994832	95949 4216383	236553 6677951	603078	+++++ 5.99	0.238 12.0	0.476 24.0	1.20 48.0	3.01
Ethyl ether	CBM	Ave	+++++ 325892	13424 555023	25965 1154411	66735 2078537	172961	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethene	CBM	Ave	+++++ 318285	14583 577289	25695 1206654	68398 2077516	169369	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Acrylonitrile	CBM	Ave	+++++ 168986	+++++ 276654	14789 573224	35318 1034769	94029	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butyl alcohol	CBM	Ave	+++++ 508538	+++++ 932562	40474 2039406	106508 3427775	274986	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloro-1,2,2-trifluoroetha ne	CBM	Ave	13186 638134	31697 1165910	50007 2420971	139414 4241786	333362	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Methylene Chloride	CBM	Ave	+++++ 270518	+++++ 462030	37247 984458	75301 1651913	154370	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
3-Chloropropene	CBM	Ave	+++++ 300714	14154 536825	24655 1130259	63104 2100866	152921	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Carbon disulfide	CBM	Ave	+++++ 780136	+++++ 1379705	71891 3058904	181753 5091339	408911	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,2-Dichloroethene	CBM	Ave	6651 326595	16358 595823	24985 1233201	69180 2164046	171609	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Methyl tert-butyl ether	CBM	Ave	+++++ 837324	33595 1382822	65067 2904342	169973 5224325	430381	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethane	CBM	Ave	12095 595252	27177 1084126	46865 2231497	125007 4035525	311144	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Vinyl acetate	CBM	Ave	+++++ 777472	28738 1242260	57731 2455920	150596 4671129	399894	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
2-Butanone (MEK)	CBM	Ave	+++++ 146747	7551 240895	15469 466984	33985 864832	77227	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Hexane	CBM	Ave	+++++ 236138	13071 428305	20219 880858	51010 1573223	121727	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,2-Dichloroethene	CBM	Ave	7884 369126	16686 670191	27832 1373070	77427 2467172	190634	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl acetate	CBM	Ave	11808 674209	23015 1084060	50230 2152026	121083 4006926	329178	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1 Analy Batch No.: 14546

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/19/2017 18:30 Calibration End Date: 09/20/2017 09:06 Calibration ID: 1242

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chloroform	CBM	Ave	16866 800319	38093 1477241	63930 3017155	163431 5550868	416219	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Tetrahydrofuran	CBM	Ave	+++++ 340342	12493 555017	26259 1147813	64089 2066058	169945	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
1,1,1-Trichloroethane	CBM	Ave	18793 889159	39049 1680414	67221 3431354	176026 6467516	452114	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloroethane	DFBZ	Ave	9023 494370	21646 953971	36887 1943087	98036 3642185	252582	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Benzene	DFBZ	Ave	20611 1031990	49481 1931018	79178 3869542	210547 6807955	546586	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Cyclohexane	DFBZ	Ave	+++++ 176659	+++++ 333985	15472 656658	36884 1142856	93381	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Carbon tetrachloride	DFBZ	Ave	16004 887140	37293 1708489	66348 3467279	166625 6642826	439418	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
1-Butanol	DFBZ	Ave	+++++ 140602	+++++ 274672	+++++ 602258	27907 1022592	71273	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
2,2,4-Trimethylpentane	DFBZ	Ave	+++++ 1684485	74319 3166284	127497 6318793	329584 11283181	850781	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Heptane	DFBZ	Ave	+++++ 407032	17818 755489	31084 1504438	77855 2660758	201359	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloropropane	DFBZ	Ave	+++++ 390376	17771 727768	30287 1429981	75212 2537791	198964	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Trichloroethene	DFBZ	Ave	10919 545431	24071 1083164	40984 2157096	104716 3817448	270740	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Dibromomethane	DFBZ	Ave	+++++ 461991	21240 868246	37331 1752213	89038 3221949	233503	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Bromodichloromethane	DFBZ	Ave	16883 911023	34987 1740690	65753 3512219	169750 6427655	453057	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
1,4-Dioxane	DFBZ	Ave	+++++ 162835	6369 292336	13740 590340	31457 944373	81277	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Methyl methacrylate	DFBZ	Ave	+++++ 455166	15608 777249	32202 1632009	79810 2917920	217937	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	+++++ 707684	+++++ 1378225	58241 3003681	137090 5126037	354011	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,3-Dichloropropene	DFBZ	Ave	11925 658111	26515 1292229	46994 2576140	123657 4718558	327283	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,3-Dichloropropene	CBZd 5	Ave	11876 623730	22099 1223604	43519 2466114	114193 4681728	307428	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Toluene	CBZd 5	Ave	24632 1266003	52045 2405216	96068 4731534	241523 8742690	633608	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloroethane	CBZd 5	Ave	8298 391445	15851 751152	29563 1475759	74688 2691030	195163	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1 Analy Batch No.: 14546

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/19/2017 18:30 Calibration End Date: 09/20/2017 09:06 Calibration ID: 1242

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
2-Hexanone	CBZd 5	Ave	+++++ 343247	12647 705802	28845 1595328	69892 2719003	177870	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Dibromochloromethane	CBZd 5	Ave	14537 877188	29565 1779686	56563 3654711	157510 6540900	435999	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Octane	CBZd 5	Ave	+++++ 458727	18000 868420	32717 1742483	83085 2998115	220792	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromoethane (EDB)	CBZd 5	Ave	12603 757978	28585 1482375	54667 2935162	139599 5416748	371108	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Tetrachloroethene	CBZd 5	Ave	8875 493288	21646 957339	37659 1924378	92654 3471207	242722	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Chlorobenzene	CBZd 5	Ave	19669 1026759	43038 2023170	76795 4023421	195946 7286893	519879	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Ethylbenzene	CBZd 5	Ave	29698 1700492	61974 3137567	121659 6321314	303630 11415631	834400	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
m-Xylene & p-Xylene	CBZd 5	Ave	49937 2649931	97434 4828498	190784 9725450	470413 17405560	1291672	0.0784 3.99	0.159 8.00	0.317 16.0	0.800 32.0	2.00
Bromoform	CBZd 5	Ave	15935 1048544	30955 2088866	58148 4312184	180997 7522030	513000	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Styrene	CBZd 5	Ave	16902 998271	32171 1848233	64747 3675128	170193 6397527	481292	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Nonane	CBZd 5	Ave	+++++ 796943	29284 1571559	59949 3064123	148635 5043378	393367	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
o-Xylene	CBZd 5	Ave	26281 1381423	49346 2510840	100036 4974525	247144 8686168	677607	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	17591 1000101	34202 1787315	67147 3644497	170617 6182020	485381	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichloropropane	CBZd 5	Ave	+++++ 318295	11288 567403	21979 1173786	53469 2047000	152584	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Isopropylbenzene	CBZd 5	Ave	+++++ 1870339	67205 3358387	136777 6810043	334930 11757249	915711	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Propylbenzene	CBZd 5	Ave	9518 543161	18833 961855	38010 1956288	94811 3330168	266406	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
2-Chlorotoluene	CBZd 5	Ave	9006 486666	18092 907449	36390 1776039	85503 3057954	237048	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
4-Ethyltoluene	CBZd 5	Ave	+++++ 1939242	66843 3398460	134593 7018895	326800 11930132	932100	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
1,3,5-Trimethylbenzene	CBZd 5	Ave	+++++ 808471	26999 1397737	56327 2878770	138882 4823450	392669	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Alpha Methyl Styrene	CBZd 5	Ave	+++++ 807557	+++++ 1454679	45428 2989931	124028 5055450	376972	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Decane	CBZd 5	Ave	+++++ 993781	34140 1861458	69060 3624730	174168 5980842	484948	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1 Analy Batch No.: 14546

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/19/2017 18:30 Calibration End Date: 09/20/2017 09:06 Calibration ID: 1242

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
tert-Butylbenzene	CBZd 5	Ave	+++++ 1821833	59997 3181586	127312 6472236	314662 10734900	882452	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trimethylbenzene	CBZd 5	Ave	28272 1633412	53697 2844476	113436 5860970	272930 9652275	786562	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Dichlorobenzene	CBZd 5	Ave	21949 1227050	47783 2260117	87699 4376373	214625 7420145	607755	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
sec-Butylbenzene	CBZd 5	Ave	+++++ 2350614	78015 4071188	161297 8192661	398859 13274307	1137262	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Benzyl chloride	CBZd 5	Ave	+++++ 1586866	42557 2785853	82153 5765027	240011 9234676	726743	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
1,4-Dichlorobenzene	CBZd 5	Ave	22059 1233872	50201 2274388	84809 4331139	220007 7111569	621639	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
4-Isopropyltoluene	CBZd 5	Ave	36369 2135645	71734 3652581	146055 7472670	346398 11802359	1027239	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trimethylbenzene	CBZd 5	Ave	+++++ 1464985	48454 2499082	97949 5012710	238013 7947590	690286	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichlorobenzene	CBZd 5	Ave	21814 1191667	46115 2147159	85364 4100074	209769 6559825	590433	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Butylbenzene	CBZd 5	Ave	+++++ 1941248	62508 3360404	131708 6765020	305879 10458896	917768	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Undecane	CBZd 5	Ave	+++++ 1100744	34009 1946069	77455 3707557	173708 5672975	527727	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	+++++ 524441	16789 955280	32001 1938943	84875 2936676	257193	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4,5-Tetramethylbenzene	CBZd 5	LinF	+++++ 2338873	80747 4219977	171416 8048423	387068 +++++	1146505	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 +++++	1.00
Dodecane	CBZd 5	Ave	+++++ 965701	36908 1926488	85357 2755119	155579 5599629	510467	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trichlorobenzene	CBZd 5	Ave	+++++ 1130653	58510 2054798	97804 3263794	191365 6567800	600327	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Naphthalene	CBZd 5	Ave	49461 2186496	102200 4099053	177155 7257491	350989 11537518	1136927	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
Hexachlorobutadiene	CBZd 5	Ave	23490 1190449	47543 2042576	97810 3143247	207684 7360709	635128	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichlorobenzene	CBZd 5	Ave	+++++ 1034002	+++++ 1930112	+++++ 2774166	176355 5656530	572565	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
2-Methylnaphthalene	CBZd 5	Ave	+++++ 1197669	+++++ 2533688	+++++ 3116033	166314 6261651	706395	+++++ 4.59	+++++ 9.20	+++++ 18.4	0.920 36.8	2.30
1-Methylnaphthalene	CBZd 5	Ave	+++++ 1020196	+++++ 2148809	+++++ 2628856	140143 4800318	620928	+++++ 4.59	+++++ 9.20	+++++ 18.4	0.920 36.8	2.30
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1684997 2051235	2072592 2143298	1892436 2001746	2050428 1861271	2108331	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1 Analy Batch No.: 14546

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/19/2017 18:30 Calibration End Date: 09/20/2017 09:06 Calibration ID: 1242

Curve Type Legend:

Ave = Average ISTD
LinF = Linear ISTD forced zero

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1 Analy Batch No.: 14546

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/19/2017 18:30 Calibration End Date: 09/20/2017 09:06 Calibration ID: 1242

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-14546/3	GI18ICL01.D
Level 2	IC 140-14546/17	GI18ICL02R.D
Level 3	IC 140-14546/5	GI18ICL03.D
Level 4	IC 140-14546/6	GI18ICL04.D
Level 5	IC 140-14546/7	GI18ICL05.D
Level 6	ICIS 140-14546/8	GI18ICL06.D
Level 7	IC 140-14546/9	GI18ICL07.D
Level 8	IC 140-14546/10	GI18ICL08.D
Level 9	IC 140-14546/11	GI18ICL09.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4	LVL 5	LVL 6
Chlorodifluoromethane	+++++	22.5						50				
Propene	+++++	+++++	10.8						50			
Dichlorodifluoromethane	6.2						50					
Chloromethane	+++++	+++++	20.4						50			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	14.6						50					
Vinyl chloride	10.7						50					
1,3-Butadiene	+++++	9.2						50				
Butane	+++++	+++++	3.4						50			
Bromomethane	14.8						50					
Chloroethane	+++++	4.8						50				
Ethanol	+++++	-2.9						50				
Vinyl bromide	3.9						50					
2-Methylbutane	+++++	+++++	-0.6						50			
Trichlorofluoromethane	5.2						50					

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1 Analy Batch No.: 14546

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/19/2017 18:30 Calibration End Date: 09/20/2017 09:06 Calibration ID: 1242

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4	LVL 5	LVL 6
Acrolein	+++++	+++++	13.3						50			
Acetonitrile	+++++	+++++	+++++	-1.4						50		
Acetone	+++++	+++++	+++++	47.3						80		
Pentane	+++++	+++++	8.3						50			
Isopropyl alcohol	+++++	9.7						50				
Ethyl ether	+++++	-3.3						50				
1,1-Dichloroethene	+++++	3.3						50				
Acrylonitrile	+++++	+++++	12.9						50			
tert-Butyl alcohol	+++++	+++++	-0.8						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	8.0						50					
Methylene Chloride	+++++	+++++	53.2						80			
3-Chloropropene	+++++	5.9						50				
Carbon disulfide	+++++	+++++	12.5						50			
trans-1,2-Dichloroethene	7.2						50					
Methyl tert-butyl ether	+++++	-3.8						50				
1,1-Dichloroethane	7.9						50					
Vinyl acetate	+++++	-7.7						50				
2-Butanone (MEK)	+++++	13.9						50				
Hexane	+++++	21.0						50				
cis-1,2-Dichloroethene	13.8						50					
Ethyl acetate	5.3						50					

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1 Analy Batch No.: 14546

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/19/2017 18:30 Calibration End Date: 09/20/2017 09:06 Calibration ID: 1242

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4	LVL 5	LVL 6
Chloroform	10.6						50					
Tetrahydrofuran	+++++	-9.1						50				
1,1,1-Trichloroethane	12.0						50					
1,2-Dichloroethane	4.4						50					
Benzene	13.0						50					
Cyclohexane	+++++	+++++	12.8						50			
Carbon tetrachloride	4.6						50					
1-Butanol	+++++	+++++	+++++	-6.5						50		
2,2,4-Trimethylpentane	+++++	3.5						50				
Heptane	+++++	3.9						50				
1,2-Dichloropropane	+++++	6.9						50				
Trichloroethene	14.0						50					
Dibromomethane	+++++	5.9						50				
Bromodichloromethane	9.6						50					
1,4-Dioxane	+++++	-5.5						50				
Methyl methacrylate	+++++	-12.8						50				
4-Methyl-2-pentanone (MIBK)	+++++	+++++	4.7						50			
cis-1,3-Dichloropropene	6.3						50					
trans-1,3-Dichloropropene	16.3						50					
Toluene	17.0						50					
1,1,2-Trichloroethane	26.2						50					

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1 Analy Batch No.: 14546

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/19/2017 18:30 Calibration End Date: 09/20/2017 09:06 Calibration ID: 1242

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4	LVL 5	LVL 6
2-Hexanone	+++++	-12.9						50				
Dibromochloromethane	3.4						50					
Octane	+++++	2.3						50				
1,2-Dibromoethane (EDB)	3.0						50					
Tetrachloroethene	7.8						50					
Chlorobenzene	13.9						50					
Ethylbenzene	10.3						50					
m-Xylene & p-Xylene	18.5						50					
Bromoform	-0.2						50					
Styrene	11.3						50					
Nonane	+++++	-5.0						50				
o-Xylene	20.3						50					
1,1,2,2-Tetrachloroethane	14.8						50					
1,2,3-Trichloropropane	+++++	-3.9						50				
Isopropylbenzene	+++++	-4.2						50				
Propylbenzene	13.7						50					
2-Chlorotoluene	16.4						50					
4-Ethyltoluene	+++++	-5.5						50				
1,3,5-Trimethylbenzene	+++++	-7.8						50				
Alpha Methyl Styrene	+++++	+++++	-13.3						50			
Decane	+++++	-7.0						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1 Analy Batch No.: 14546

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/19/2017 18:30 Calibration End Date: 09/20/2017 09:06 Calibration ID: 1242

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4	LVL 5	LVL 6
tert-Butylbenzene	+++++	-9.0						50				
1,2,4-Trimethylbenzene	14.6						50					
1,3-Dichlorobenzene	13.7						50					
sec-Butylbenzene	+++++	-7.2						50				
Benzyl chloride	+++++	-19.8						50				
1,4-Dichlorobenzene	13.8						50					
4-Isopropyltoluene	14.5						50					
1,2,3-Trimethylbenzene	+++++	-5.6						50				
1,2-Dichlorobenzene	17.7						50					
Butylbenzene	+++++	-8.0						50				
Undecane	+++++	-11.4						50				
1,2-Dibromo-3-Chloropropane	+++++	-9.6						50				
1,2,4,5-Tetramethylbenzene	+++++	-3.4	+++++					50				
Dodecane	+++++	0.8						50				
1,2,4-Trichlorobenzene	+++++	31.6						50				
Naphthalene	36.8						80					
Hexachlorobutadiene	24.3						50					
1,2,3-Trichlorobenzene	+++++	+++++	+++++	-4.1						50		
2-Methylnaphthalene	+++++	+++++	+++++	-21.8						80		
1-Methylnaphthalene	+++++	+++++	+++++	-21.8						80		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL01.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 19-Sep-2017 18:30:30 ALS Bottle#: 8 Worklist Smp#: 3
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006110-003
Operator ID: 403648 Instrument ID: MG
Sublist: chrom-MG_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 21-Sep-2017 12:11:07 Calib Date: 20-Sep-2017 09:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK030

First Level Reviewer: tajh Date: 20-Sep-2017 11:32:03

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.625	7.645	-0.020	88	492287	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.771	9.790	-0.019	95	2485819	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.727	14.731	-0.004	88	2290235	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.409	16.414	-0.005	94	1684997	4.00	3.88	
6 Chlorodifluoromethane	67	3.300	3.309	-0.009	95	3195	0.0392	0.0694	
7 Propene	41	3.311	3.318	-0.007	88	8349	0.0392	0.0646	
8 Dichlorodifluoromethane	85	3.354	3.358	-0.004	100	19340	0.0392	0.0416	
9 Chloromethane	52	3.489	3.497	-0.008	97	3196	0.0392	0.0738	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.505	3.511	-0.006	89	14048	0.0392	0.0449	
11 Vinyl chloride	62	3.629	3.632	-0.003	95	6793	0.0392	0.0434	
12 Butadiene	54	3.699	3.703	-0.004	59	5242	0.0392	0.0456	
13 Butane	43	3.699	3.705	-0.006	86	11919	0.0392	0.0509	
14 Bromomethane	94	3.936	3.947	-0.011	98	7561	0.0392	0.0450	
15 Chloroethane	64	4.050	4.058	-0.008	92	4274	0.0392	0.0504	
16 Ethanol	31	4.147	4.176	-0.029	98	17812	0.1960	0.2328	
17 Vinyl bromide	106	4.282	4.293	-0.011	96	6381	0.0392	0.0407	
18 2-Methylbutane	43	4.336	4.346	-0.010	87	8169	0.0392	0.0468	
19 Trichlorofluoromethane	101	4.497	4.512	-0.015	99	19802	0.0392	0.0413	
20 Acrolein	56	4.497	4.515	-0.018	34	2492	0.0392	0.0891	
21 Acetonitrile	40	4.546	4.566	-0.020	53	3499	0.0392	0.0630	
22 Acetone	58	4.600	4.610	-0.010	99	14063	0.1176	0.2274	
23 Pentane	72	4.675	4.699	-0.024	84	1527	0.0392	0.0504	
24 Isopropyl alcohol	45	4.697	4.730	-0.033	93	27813	0.1176	0.1558	
25 Ethyl ether	31	4.821	4.833	-0.012	91	7551	0.0392	0.0504	
26 1,1-Dichloroethene	96	5.063	5.085	-0.022	96	7448	0.0392	0.0489	
27 Acrylonitrile	53	5.144	5.167	-0.023	82	4086	0.0392	0.0520	
28 2-Methyl-2-propanol	59	5.220	5.241	-0.021	94	10976	0.0392	0.0449	
29 1,1,2-Trichloro-1,2,2-trif	101	5.241	5.253	-0.012	92	13186	0.0392	0.0424	
30 Methylene Chloride	84	5.355	5.375	-0.020	94	20608	0.0392	0.1413	
31 3-Chloro-1-propene	39	5.376	5.391	-0.015	95	21278	0.0392	0.1476	
32 Carbon disulfide	76	5.495	5.508	-0.013	97	16169	0.0392	0.0422	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 trans-1,2-Dichloroethene	96	6.066	6.086	-0.020	97	6651	0.0392	0.0420	
34 Methyl tert-butyl ether	73	6.217	6.223	-0.006	95	16170	0.0392	0.0429	
35 1,1-Dichloroethane	63	6.433	6.453	-0.020	97	12095	0.0392	0.0423	
37 Vinyl acetate	43	6.552	6.571	-0.019	97	14049	0.0392	0.0419	
38 2-Butanone (MEK)	72	6.945	6.963	-0.018	98	3681	0.0392	0.0515	
39 Hexane	56	6.994	7.013	-0.019	82	5328	0.0392	0.0457	
40 cis-1,2-Dichloroethene	96	7.328	7.349	-0.021	89	7884	0.0392	0.0446	
41 Ethyl acetate	43	7.539	7.552	-0.013	97	11808	0.0392	0.0413	
42 Chloroform	83	7.657	7.673	-0.016	92	16866	0.0392	0.0433	
43 Tetrahydrofuran	42	8.035	8.044	-0.009	84	8778	0.0392	0.0592	
44 1,1,1-Trichloroethane	97	8.612	8.631	-0.019	91	18793	0.0392	0.0439	
45 1,2-Dichloroethane	62	8.698	8.718	-0.020	97	9023	0.0392	0.0409	
46 Benzene	78	9.194	9.209	-0.015	96	20611	0.0392	0.0443	
47 Cyclohexane	69	9.205	9.216	-0.011	89	4368	0.0392	0.0554	
48 Carbon tetrachloride	117	9.226	9.238	-0.012	94	16004	0.0392	0.0410	
49 n-Butanol	31	9.275	9.285	-0.010	33	4695	0.0392	0.0739	
52 Isooctane	57	10.046	10.056	-0.010	97	34941	0.0392	0.0478	
53 n-Heptane	71	10.456	10.472	-0.016	87	8897	0.0392	0.0509	
54 1,2-Dichloropropane	63	10.467	10.483	-0.016	59	7949	0.0392	0.0470	
55 Trichloroethene	130	10.521	10.538	-0.017	96	10919	0.0392	0.0447	
56 Dibromomethane	93	10.580	10.597	-0.017	90	10631	0.0392	0.0521	
57 Dichlorobromomethane	83	10.752	10.769	-0.017	98	16883	0.0392	0.0430	
58 1,4-Dioxane	88	10.801	10.804	-0.003	66	4063	0.0392	0.0592	
59 Methyl methacrylate	41	10.909	10.924	-0.015	92	9854	0.0392	0.0541	
61 4-Methyl-2-pentanone (MIBK	43	11.809	11.814	-0.005	95	16338	0.0392	0.0511	
62 cis-1,3-Dichloropropene	75	11.836	11.843	-0.007	94	11925	0.0392	0.0417	
63 trans-1,3-Dichloropropene	75	12.570	12.577	-0.007	96	11876	0.0392	0.0456	
64 Toluene	91	12.694	12.703	-0.009	94	24632	0.0392	0.0459	
65 1,1,2-Trichloroethane	83	12.764	12.772	-0.008	96	8298	0.0392	0.0495	
66 2-Hexanone	58	13.217	13.219	-0.002	92	8588	0.0392	0.0563	
67 Chlorodibromomethane	129	13.470	13.485	-0.015	83	14537	0.0392	0.0405	
68 n-Octane	85	13.481	13.489	-0.008	91	9328	0.0392	0.0505	
69 Ethylene Dibromide	107	13.772	13.776	-0.004	99	12603	0.0392	0.0404	
70 Tetrachloroethene	129	13.880	13.887	-0.007	91	8875	0.0392	0.0423	
71 Chlorobenzene	112	14.775	14.781	-0.006	92	19669	0.0392	0.0446	
72 Ethylbenzene	91	15.093	15.097	-0.004	99	29698	0.0392	0.0432	
73 m-Xylene & p-Xylene	91	15.260	15.268	-0.008	98	49937	0.0784	0.0929	
74 Bromoform	173	15.665	15.676	-0.011	96	15935	0.0392	0.0391	
75 Styrene	104	15.730	15.736	-0.006	98	16902	0.0392	0.0436	
76 n-Nonane	57	15.751	15.757	-0.006	90	16318	0.0392	0.0504	
77 o-Xylene	91	15.789	15.796	-0.007	97	26281	0.0392	0.0472	
78 1,1,2,2-Tetrachloroethane	83	16.112	16.120	-0.008	98	17591	0.0392	0.0450	
79 1,2,3-Trichloropropane	110	16.263	16.274	-0.011	93	5921	0.0392	0.0480	
80 Isopropylbenzene	105	16.398	16.405	-0.007	80	35871	0.0392	0.0487	
81 N-Propylbenzene	120	16.954	16.962	-0.008	98	9518	0.0392	0.0446	
82 2-Chlorotoluene	126	16.986	16.987	-0.001	94	9006	0.0392	0.0456	
83 4-Ethyltoluene	105	17.121	17.126	-0.005	98	36288	0.0392	0.0489	
84 1,3,5-Trimethylbenzene	120	17.202	17.211	-0.009	93	14861	0.0392	0.0483	
85 Alpha Methyl Styrene	118	17.450	17.455	-0.005	81	11146	0.0392	0.0370	
86 n-Decane	57	17.568	17.576	-0.008	94	17566	0.0392	0.0455	
87 tert-Butylbenzene	119	17.660	17.667	-0.007	92	33277	0.0392	0.0481	
88 1,2,4-Trimethylbenzene	105	17.676	17.683	-0.007	96	28272	0.0392	0.0449	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
89 1,3-Dichlorobenzene	146	17.951	17.954	-0.003	98	21949	0.0392	0.0446	
90 sec-Butylbenzene	105	17.957	17.963	-0.006	98	41762	0.0392	0.0473	
91 Benzyl chloride	91	18.032	18.036	-0.004	97	26764	0.0392	0.0480	
92 1,4-Dichlorobenzene	146	18.043	18.049	-0.006	95	22059	0.0392	0.0446	
93 4-Isopropyltoluene	119	18.140	18.147	-0.007	97	36369	0.0392	0.0449	
94 1,2,3-Trimethylbenzene	105	18.178	18.186	-0.008	97	25489	0.0392	0.0473	
95 1,2-Dichlorobenzene	146	18.426	18.429	-0.003	95	21814	0.0392	0.0461	
96 n-Butylbenzene	91	18.609	18.611	-0.002	97	35415	0.0392	0.0496	
99 Undecane	57	18.981	18.987	-0.006	94	19072	0.0392	0.0473	
100 1,2-Dibromo-3-Chloropropan	157	19.057	19.063	-0.006	94	9461	0.0392	0.0485	
102 1,2,4,5-Tetramethylbenzene	119	19.402	19.404	-0.002	96	45032	0.0392	0.0513	
104 Dodecane	57	20.070	20.071	-0.001	94	20912	0.0392	0.0544	
105 1,2,4-Trichlorobenzene	180	20.184	20.186	-0.002	91	24352	0.0392	0.0522	
106 Naphthalene	128	20.308	20.309	-0.001	99	49461	0.0392	0.0536	
107 Hexachlorobutadiene	225	20.545	20.545	0.000	95	23490	0.0392	0.0487	
108 1,2,3-Trichlorobenzene	180	20.583	20.585	-0.002	95	26545	0.0392	0.0683	
109 2-Methylnaphthalene	142	21.375	21.378	-0.003	98	41312	0.0902	0.2116	
110 1-Methylnaphthalene	142	21.564	21.564	0.000	98	37510	0.0902	0.2279	
S 111 Xylenes, Total	100				0		0.1176	0.1400	
S 112 1,2-Dichloroethene, Total	1				0		0.0784	0.0867	

Reagents:

40L12DNP_00014	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

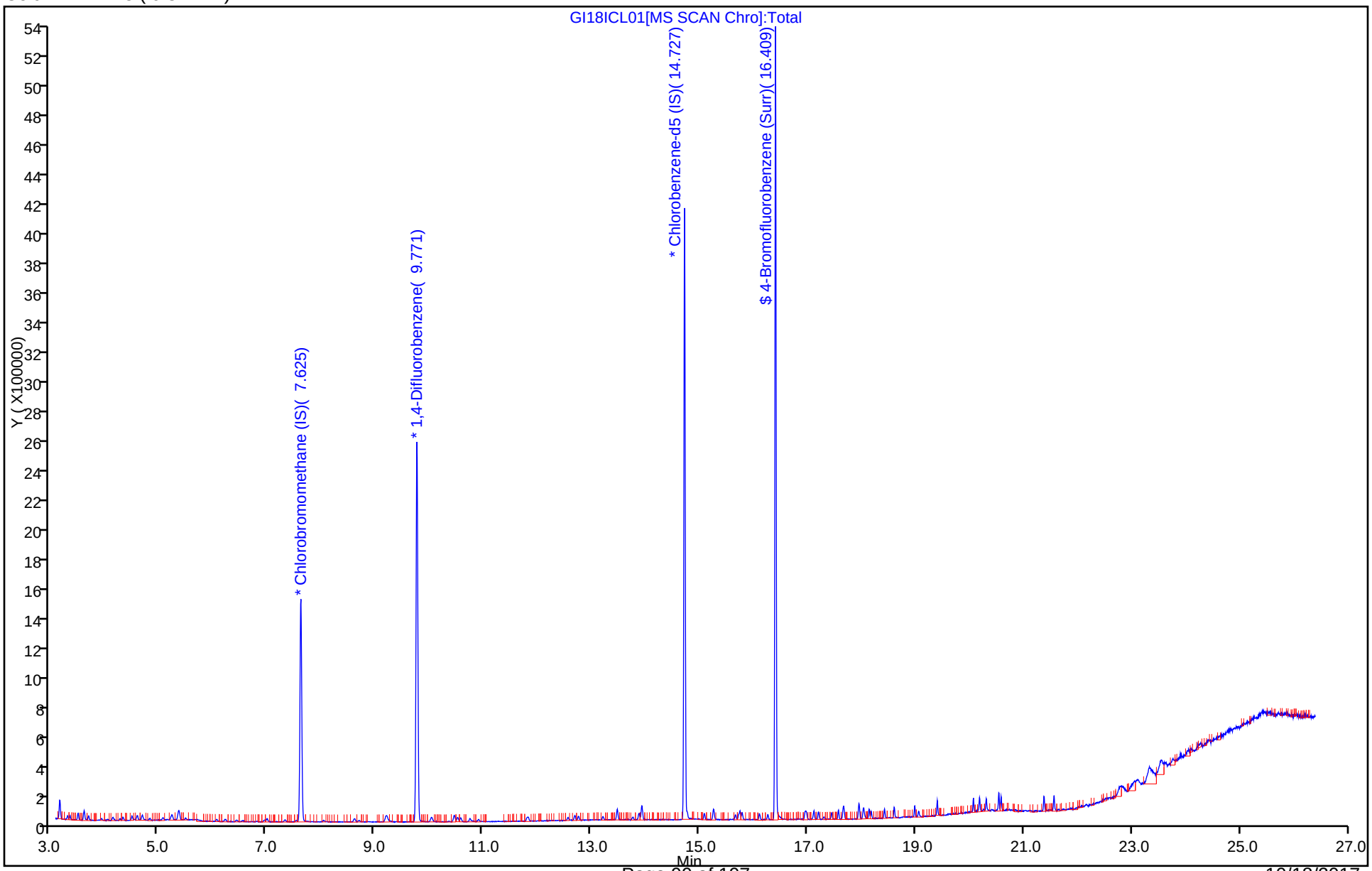
Report Date: 21-Sep-2017 12:11:08 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL01.D

Injection Date:	19-Sep-2017 18:30:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	IC L1			Worklist Smp#:	3
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL03.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 19-Sep-2017 19:54:30 ALS Bottle#: 9 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006110-005
Operator ID: 403648 Instrument ID: MG
Sublist: chrom-MG_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 21-Sep-2017 12:10:41 Calib Date: 20-Sep-2017 09:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK030

First Level Reviewer: tajh Date: 20-Sep-2017 11:37:50

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.646	7.645	0.001	88	517300	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.793	9.790	0.003	95	2727701	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.732	14.731	0.001	88	2512642	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.409	16.414	-0.005	96	1892436	4.00	3.97	
6 Chlorodifluoromethane	67	3.311	3.309	0.002	96	7406	0.1587	0.1531	
7 Propene	41	3.322	3.318	0.004	94	23890	0.1587	0.1758	
8 Dichlorodifluoromethane	85	3.359	3.358	0.001	100	73811	0.1587	0.1511	
9 Chloromethane	52	3.505	3.497	0.008	99	8695	0.1587	0.1910	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.516	3.511	0.005	92	51897	0.1587	0.1580	
11 Vinyl chloride	62	3.634	3.632	0.002	54	24888	0.1587	0.1513	
12 Butadiene	54	3.710	3.703	0.007	66	18810	0.1587	0.1556	
13 Butane	43	3.710	3.705	0.005	85	40331	0.1587	0.1640	
14 Bromomethane	94	3.947	3.947	0.000	98	27007	0.1587	0.1530	
15 Chloroethane	64	4.060	4.058	0.002	94	13671	0.1587	0.1535	
16 Ethanol	31	4.174	4.176	-0.002	97	68701	0.7933	0.8544	
17 Vinyl bromide	106	4.298	4.293	0.005	95	25426	0.1587	0.1544	
18 2-Methylbutane	43	4.352	4.346	0.006	88	28951	0.1587	0.1577	
19 Trichlorofluoromethane	101	4.519	4.512	0.007	98	76605	0.1587	0.1519	
20 Acrolein	56	4.524	4.515	0.009	30	5280	0.1587	0.1797	
21 Acetonitrile	40	4.567	4.566	0.001	94	6828	0.1587	0.1171	
22 Acetone	58	4.621	4.610	0.011	98	62026	0.4760	0.9546	
23 Pentane	72	4.702	4.699	0.003	98	5468	0.1587	0.1718	
24 Isopropyl alcohol	45	4.729	4.730	-0.001	97	95949	0.4760	0.5116	
25 Ethyl ether	31	4.848	4.833	0.015	95	25965	0.1587	0.1651	
26 1,1-Dichloroethene	96	5.090	5.085	0.005	99	25695	0.1587	0.1607	
27 Acrylonitrile	53	5.171	5.167	0.004	97	14789	0.1587	0.1791	
28 2-Methyl-2-propanol	59	5.252	5.241	0.011	73	40474	0.1587	0.1574	
29 1,1,2-Trichloro-1,2,2-trif	101	5.263	5.253	0.010	94	50007	0.1587	0.1529	
30 Methylene Chloride	84	5.376	5.375	0.001	94	37247	0.1587	0.2430	
31 3-Chloro-1-propene	39	5.392	5.391	0.001	97	24655	0.1587	0.1628	
32 Carbon disulfide	76	5.511	5.508	0.003	99	71891	0.1587	0.1785	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 trans-1,2-Dichloroethene	96	6.088	6.086	0.002	98	24985	0.1587	0.1503	
34 Methyl tert-butyl ether	73	6.239	6.223	0.016	96	65067	0.1587	0.1644	
35 1,1-Dichloroethane	63	6.455	6.453	0.002	100	46865	0.1587	0.1559	
37 Vinyl acetate	43	6.579	6.571	0.008	99	57731	0.1587	0.1637	
38 2-Butanone (MEK)	72	6.967	6.963	0.004	98	15469	0.1587	0.2058	
39 Hexane	56	7.021	7.013	0.008	81	20219	0.1587	0.1652	
40 cis-1,2-Dichloroethene	96	7.344	7.349	-0.005	91	27832	0.1587	0.1499	
41 Ethyl acetate	43	7.560	7.552	0.008	98	50230	0.1587	0.1671	
42 Chloroform	83	7.673	7.673	0.000	92	63930	0.1587	0.1564	
43 Tetrahydrofuran	42	8.056	8.044	0.012	90	26259	0.1587	0.1686	
44 1,1,1-Trichloroethane	97	8.639	8.631	0.008	94	67221	0.1587	0.1494	
45 1,2-Dichloroethane	62	8.719	8.718	0.001	97	36887	0.1587	0.1525	
46 Benzene	78	9.210	9.209	0.001	96	79178	0.1587	0.1551	
47 Cyclohexane	69	9.221	9.216	0.005	87	15472	0.1587	0.1789	
48 Carbon tetrachloride	117	9.237	9.238	-0.001	96	66348	0.1587	0.1550	
49 n-Butanol	31	9.323	9.285	0.038	86	12003	0.1587	0.1722	
52 Isooctane	57	10.062	10.056	0.006	96	127497	0.1587	0.1589	
53 n-Heptane	71	10.477	10.472	0.005	87	31084	0.1587	0.1622	
54 1,2-Dichloropropane	63	10.483	10.483	0.000	89	30287	0.1587	0.1631	
55 Trichloroethene	130	10.537	10.538	-0.001	97	40984	0.1587	0.1529	
56 Dibromomethane	93	10.591	10.597	-0.006	92	37331	0.1587	0.1666	
57 Dichlorobromomethane	83	10.763	10.769	-0.006	98	65753	0.1587	0.1525	
58 1,4-Dioxane	88	10.812	10.804	0.008	77	13740	0.1587	0.1825	
59 Methyl methacrylate	41	10.925	10.924	0.001	93	32202	0.1587	0.1611	
61 4-Methyl-2-pentanone (MIBK	43	11.820	11.814	0.006	97	58241	0.1587	0.1662	
62 cis-1,3-Dichloropropene	75	11.842	11.843	-0.001	96	46994	0.1587	0.1496	
63 trans-1,3-Dichloropropene	75	12.575	12.577	-0.002	98	43519	0.1587	0.1522	
64 Toluene	91	12.704	12.703	0.001	94	96068	0.1587	0.1631	
65 1,1,2-Trichloroethane	83	12.764	12.772	-0.008	98	29563	0.1587	0.1606	
66 2-Hexanone	58	13.217	13.219	-0.002	93	28845	0.1587	0.1725	
67 Chlorodibromomethane	129	13.481	13.485	-0.004	97	56563	0.1587	0.1438	
68 n-Octane	85	13.492	13.489	0.003	95	32717	0.1587	0.1613	
69 Ethylene Dibromide	107	13.772	13.776	-0.004	98	54667	0.1587	0.1597	
70 Tetrachloroethene	129	13.885	13.887	-0.002	95	37659	0.1587	0.1634	
71 Chlorobenzene	112	14.781	14.781	0.000	93	76795	0.1587	0.1589	
72 Ethylbenzene	91	15.093	15.097	-0.004	98	121659	0.1587	0.1615	
73 m-Xylene & p-Xylene	91	15.266	15.268	-0.002	99	190784	0.3173	0.3234	
74 Bromoform	173	15.676	15.676	0.000	96	58148	0.1587	0.1301	
75 Styrene	104	15.735	15.736	-0.001	98	64747	0.1587	0.1523	
76 n-Nonane	57	15.757	15.757	0.000	93	59949	0.1587	0.1687	
77 o-Xylene	91	15.794	15.796	-0.002	98	100036	0.1587	0.1637	
78 1,1,2,2-Tetrachloroethane	83	16.118	16.120	-0.002	99	67147	0.1587	0.1566	
79 1,2,3-Trichloropropane	110	16.269	16.274	-0.005	97	21979	0.1587	0.1624	
80 Isopropylbenzene	105	16.404	16.405	-0.001	95	136777	0.1587	0.1693	
81 N-Propylbenzene	120	16.959	16.962	-0.003	99	38010	0.1587	0.1622	
82 2-Chlorotoluene	126	16.981	16.987	-0.006	95	36390	0.1587	0.1680	
83 4-Ethyltoluene	105	17.121	17.126	-0.005	99	134593	0.1587	0.1652	
84 1,3,5-Trimethylbenzene	120	17.207	17.211	-0.004	93	56327	0.1587	0.1669	
85 Alpha Methyl Styrene	118	17.450	17.455	-0.005	87	45428	0.1587	0.1376	
86 n-Decane	57	17.574	17.576	-0.002	91	69060	0.1587	0.1632	
87 tert-Butylbenzene	119	17.665	17.667	-0.002	94	127312	0.1587	0.1676	
88 1,2,4-Trimethylbenzene	105	17.676	17.683	-0.007	96	113436	0.1587	0.1643	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
89 1,3-Dichlorobenzene	146	17.951	17.954	-0.003	98	87699	0.1587	0.1623	
90 sec-Butylbenzene	105	17.957	17.963	-0.006	98	161297	0.1587	0.1665	
91 Benzyl chloride	91	18.032	18.036	-0.004	98	82153	0.1587	0.1343	
92 1,4-Dichlorobenzene	146	18.043	18.049	-0.006	95	84809	0.1587	0.1563	
93 4-Isopropyltoluene	119	18.145	18.147	-0.002	97	146055	0.1587	0.1643	
94 1,2,3-Trimethylbenzene	105	18.183	18.186	-0.003	97	97949	0.1587	0.1657	
95 1,2-Dichlorobenzene	146	18.426	18.429	-0.003	96	85364	0.1587	0.1645	
96 n-Butylbenzene	91	18.609	18.611	-0.002	98	131708	0.1587	0.1683	
99 Undecane	57	18.987	18.987	0.000	94	77455	0.1587	0.1752	
100 1,2-Dibromo-3-Chloropropan	157	19.062	19.063	-0.001	95	32001	0.1587	0.1495	
102 1,2,4,5-Tetramethylbenzene	119	19.402	19.404	-0.002	97	171416	0.1587	0.1781	
104 Dodecane	57	20.070	20.071	-0.001	95	85357	0.1587	0.2023	
105 1,2,4-Trichlorobenzene	180	20.184	20.186	-0.002	93	97804	0.1587	0.1909	
106 Naphthalene	128	20.308	20.309	-0.001	99	177155	0.1587	0.1750	
107 Hexachlorobutadiene	225	20.545	20.545	0.000	93	97810	0.1587	0.1849	
108 1,2,3-Trichlorobenzene	180	20.583	20.585	-0.002	96	99345	0.1587	0.2331	
109 2-Methylnaphthalene	142	21.381	21.378	0.003	99	130058	0.3649	0.6073	
110 1-Methylnaphthalene	142	21.564	21.564	0.000	99	117079	0.3649	0.6483	
S 111 Xylenes, Total	100				0		0.4760	0.4871	
S 112 1,2-Dichloroethene, Total	1				0		0.3173	0.3002	

Reagents:

40L3DNP_00015	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

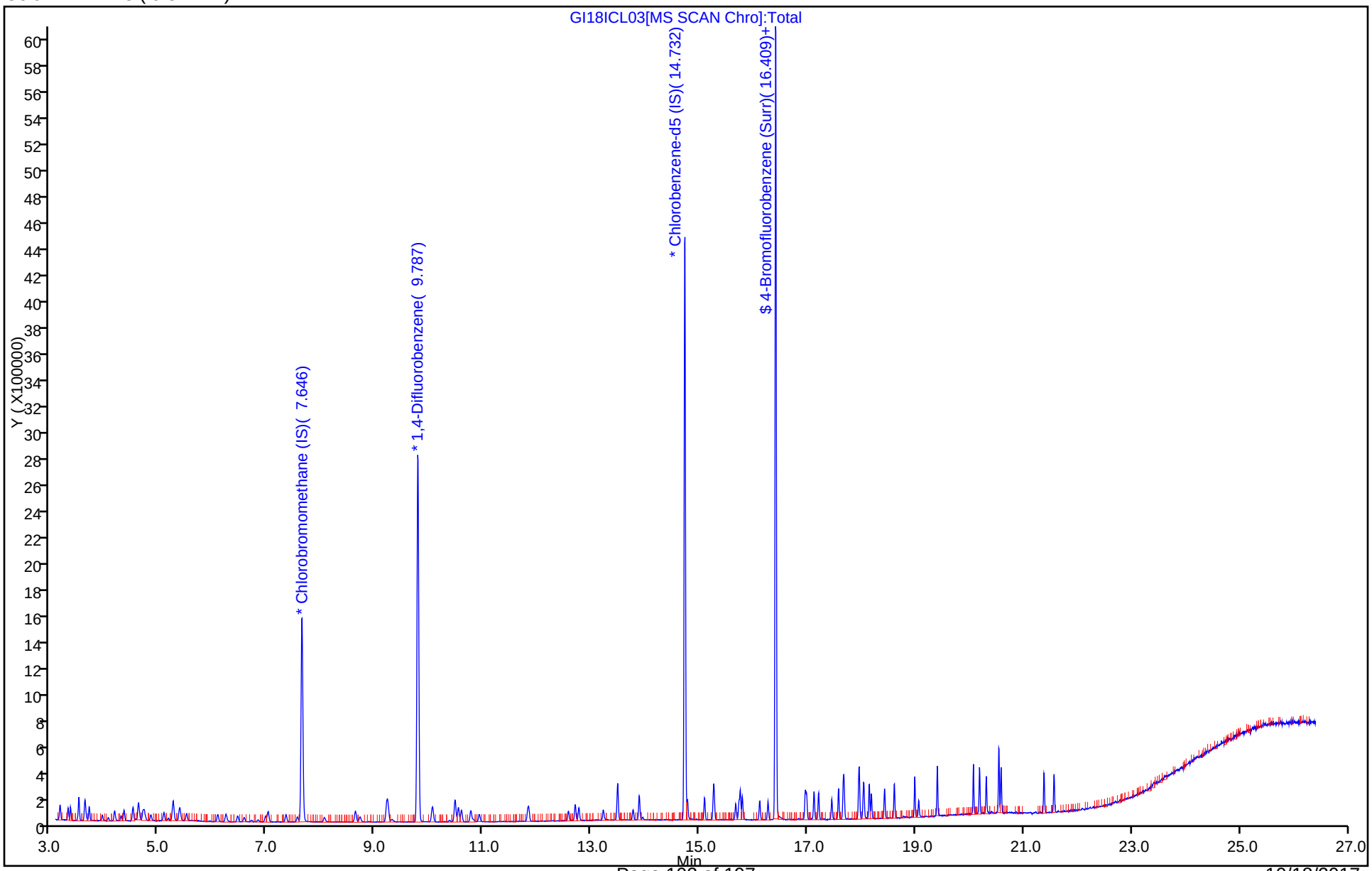
Report Date: 21-Sep-2017 12:10:42 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL03.D

Injection Date:	19-Sep-2017 19:54:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	IC L3			Worklist Smp#:	5
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL04.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 19-Sep-2017 20:37:30 ALS Bottle#: 10 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006110-006
Operator ID: 403648 Instrument ID: MG
Sublist: chrom-MG_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 21-Sep-2017 12:10:44 Calib Date: 20-Sep-2017 09:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK030

First Level Reviewer: barlozhetskayaa Date: 20-Sep-2017 11:47:09

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.652	7.645	0.007	88	549852	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.798	9.790	0.008	95	2921331	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.732	14.731	0.001	88	2711328	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.414	16.414	0.000	96	2050428	4.00	3.98	
6 Chlorodifluoromethane	67	3.322	3.309	0.013	97	18534	0.4000	0.3605	
7 Propene	41	3.332	3.318	0.014	97	56266	0.4000	0.3896	
8 Dichlorodifluoromethane	85	3.370	3.358	0.012	100	189230	0.4000	0.3645	
9 Chloromethane	52	3.510	3.497	0.013	100	18344	0.4000	0.3790	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.527	3.511	0.016	93	130693	0.4000	0.3742	
11 Vinyl chloride	62	3.645	3.632	0.013	98	65734	0.4000	0.3759	
12 Butadiene	54	3.715	3.703	0.012	84	48630	0.4000	0.3785	
13 Butane	43	3.721	3.705	0.016	92	102409	0.4000	0.3919	
14 Bromomethane	94	3.963	3.947	0.016	98	67601	0.4000	0.3603	
15 Chloroethane	64	4.071	4.058	0.013	94	36682	0.4000	0.3874	
16 Ethanol	31	4.195	4.176	0.019	98	166057	2.00	1.94	
17 Vinyl bromide	106	4.303	4.293	0.010	98	66026	0.4000	0.3772	
18 2-Methylbutane	43	4.362	4.346	0.016	92	76366	0.4000	0.3913	
19 Trichlorofluoromethane	101	4.524	4.512	0.012	100	198344	0.4000	0.3700	
20 Acrolein	56	4.530	4.515	0.015	30	12288	0.4000	0.3935	
21 Acetonitrile	40	4.578	4.566	0.012	99	24464	0.4000	0.3946	
22 Acetone	58	4.627	4.610	0.017	98	122108	1.20	1.77	
23 Pentane	72	4.718	4.699	0.019	99	13557	0.4000	0.4007	
24 Isopropyl alcohol	45	4.751	4.730	0.021	96	236553	1.20	1.19	
25 Ethyl ether	31	4.853	4.833	0.020	93	66735	0.4000	0.3992	
26 1,1-Dichloroethene	96	5.101	5.085	0.016	99	68398	0.4000	0.4024	
27 Acrylonitrile	53	5.182	5.167	0.015	96	35318	0.4000	0.4023	
28 2-Methyl-2-propanol	59	5.285	5.241	0.044	95	106508	0.4000	0.3897	
29 1,1,2-Trichloro-1,2,2-trif	101	5.268	5.253	0.015	95	139414	0.4000	0.4009	
30 Methylene Chloride	84	5.387	5.375	0.012	92	75301	0.4000	0.4623	
31 3-Chloro-1-propene	39	5.403	5.391	0.012	99	63104	0.4000	0.3920	
32 Carbon disulfide	76	5.522	5.508	0.014	99	181753	0.4000	0.4247	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 trans-1,2-Dichloroethene	96	6.099	6.086	0.013	98	69180	0.4000	0.3915	
34 Methyl tert-butyl ether	73	6.244	6.223	0.021	96	169973	0.4000	0.4039	
35 1,1-Dichloroethane	63	6.465	6.453	0.012	100	125007	0.4000	0.3913	
37 Vinyl acetate	43	6.589	6.571	0.018	100	150596	0.4000	0.4016	
38 2-Butanone (MEK)	72	6.989	6.963	0.025	99	33985	0.4000	0.4254	
39 Hexane	56	7.026	7.013	0.013	90	51010	0.4000	0.3921	
40 cis-1,2-Dichloroethene	96	7.361	7.349	0.012	89	77427	0.4000	0.3924	
41 Ethyl acetate	43	7.571	7.552	0.019	98	121083	0.4000	0.3789	
42 Chloroform	83	7.684	7.673	0.011	94	163431	0.4000	0.3760	
43 Tetrahydrofuran	42	8.067	8.044	0.023	90	64089	0.4000	0.3872	
44 1,1,1-Trichloroethane	97	8.644	8.631	0.013	94	176026	0.4000	0.3681	
45 1,2-Dichloroethane	62	8.730	8.718	0.012	98	98036	0.4000	0.3785	
46 Benzene	78	9.221	9.209	0.012	96	210547	0.4000	0.3852	
47 Cyclohexane	69	9.232	9.216	0.016	90	36884	0.4000	0.3982	
48 Carbon tetrachloride	117	9.248	9.238	0.010	96	166625	0.4000	0.3633	
49 n-Butanol	31	9.345	9.285	0.060	90	27907	0.4000	0.3738	
52 Isooctane	57	10.068	10.056	0.012	96	329584	0.4000	0.3836	
53 n-Heptane	71	10.483	10.472	0.011	94	77855	0.4000	0.3794	
54 1,2-Dichloropropane	63	10.494	10.483	0.011	86	75212	0.4000	0.3782	
55 Trichloroethene	130	10.547	10.538	0.009	96	104716	0.4000	0.3648	
56 Dibromomethane	93	10.607	10.597	0.010	90	89038	0.4000	0.3710	
57 Dichlorobromomethane	83	10.779	10.769	0.010	98	169750	0.4000	0.3677	
58 1,4-Dioxane	88	10.817	10.804	0.013	93	31457	0.4000	0.3902	
59 Methyl methacrylate	41	10.930	10.924	0.006	94	79810	0.4000	0.3728	
61 4-Methyl-2-pentanone (MIBK	43	11.831	11.814	0.017	98	137090	0.4000	0.3652	
62 cis-1,3-Dichloropropene	75	11.847	11.843	0.004	97	123657	0.4000	0.3676	
63 trans-1,3-Dichloropropene	75	12.580	12.577	0.003	98	114193	0.4000	0.3702	
64 Toluene	91	12.704	12.703	0.001	93	241523	0.4000	0.3799	
65 1,1,2-Trichloroethane	83	12.775	12.772	0.003	97	74688	0.4000	0.3760	
66 2-Hexanone	58	13.233	13.219	0.014	94	69892	0.4000	0.3872	
67 Chlorodibromomethane	129	13.486	13.485	0.001	97	157510	0.4000	0.3711	
68 n-Octane	85	13.497	13.489	0.008	92	83085	0.4000	0.3797	
69 Ethylene Dibromide	107	13.778	13.776	0.002	98	139599	0.4000	0.3779	
70 Tetrachloroethene	129	13.891	13.887	0.004	95	92654	0.4000	0.3726	
71 Chlorobenzene	112	14.786	14.781	0.005	94	195946	0.4000	0.3756	
72 Ethylbenzene	91	15.099	15.097	0.002	98	303630	0.4000	0.3735	
73 m-Xylene & p-Xylene	91	15.271	15.268	0.003	100	470413	0.8000	0.7390	
74 Bromoform	173	15.676	15.676	0.000	97	180997	0.4000	0.3753	
75 Styrene	104	15.740	15.736	0.004	98	170193	0.4000	0.3709	
76 n-Nonane	57	15.762	15.757	0.005	90	148635	0.4000	0.3877	
77 o-Xylene	91	15.800	15.796	0.004	98	247144	0.4000	0.3747	
78 1,1,2,2-Tetrachloroethane	83	16.123	16.120	0.003	99	170617	0.4000	0.3687	
79 1,2,3-Trichloropropane	110	16.274	16.274	0.000	97	53469	0.4000	0.3662	
80 Isopropylbenzene	105	16.404	16.405	-0.001	97	334930	0.4000	0.3842	
81 N-Propylbenzene	120	16.964	16.962	0.002	99	94811	0.4000	0.3750	
82 2-Chlorotoluene	126	16.986	16.987	-0.001	97	85503	0.4000	0.3659	
83 4-Ethyltoluene	105	17.126	17.126	0.000	98	326800	0.4000	0.3716	
84 1,3,5-Trimethylbenzene	120	17.212	17.211	0.001	94	138882	0.4000	0.3813	
85 Alpha Methyl Styrene	118	17.455	17.455	0.000	87	124028	0.4000	0.3481	
86 n-Decane	57	17.579	17.576	0.003	92	174168	0.4000	0.3814	
87 tert-Butylbenzene	119	17.665	17.667	-0.002	94	314662	0.4000	0.3839	
88 1,2,4-Trimethylbenzene	105	17.682	17.683	-0.001	95	272930	0.4000	0.3663	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
89 1,3-Dichlorobenzene	146	17.951	17.954	-0.003	97	214625	0.4000	0.3681	
90 sec-Butylbenzene	105	17.962	17.963	-0.001	98	398859	0.4000	0.3817	
91 Benzyl chloride	91	18.032	18.036	-0.004	98	240011	0.4000	0.3636	
92 1,4-Dichlorobenzene	146	18.048	18.049	-0.001	96	220007	0.4000	0.3757	
93 4-Isopropyltoluene	119	18.145	18.147	-0.002	98	346398	0.4000	0.3612	
94 1,2,3-Trimethylbenzene	105	18.188	18.186	0.002	97	238013	0.4000	0.3731	
95 1,2-Dichlorobenzene	146	18.426	18.429	-0.003	97	209769	0.4000	0.3747	
96 n-Butylbenzene	91	18.609	18.611	-0.002	98	305879	0.4000	0.3622	
99 Undecane	57	18.987	18.987	0.000	94	173708	0.4000	0.3641	
100 1,2-Dibromo-3-Chloropropan	157	19.062	19.063	-0.001	96	84875	0.4000	0.3674	
102 1,2,4,5-Tetramethylbenzene	119	19.402	19.404	-0.002	97	387068	0.4000	0.3727	
104 Dodecane	57	20.070	20.071	-0.001	94	155579	0.4000	0.3417	
105 1,2,4-Trichlorobenzene	180	20.184	20.186	-0.002	93	191365	0.4000	0.3462	
106 Naphthalene	128	20.308	20.309	-0.001	99	350989	0.4000	0.3214	
107 Hexachlorobutadiene	225	20.545	20.545	0.000	93	207684	0.4000	0.3639	
108 1,2,3-Trichlorobenzene	180	20.583	20.585	-0.002	95	176355	0.4000	0.3834	
109 2-Methylnaphthalene	142	21.375	21.378	-0.003	99	166314	0.9200	0.7197	
110 1-Methylnaphthalene	142	21.564	21.564	0.000	98	140143	0.9200	0.7192	
S 111 Xylenes, Total	100				0		1.20	1.11	
S 112 1,2-Dichloroethene, Total	1				0		0.8000	0.7838	

Reagents:

40L4DNP_00014	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

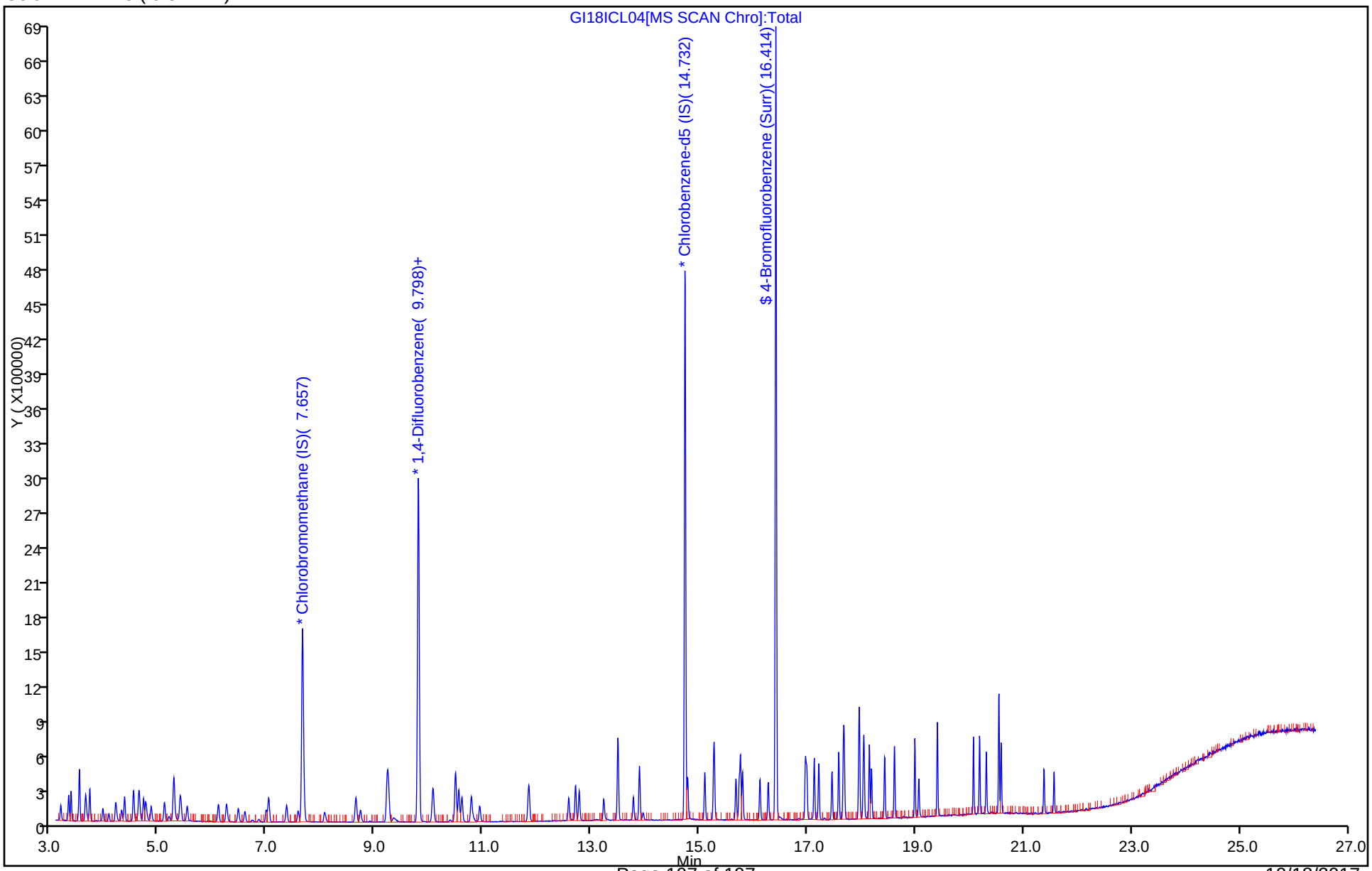
Report Date: 21-Sep-2017 12:10:45 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL04.D

Injection Date:	19-Sep-2017 20:37:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	IC L4			Worklist Smp#:	6
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL05.D
Lims ID: IC L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 19-Sep-2017 21:20:30 ALS Bottle#: 11 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006110-007
Operator ID: 403648 Instrument ID: MG
Sublist: chrom-MG_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 21-Sep-2017 12:10:47 Calib Date: 20-Sep-2017 09:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK030

First Level Reviewer: barlozhetskayaa Date: 20-Sep-2017 09:02:14

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.630	7.645	-0.015	88	542270	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.776	9.790	-0.014	95	2926609	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.727	14.731	-0.004	88	2731154	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.409	16.414	-0.005	96	2108331	4.00	4.07	
6 Chlorodifluoromethane	67	3.300	3.309	-0.009	97	48230	1.00	0.9512	
7 Propene	41	3.311	3.318	-0.007	98	147623	1.00	1.04	
8 Dichlorodifluoromethane	85	3.349	3.358	-0.009	100	507863	1.00	0.99	
9 Chloromethane	52	3.489	3.497	-0.008	98	47211	1.00	0.9891	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.500	3.511	-0.011	96	340801	1.00	0.9895	
11 Vinyl chloride	62	3.624	3.632	-0.008	99	170873	1.00	0.99	
12 Butadiene	54	3.694	3.703	-0.009	86	125538	1.00	0.99	
13 Butane	43	3.694	3.705	-0.011	92	258294	1.00	1.00	
14 Bromomethane	94	3.936	3.947	-0.011	99	183191	1.00	0.99	
15 Chloroethane	64	4.044	4.058	-0.014	94	94756	1.00	1.01	
16 Ethanol	31	4.141	4.176	-0.035	98	451623	5.01	5.36	
17 Vinyl bromide	106	4.282	4.293	-0.011	97	170386	1.00	0.9870	
18 2-Methylbutane	43	4.330	4.346	-0.016	91	196577	1.00	1.02	
19 Trichlorofluoromethane	101	4.497	4.512	-0.015	99	513071	1.00	0.9704	
20 Acrolein	56	4.497	4.515	-0.018	29	31973	1.00	1.04	
21 Acetonitrile	40	4.546	4.566	-0.020	93	70020	1.00	1.15	
22 Acetone	58	4.584	4.610	-0.026	99	228724	3.01	3.36	
23 Pentane	72	4.686	4.699	-0.013	81	31738	1.00	0.9511	
24 Isopropyl alcohol	45	4.686	4.730	-0.044	76	603078	3.01	3.07	
25 Ethyl ether	31	4.810	4.833	-0.023	92	172961	1.00	1.05	
26 1,1-Dichloroethene	96	5.074	5.085	-0.011	99	169369	1.00	1.01	
27 Acrylonitrile	53	5.144	5.167	-0.023	95	94029	1.00	1.09	
28 2-Methyl-2-propanol	59	5.182	5.241	-0.059	96	274986	1.00	1.02	
29 1,1,2-Trichloro-1,2,2-trif	101	5.236	5.253	-0.017	96	333362	1.00	0.9721	
30 Methylene Chloride	84	5.360	5.375	-0.015	93	154370	1.00	0.9609	
31 3-Chloro-1-propene	39	5.376	5.391	-0.015	97	152921	1.00	0.9633	
32 Carbon disulfide	76	5.495	5.508	-0.013	100	408911	1.00	0.9688	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 trans-1,2-Dichloroethene	96	6.072	6.086	-0.014	97	171609	1.00	0.9847	
34 Methyl tert-butyl ether	73	6.196	6.223	-0.027	96	430381	1.00	1.04	
35 1,1-Dichloroethane	63	6.438	6.453	-0.015	100	311144	1.00	0.9876	
37 Vinyl acetate	43	6.546	6.571	-0.025	100	399894	1.00	1.08	
38 2-Butanone (MEK)	72	6.935	6.963	-0.028	99	77227	1.00	0.9802	
39 Hexane	56	6.999	7.013	-0.014	88	121727	1.00	0.9487	
40 cis-1,2-Dichloroethene	96	7.339	7.349	-0.010	92	190634	1.00	0.9795	
41 Ethyl acetate	43	7.528	7.552	-0.024	98	329178	1.00	1.04	
42 Chloroform	83	7.657	7.673	-0.016	95	416219	1.00	0.9711	
43 Tetrahydrofuran	42	8.018	8.044	-0.026	90	169945	1.00	1.04	
44 1,1,1-Trichloroethane	97	8.617	8.631	-0.014	94	452114	1.00	0.9586	
45 1,2-Dichloroethane	62	8.703	8.718	-0.015	98	252582	1.00	0.9734	
46 Benzene	78	9.194	9.209	-0.015	96	546586	1.00	1.00	
47 Cyclohexane	69	9.210	9.216	-0.006	92	93381	1.00	1.01	
48 Carbon tetrachloride	117	9.226	9.238	-0.012	96	439418	1.00	0.9565	
49 n-Butanol	31	9.232	9.285	-0.053	60	71273	1.00	0.9530	
52 Isooctane	57	10.046	10.056	-0.010	98	850781	1.00	0.9886	
53 n-Heptane	71	10.461	10.472	-0.011	90	201359	1.00	0.9794	
54 1,2-Dichloropropane	63	10.472	10.483	-0.011	91	198964	1.00	1.00	
55 Trichloroethene	130	10.526	10.538	-0.012	96	270740	1.00	0.9414	
56 Dibromomethane	93	10.585	10.597	-0.012	91	233503	1.00	0.9712	
57 Dichlorobromomethane	83	10.758	10.769	-0.011	98	453057	1.00	0.9795	
58 1,4-Dioxane	88	10.779	10.804	-0.025	92	81277	1.00	1.01	
59 Methyl methacrylate	41	10.909	10.924	-0.015	95	217937	1.00	1.02	
61 4-Methyl-2-pentanone (MIBK	43	11.793	11.814	-0.021	98	354011	1.00	0.9413	
62 cis-1,3-Dichloropropene	75	11.836	11.843	-0.007	93	327283	1.00	0.9711	
63 trans-1,3-Dichloropropene	75	12.570	12.577	-0.007	98	307428	1.00	0.9894	
64 Toluene	91	12.694	12.703	-0.009	94	633608	1.00	0.9894	
65 1,1,2-Trichloroethane	83	12.764	12.772	-0.008	98	195163	1.00	0.9754	
66 2-Hexanone	58	13.206	13.219	-0.013	93	177870	1.00	0.9783	
67 Chlorodibromomethane	129	13.476	13.485	-0.009	97	435999	1.00	1.02	
68 n-Octane	85	13.481	13.489	-0.008	93	220792	1.00	1.00	
69 Ethylene Dibromide	107	13.767	13.776	-0.009	98	371108	1.00	1.00	
70 Tetrachloroethene	129	13.880	13.887	-0.007	95	242722	1.00	0.9690	
71 Chlorobenzene	112	14.775	14.781	-0.006	94	519879	1.00	0.9894	
72 Ethylbenzene	91	15.093	15.097	-0.004	98	834400	1.00	1.02	
73 m-Xylene & p-Xylene	91	15.260	15.268	-0.008	100	1291672	2.00	2.01	
74 Bromoform	173	15.670	15.676	-0.006	98	513000	1.00	1.06	
75 Styrene	104	15.730	15.736	-0.006	98	481292	1.00	1.04	
76 n-Nonane	57	15.751	15.757	-0.006	91	393367	1.00	1.02	
77 o-Xylene	91	15.789	15.796	-0.007	98	677607	1.00	1.02	
78 1,1,2,2-Tetrachloroethane	83	16.112	16.120	-0.008	99	485381	1.00	1.04	
79 1,2,3-Trichloropropane	110	16.269	16.274	-0.005	97	152584	1.00	1.04	
80 Isopropylbenzene	105	16.398	16.405	-0.007	97	915711	1.00	1.04	
81 N-Propylbenzene	120	16.959	16.962	-0.003	99	266406	1.00	1.05	
82 2-Chlorotoluene	126	16.981	16.987	-0.006	97	237048	1.00	1.01	
83 4-Ethyltoluene	105	17.121	17.126	-0.005	98	932100	1.00	1.05	
84 1,3,5-Trimethylbenzene	120	17.207	17.211	-0.004	94	392669	1.00	1.07	
85 Alpha Methyl Styrene	118	17.450	17.455	-0.005	88	376972	1.00	1.05	
86 n-Decane	57	17.574	17.576	-0.002	92	484948	1.00	1.05	
87 tert-Butylbenzene	119	17.665	17.667	-0.002	93	882452	1.00	1.07	
88 1,2,4-Trimethylbenzene	105	17.682	17.683	-0.001	95	786562	1.00	1.05	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
89 1,3-Dichlorobenzene	146	17.951	17.954	-0.003	98	607755	1.00	1.03	
90 sec-Butylbenzene	105	17.962	17.963	-0.001	98	1137262	1.00	1.08	
91 Benzyl chloride	91	18.032	18.036	-0.004	98	726743	1.00	1.09	
92 1,4-Dichlorobenzene	146	18.048	18.049	-0.001	96	621639	1.00	1.05	
93 4-Isopropyltoluene	119	18.145	18.147	-0.002	97	1027239	1.00	1.06	
94 1,2,3-Trimethylbenzene	105	18.183	18.186	-0.003	97	690286	1.00	1.07	
95 1,2-Dichlorobenzene	146	18.426	18.429	-0.003	96	590433	1.00	1.05	
96 n-Butylbenzene	91	18.609	18.611	-0.002	98	917768	1.00	1.08	
99 Undecane	57	18.987	18.987	0.000	94	527727	1.00	1.10	
100 1,2-Dibromo-3-Chloropropan	157	19.062	19.063	-0.001	97	257193	1.00	1.11	
102 1,2,4,5-Tetramethylbenzene	119	19.402	19.404	-0.002	97	1146505	1.00	1.10	
104 Dodecane	57	20.070	20.071	-0.001	93	510467	1.00	1.11	
105 1,2,4-Trichlorobenzene	180	20.184	20.186	-0.002	94	600327	1.00	1.08	
106 Naphthalene	128	20.308	20.309	-0.001	99	1136927	1.00	1.03	
107 Hexachlorobutadiene	225	20.545	20.545	0.000	94	635128	1.00	1.10	
108 1,2,3-Trichlorobenzene	180	20.583	20.585	-0.002	95	572565	1.00	1.24	
109 2-Methylnaphthalene	142	21.375	21.378	-0.003	100	706395	2.30	3.03	
110 1-Methylnaphthalene	142	21.564	21.564	0.000	99	620928	2.30	3.16	
S 111 Xylenes, Total	100				0		3.00	3.03	
S 112 1,2-Dichloroethene, Total	1				0		2.00	1.96	

Reagents:

40L5DNP_00014	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

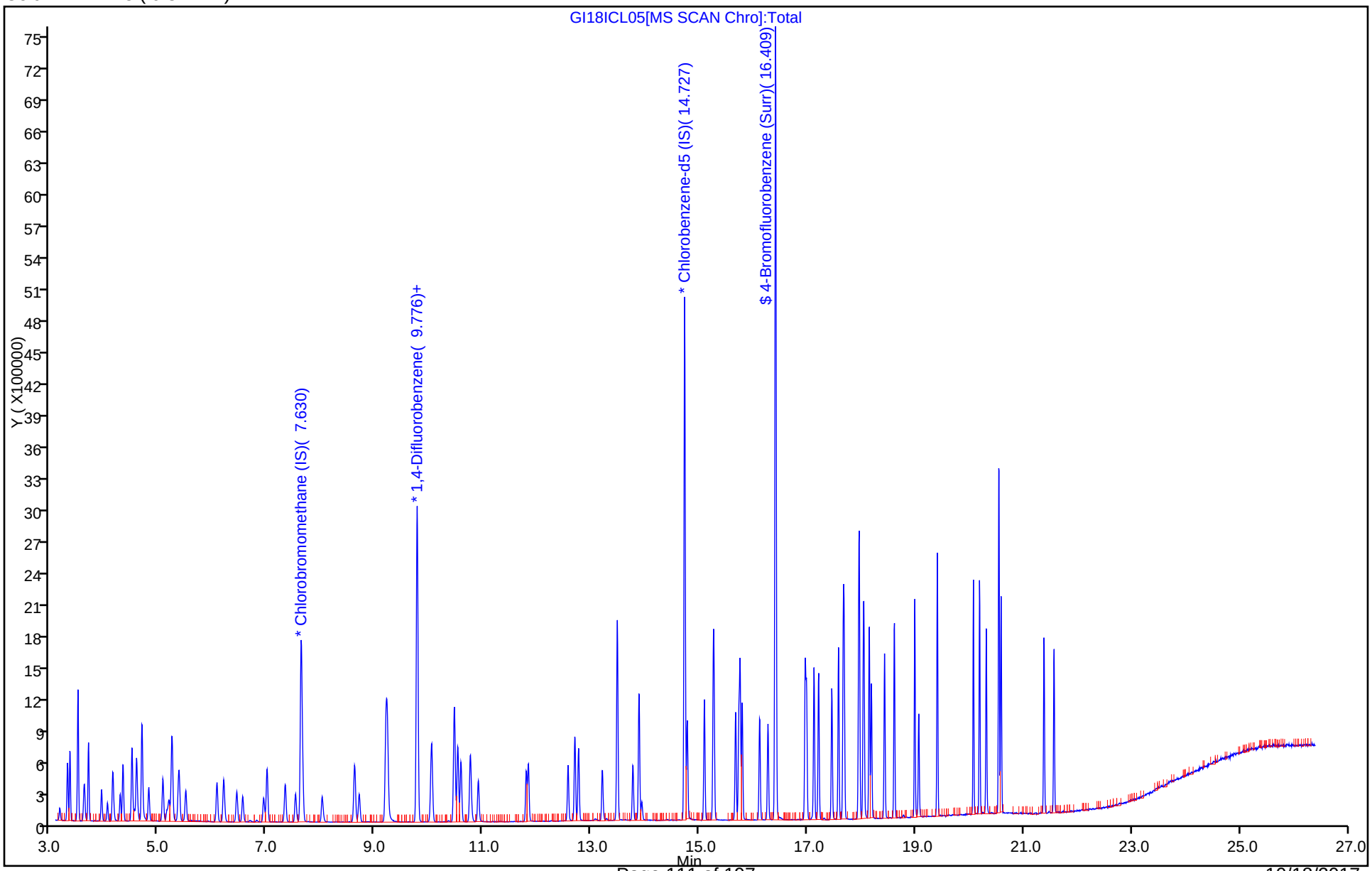
Report Date: 21-Sep-2017 12:10:48 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL05.D

Injection Date:	19-Sep-2017 21:20:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	IC L5			Worklist Smp#:	7
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL06.D
Lims ID: ICIS L6
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 19-Sep-2017 22:02:30 ALS Bottle#: 12 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006110-008
Operator ID: 403648 Instrument ID: MG
Sublist: chrom-MG_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 21-Sep-2017 12:10:50 Calib Date: 20-Sep-2017 09:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK030

First Level Reviewer: barlozhetskayaa Date: 20-Sep-2017 08:46:35

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.652	7.645	0.007	88	516294	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.793	9.790	0.003	95	2697030	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.732	14.731	0.001	88	2607815	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.415	16.414	0.001	96	2051235	4.00	4.14	
6 Chlorodifluoromethane	67	3.306	3.309	-0.003	97	92301	2.00	1.91	
7 Propene	41	3.317	3.318	-0.001	98	267028	2.00	1.97	
8 Dichlorodifluoromethane	85	3.360	3.358	0.002	100	982925	2.00	2.02	
9 Chloromethane	52	3.494	3.497	-0.003	99	90205	2.00	1.98	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.511	3.511	0.000	92	658215	2.00	2.01	
11 Vinyl chloride	62	3.629	3.632	-0.003	98	325476	2.00	1.98	
12 Butadiene	54	3.705	3.703	0.002	85	247641	2.00	2.05	
13 Butane	43	3.705	3.705	0.000	93	503368	2.00	2.05	
14 Bromomethane	94	3.947	3.947	0.000	98	348010	2.00	1.98	
15 Chloroethane	64	4.061	4.058	0.003	94	180198	2.00	2.03	
16 Ethanol	31	4.179	4.176	0.003	98	836551	9.99	10.4	
17 Vinyl bromide	106	4.298	4.293	0.005	97	325129	2.00	1.98	
18 2-Methylbutane	43	4.346	4.346	0.000	90	369233	2.00	2.01	
19 Trichlorofluoromethane	101	4.514	4.512	0.002	99	1000475	2.00	1.99	
20 Acrolein	56	4.514	4.515	-0.001	29	52401	2.00	1.79	
21 Acetonitrile	40	4.568	4.566	0.002	98	126393	2.00	2.17	
22 Acetone	58	4.605	4.610	-0.005	98	389049	5.99	6.00	
23 Pentane	72	4.702	4.699	0.003	98	64152	2.00	2.02	
24 Isopropyl alcohol	45	4.729	4.730	-0.001	99	1103619	5.99	5.90	
25 Ethyl ether	31	4.826	4.833	-0.007	93	325892	2.00	2.08	
26 1,1-Dichloroethene	96	5.091	5.085	0.006	99	318285	2.00	1.99	
27 Acrylonitrile	53	5.172	5.167	0.005	93	168986	2.00	2.05	
28 2-Methyl-2-propanol	59	5.225	5.241	-0.016	95	508538	2.00	1.98	
29 1,1,2-Trichloro-1,2,2-trif	101	5.258	5.253	0.005	95	638134	2.00	1.95	
30 Methylene Chloride	84	5.382	5.375	0.007	93	270518	2.00	1.77	
31 3-Chloro-1-propene	39	5.398	5.391	0.007	97	300714	2.00	1.99	
32 Carbon disulfide	76	5.511	5.508	0.003	100	780136	2.00	1.94	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 trans-1,2-Dichloroethene	96	6.088	6.086	0.002	98	326595	2.00	1.97	
34 Methyl tert-butyl ether	73	6.218	6.223	-0.005	96	837324	2.00	2.12	
35 1,1-Dichloroethane	63	6.460	6.453	0.007	99	595252	2.00	1.98	
37 Vinyl acetate	43	6.574	6.571	0.003	100	777472	2.00	2.21	
38 2-Butanone (MEK)	72	6.962	6.963	-0.001	99	146747	2.00	1.96	
39 Hexane	56	7.016	7.013	0.003	91	236138	2.00	1.93	
40 cis-1,2-Dichloroethene	96	7.355	7.349	0.006	92	369126	2.00	1.99	
41 Ethyl acetate	43	7.550	7.552	-0.002	98	674209	2.00	2.25	
42 Chloroform	83	7.679	7.673	0.006	96	800319	2.00	1.96	
43 Tetrahydrofuran	42	8.035	8.044	-0.009	91	340342	2.00	2.19	
44 1,1,1-Trichloroethane	97	8.633	8.631	0.002	94	889159	2.00	1.98	
45 1,2-Dichloroethane	62	8.725	8.718	0.007	98	494370	2.00	2.07	
46 Benzene	78	9.210	9.209	0.001	96	1031990	2.00	2.04	
47 Cyclohexane	69	9.216	9.216	0.000	92	176659	2.00	2.07	
48 Carbon tetrachloride	117	9.243	9.238	0.005	96	887140	2.00	2.10	
49 n-Butanol	31	9.264	9.285	-0.021	58	140602	2.00	2.04	
52 Isooctane	57	10.057	10.056	0.001	97	1684485	2.00	2.12	
53 n-Heptane	71	10.472	10.472	0.000	86	407032	2.00	2.15	
54 1,2-Dichloropropane	63	10.483	10.483	0.000	89	390376	2.00	2.13	
55 Trichloroethene	130	10.542	10.538	0.004	96	545431	2.00	2.06	
56 Dibromomethane	93	10.602	10.597	0.005	91	461991	2.00	2.09	
57 Dichlorobromomethane	83	10.774	10.769	0.005	98	911023	2.00	2.14	
58 1,4-Dioxane	88	10.796	10.804	-0.008	91	162835	2.00	2.19	
59 Methyl methacrylate	41	10.920	10.924	-0.004	95	455166	2.00	2.30	
61 4-Methyl-2-pentanone (MIBK	43	11.810	11.814	-0.004	98	707684	2.00	2.04	
62 cis-1,3-Dichloropropene	75	11.847	11.843	0.004	94	658111	2.00	2.12	
63 trans-1,3-Dichloropropene	75	12.581	12.577	0.004	98	623730	2.00	2.10	
64 Toluene	91	12.705	12.703	0.002	94	1266003	2.00	2.07	
65 1,1,2-Trichloroethane	83	12.775	12.772	0.003	98	391445	2.00	2.05	
66 2-Hexanone	58	13.212	13.219	-0.007	92	343247	2.00	1.98	
67 Chlorodibromomethane	129	13.487	13.485	0.002	97	877188	2.00	2.15	
68 n-Octane	85	13.487	13.489	-0.002	92	458727	2.00	2.18	
69 Ethylene Dibromide	107	13.778	13.776	0.002	98	757978	2.00	2.13	
70 Tetrachloroethene	129	13.886	13.887	-0.001	95	493288	2.00	2.06	
71 Chlorobenzene	112	14.781	14.781	0.000	93	1026759	2.00	2.05	
72 Ethylbenzene	91	15.093	15.097	-0.004	99	1700492	2.00	2.17	
73 m-Xylene & p-Xylene	91	15.266	15.268	-0.002	100	2649931	3.99	4.33	
74 Bromoform	173	15.676	15.676	0.000	98	1048544	2.00	2.26	
75 Styrene	104	15.735	15.736	-0.001	98	998271	2.00	2.26	
76 n-Nonane	57	15.757	15.757	0.000	90	796943	2.00	2.16	
77 o-Xylene	91	15.794	15.796	-0.002	98	1381423	2.00	2.18	
78 1,1,2,2-Tetrachloroethane	83	16.118	16.120	-0.002	99	1000101	2.00	2.25	
79 1,2,3-Trichloropropane	110	16.274	16.274	0.000	97	318295	2.00	2.27	
80 Isopropylbenzene	105	16.404	16.405	-0.001	98	1870339	2.00	2.23	
81 N-Propylbenzene	120	16.959	16.962	-0.003	99	543161	2.00	2.23	
82 2-Chlorotoluene	126	16.986	16.987	-0.001	97	486666	2.00	2.17	
83 4-Ethyltoluene	105	17.126	17.126	0.000	99	1939242	2.00	2.29	
84 1,3,5-Trimethylbenzene	120	17.207	17.211	-0.004	93	808471	2.00	2.31	
85 Alpha Methyl Styrene	118	17.455	17.455	0.000	90	807557	2.00	2.36	
86 n-Decane	57	17.574	17.576	-0.002	92	993781	2.00	2.26	
87 tert-Butylbenzene	119	17.666	17.667	-0.001	92	1821833	2.00	2.31	
88 1,2,4-Trimethylbenzene	105	17.682	17.683	-0.001	96	1633412	2.00	2.28	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
89 1,3-Dichlorobenzene	146	17.951	17.954	-0.003	98	1227050	2.00	2.19	
90 sec-Butylbenzene	105	17.962	17.963	-0.001	99	2350614	2.00	2.34	
91 Benzyl chloride	91	18.032	18.036	-0.004	98	1586866	2.00	2.50	
92 1,4-Dichlorobenzene	146	18.048	18.049	-0.001	96	1233872	2.00	2.19	
93 4-Isopropyltoluene	119	18.146	18.147	-0.001	97	2135645	2.00	2.32	
94 1,2,3-Trimethylbenzene	105	18.183	18.186	-0.003	97	1464985	2.00	2.39	
95 1,2-Dichlorobenzene	146	18.431	18.429	0.002	97	1191667	2.00	2.21	
96 n-Butylbenzene	91	18.609	18.611	-0.002	98	1941248	2.00	2.39	
99 Undecane	57	18.987	18.987	0.000	94	1100744	2.00	2.40	
100 1,2-Dibromo-3-Chloropropan	157	19.062	19.063	-0.001	97	524441	2.00	2.36	
102 1,2,4,5-Tetramethylbenzene	119	19.402	19.404	-0.002	97	2338873	2.00	2.34	
104 Dodecane	57	20.071	20.071	0.000	94	965701	2.00	2.20	
105 1,2,4-Trichlorobenzene	180	20.184	20.186	-0.002	94	1130653	2.00	2.13	
106 Naphthalene	128	20.308	20.309	-0.001	99	2186496	2.00	2.08	
107 Hexachlorobutadiene	225	20.545	20.545	0.000	94	1190449	2.00	2.17	
108 1,2,3-Trichlorobenzene	180	20.583	20.585	-0.002	96	1034002	2.00	2.34	
109 2-Methylnaphthalene	142	21.376	21.378	-0.002	100	1197669	4.59	5.39	
110 1-Methylnaphthalene	142	21.564	21.564	0.000	99	1020196	4.59	5.44	
S 111 Xylenes, Total	100				0		5.99	6.51	
S 112 1,2-Dichloroethene, Total	1				0		3.99	3.96	

Reagents:

40L6DNP_00015	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

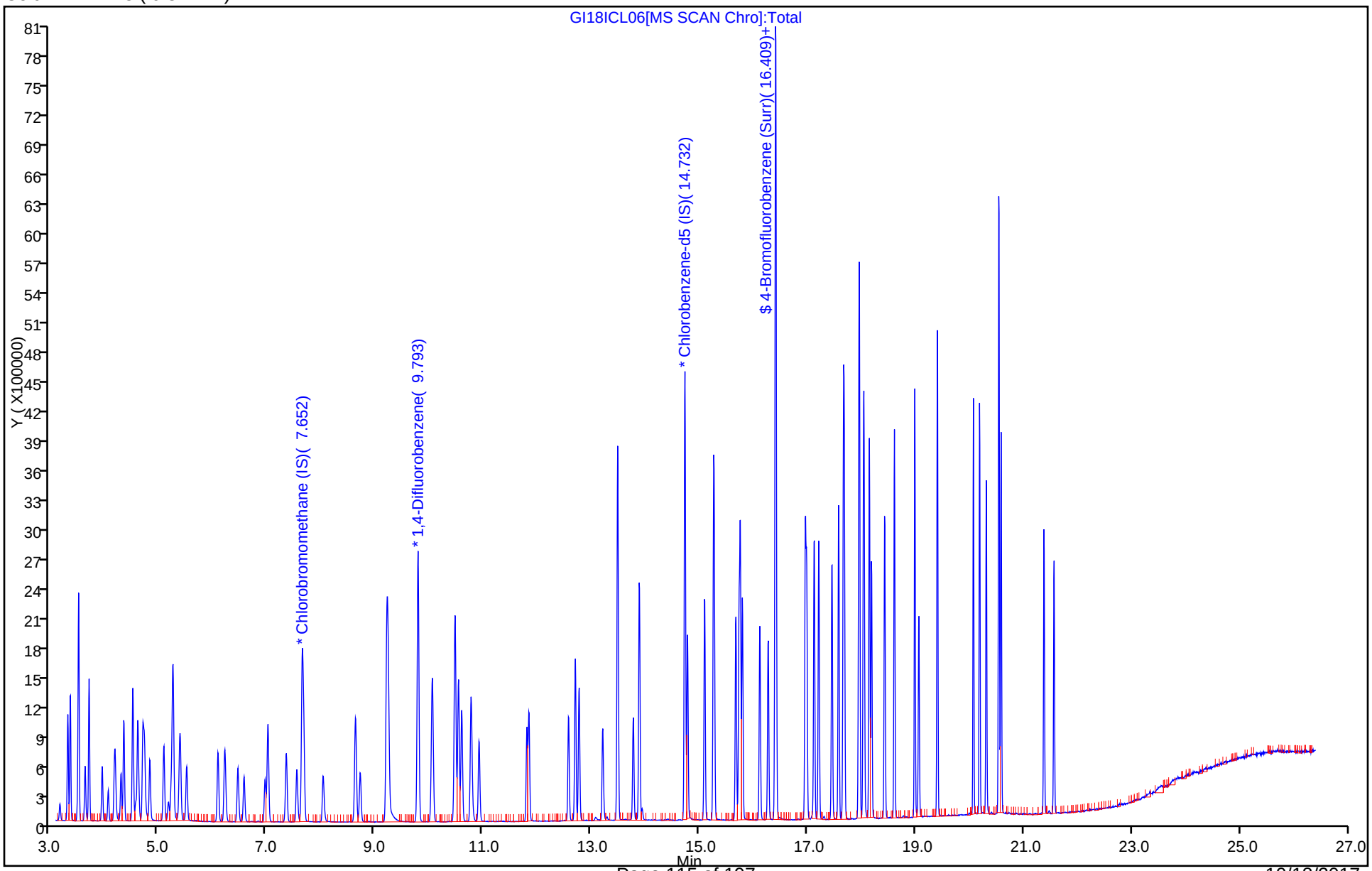
Report Date: 21-Sep-2017 12:10:51 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL06.D

Injection Date:	19-Sep-2017 22:02:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	ICIS L6			Worklist Smp#:	8
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL07.D
Lims ID: IC L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 19-Sep-2017 22:45:30 ALS Bottle#: 13 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006110-009
Operator ID: 403648 Instrument ID: MG
Sublist: chrom-MG_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 21-Sep-2017 12:10:53 Calib Date: 20-Sep-2017 09:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK030

First Level Reviewer: barlozhetskayaa Date: 20-Sep-2017 08:56:32

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.636	7.645	-0.009	88	488560	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.782	9.790	-0.008	95	2782221	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.727	14.731	-0.004	88	2706950	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.415	16.414	0.001	94	2143298	4.00	4.17	
6 Chlorodifluoromethane	67	3.300	3.309	-0.009	97	180482	4.00	3.95	
7 Propene	41	3.311	3.318	-0.007	97	518281	4.00	4.04	
8 Dichlorodifluoromethane	85	3.349	3.358	-0.009	100	1902128	4.00	4.12	
9 Chloromethane	52	3.489	3.497	-0.008	98	170979	4.00	3.98	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.500	3.511	-0.011	91	1260955	4.00	4.06	
11 Vinyl chloride	62	3.624	3.632	-0.008	99	621197	4.00	4.00	
12 Butadiene	54	3.694	3.703	-0.009	86	464480	4.00	4.07	
13 Butane	43	3.694	3.705	-0.011	93	959088	4.00	4.13	
14 Bromomethane	94	3.937	3.947	-0.010	98	667430	4.00	4.00	
15 Chloroethane	64	4.044	4.058	-0.014	94	339678	4.00	4.04	
16 Ethanol	31	4.152	4.176	-0.024	98	1474868	20.0	19.4	
17 Vinyl bromide	106	4.282	4.293	-0.011	97	626223	4.00	4.03	
18 2-Methylbutane	43	4.336	4.346	-0.010	91	697274	4.00	4.02	
19 Trichlorofluoromethane	101	4.503	4.512	-0.009	99	1913987	4.00	4.02	
20 Acrolein	56	4.497	4.515	-0.018	97	108019	4.00	3.89	
21 Acetonitrile	40	4.551	4.566	-0.015	94	203960	4.00	3.70	
22 Acetone	58	4.589	4.610	-0.021	99	627904	12.0	10.2	
23 Pentane	72	4.686	4.699	-0.013	95	115952	4.00	3.86	
24 Isopropyl alcohol	45	4.697	4.730	-0.033	96	1994832	12.0	11.3	
25 Ethyl ether	31	4.810	4.833	-0.023	92	555023	4.00	3.74	
26 1,1-Dichloroethene	96	5.074	5.085	-0.011	99	577289	4.00	3.82	
27 Acrylonitrile	53	5.155	5.167	-0.012	94	276654	4.00	3.55	
28 2-Methyl-2-propanol	59	5.193	5.241	-0.048	96	932562	4.00	3.84	
29 1,1,2-Trichloro-1,2,2-trif	101	5.242	5.253	-0.011	96	1165910	4.00	3.77	
30 Methylene Chloride	84	5.366	5.375	-0.009	93	462030	4.00	3.19	
31 3-Chloro-1-propene	39	5.382	5.391	-0.009	95	536825	4.00	3.75	
32 Carbon disulfide	76	5.500	5.508	-0.008	100	1379705	4.00	3.63	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 trans-1,2-Dichloroethene	96	6.077	6.086	-0.009	98	595823	4.00	3.79	
34 Methyl tert-butyl ether	73	6.196	6.223	-0.027	96	1382822	4.00	3.70	
35 1,1-Dichloroethane	63	6.444	6.453	-0.009	100	1084126	4.00	3.82	
37 Vinyl acetate	43	6.552	6.571	-0.019	100	1242260	4.00	3.73	
38 2-Butanone (MEK)	72	6.940	6.963	-0.023	100	240895	4.00	3.39	
39 Hexane	56	7.005	7.013	-0.008	87	428305	4.00	3.71	
40 cis-1,2-Dichloroethene	96	7.339	7.349	-0.010	92	670191	4.00	3.82	
41 Ethyl acetate	43	7.528	7.552	-0.024	98	1084060	4.00	3.82	
42 Chloroform	83	7.663	7.673	-0.010	96	1477241	4.00	3.83	
43 Tetrahydrofuran	42	8.019	8.044	-0.025	90	555017	4.00	3.77	
44 1,1,1-Trichloroethane	97	8.623	8.631	-0.008	94	1680414	4.00	3.95	
45 1,2-Dichloroethane	62	8.709	8.718	-0.009	98	953971	4.00	3.87	
46 Benzene	78	9.200	9.209	-0.009	96	1931018	4.00	3.71	
47 Cyclohexane	69	9.210	9.216	-0.006	91	333985	4.00	3.79	
48 Carbon tetrachloride	117	9.232	9.238	-0.006	96	1708489	4.00	3.91	
49 n-Butanol	31	9.221	9.285	-0.064	65	274672	4.00	3.86	
52 Isooctane	57	10.046	10.056	-0.010	97	3166284	4.00	3.87	
53 n-Heptane	71	10.467	10.472	-0.005	92	755489	4.00	3.87	
54 1,2-Dichloropropane	63	10.478	10.483	-0.005	88	727768	4.00	3.84	
55 Trichloroethene	130	10.532	10.538	-0.006	97	1083164	4.00	3.96	
56 Dibromomethane	93	10.591	10.597	-0.006	91	868246	4.00	3.80	
57 Dichlorobromomethane	83	10.763	10.769	-0.006	98	1740690	4.00	3.96	
58 1,4-Dioxane	88	10.785	10.804	-0.019	92	292336	4.00	3.81	
59 Methyl methacrylate	41	10.914	10.924	-0.010	94	777249	4.00	3.81	
61 4-Methyl-2-pentanone (MIBK	43	11.793	11.814	-0.021	98	1378225	4.00	3.85	
62 cis-1,3-Dichloropropene	75	11.836	11.843	-0.007	94	1292229	4.00	4.03	
63 trans-1,3-Dichloropropene	75	12.575	12.577	-0.002	98	1223604	4.00	3.97	
64 Toluene	91	12.699	12.703	-0.004	94	2405216	4.00	3.79	
65 1,1,2-Trichloroethane	83	12.769	12.772	-0.003	97	751152	4.00	3.79	
66 2-Hexanone	58	13.201	13.219	-0.018	93	705802	4.00	3.92	
67 Chlorodibromomethane	129	13.481	13.485	-0.004	98	1779686	4.00	4.20	
68 n-Octane	85	13.487	13.489	-0.002	92	868420	4.00	3.98	
69 Ethylene Dibromide	107	13.772	13.776	-0.004	98	1482375	4.00	4.02	
70 Tetrachloroethene	129	13.886	13.887	-0.001	95	957339	4.00	3.86	
71 Chlorobenzene	112	14.775	14.781	-0.006	93	2023170	4.00	3.88	
72 Ethylbenzene	91	15.093	15.097	-0.004	99	3137567	4.00	3.87	
73 m-Xylene & p-Xylene	91	15.266	15.268	-0.002	100	4828498	8.00	7.60	
74 Bromoform	173	15.676	15.676	0.000	98	2088866	4.00	4.34	
75 Styrene	104	15.735	15.736	-0.001	99	1848233	4.00	4.03	
76 n-Nonane	57	15.757	15.757	0.000	89	1571559	4.00	4.11	
77 o-Xylene	91	15.794	15.796	-0.002	98	2510840	4.00	3.81	
78 1,1,2,2-Tetrachloroethane	83	16.118	16.120	-0.002	99	1787315	4.00	3.87	
79 1,2,3-Trichloropropane	110	16.274	16.274	0.000	97	567403	4.00	3.89	
80 Isopropylbenzene	105	16.404	16.405	-0.001	97	3358387	4.00	3.86	
81 N-Propylbenzene	120	16.959	16.962	-0.003	99	961855	4.00	3.81	
82 2-Chlorotoluene	126	16.986	16.987	-0.001	97	907449	4.00	3.89	
83 4-Ethyltoluene	105	17.126	17.126	0.000	99	3398460	4.00	3.87	
84 1,3,5-Trimethylbenzene	120	17.213	17.211	0.002	93	1397737	4.00	3.84	
85 Alpha Methyl Styrene	118	17.455	17.455	0.000	87	1454679	4.00	4.09	
86 n-Decane	57	17.574	17.576	-0.002	92	1861458	4.00	4.08	
87 tert-Butylbenzene	119	17.666	17.667	-0.001	92	3181586	4.00	3.89	
88 1,2,4-Trimethylbenzene	105	17.682	17.683	-0.001	96	2844476	4.00	3.82	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
89 1,3-Dichlorobenzene	146	17.951	17.954	-0.003	98	2260117	4.00	3.88	
90 sec-Butylbenzene	105	17.962	17.963	-0.001	98	4071188	4.00	3.90	
91 Benzyl chloride	91	18.038	18.036	0.002	98	2785853	4.00	4.23	
92 1,4-Dichlorobenzene	146	18.048	18.049	-0.001	97	2274388	4.00	3.89	
93 4-Isopropyltoluene	119	18.146	18.147	-0.001	97	3652581	4.00	3.82	
94 1,2,3-Trimethylbenzene	105	18.189	18.186	0.003	97	2499082	4.00	3.92	
95 1,2-Dichlorobenzene	146	18.431	18.429	0.002	96	2147159	4.00	3.84	
96 n-Butylbenzene	91	18.609	18.611	-0.002	99	3360404	4.00	3.99	
99 Undecane	57	18.987	18.987	0.000	93	1946069	4.00	4.09	
100 1,2-Dibromo-3-Chloropropan	157	19.062	19.063	-0.001	98	955280	4.00	4.14	
102 1,2,4,5-Tetramethylbenzene	119	19.407	19.404	0.003	96	4219977	4.00	4.07	
104 Dodecane	57	20.071	20.071	0.000	94	1926488	4.00	4.24	
105 1,2,4-Trichlorobenzene	180	20.189	20.186	0.003	94	2054798	4.00	3.72	
106 Naphthalene	128	20.308	20.309	-0.001	99	4099053	4.00	3.76	
107 Hexachlorobutadiene	225	20.545	20.545	0.000	95	2042576	4.00	3.59	
108 1,2,3-Trichlorobenzene	180	20.583	20.585	-0.002	96	1930112	4.00	4.20	
109 2-Methylnaphthalene	142	21.381	21.378	0.003	99	2533688	9.20	11.0	
110 1-Methylnaphthalene	142	21.564	21.564	0.000	99	2148809	9.20	11.0	
S 111 Xylenes, Total	100				0		12.0	11.4	
S 112 1,2-Dichloroethene, Total	1				0		8.00	7.62	

Reagents:

40L7DNP_00014	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

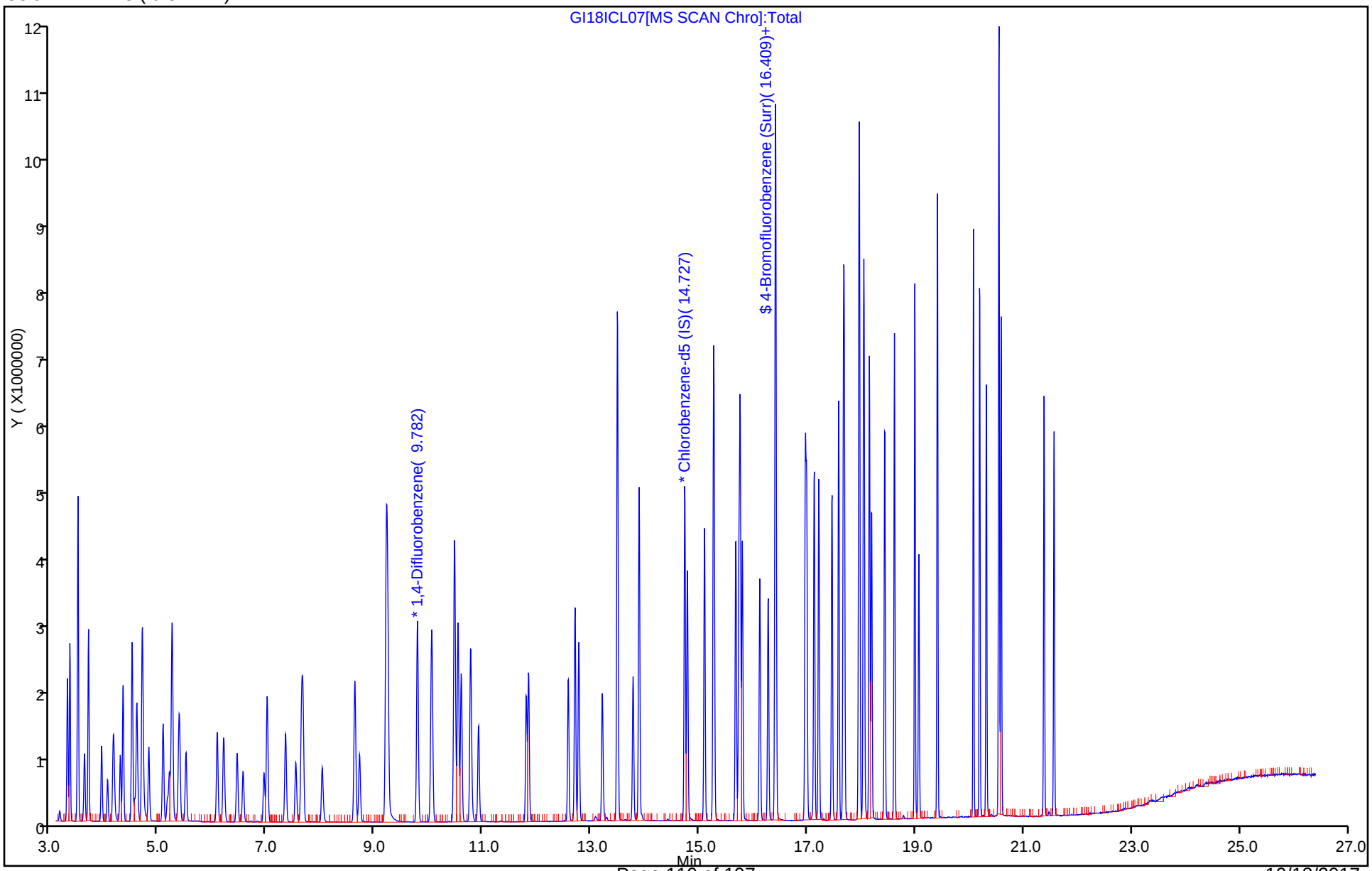
Report Date: 21-Sep-2017 12:10:54 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL07.D

Injection Date:	19-Sep-2017 22:45:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	IC L7			Worklist Smp#:	9
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL08.D
Lims ID: IC L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 19-Sep-2017 23:27:30 ALS Bottle#: 14 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006110-010
Operator ID: 403648 Instrument ID: MG
Sublist: chrom-MG_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 21-Sep-2017 12:10:56 Calib Date: 20-Sep-2017 09:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK030

First Level Reviewer: barlozhetskayaa Date: 20-Sep-2017 08:57:26

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.657	7.645	0.012	88	471555	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.804	9.790	0.014	95	2621765	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.738	14.731	0.007	87	2669959	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.420	16.414	0.006	93	2001746	4.00	3.95	
6 Chlorodifluoromethane	67	3.311	3.309	0.002	97	346186	8.00	7.85	
7 Propene	41	3.316	3.318	-0.002	97	938668	8.00	7.58	
8 Dichlorodifluoromethane	85	3.360	3.358	0.002	100	3638851	8.00	8.17	
9 Chloromethane	52	3.500	3.497	0.003	99	322056	8.00	7.76	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.511	3.511	0.000	92	2331487	8.00	7.78	
11 Vinyl chloride	62	3.635	3.632	0.003	99	1176554	8.00	7.85	
12 Butadiene	54	3.705	3.703	0.002	90	877448	8.00	7.96	
13 Butane	43	3.705	3.705	0.000	94	1772911	8.00	7.91	
14 Bromomethane	94	3.953	3.947	0.006	99	1292692	8.00	8.03	
15 Chloroethane	64	4.061	4.058	0.003	94	649085	8.00	7.99	
16 Ethanol	31	4.206	4.176	0.030	98	2894457	40.0	39.5	
17 Vinyl bromide	106	4.298	4.293	0.005	97	1225729	8.00	8.17	
18 2-Methylbutane	43	4.352	4.346	0.006	90	1363043	8.00	8.14	
19 Trichlorofluoromethane	101	4.519	4.512	0.007	99	3822071	8.00	8.31	
20 Acrolein	56	4.519	4.515	0.004	29	198428	8.00	7.41	
21 Acetonitrile	40	4.578	4.566	0.012	99	399117	8.00	7.51	
22 Acetone	58	4.616	4.610	0.006	99	1115325	24.0	18.8	
23 Pentane	72	4.708	4.699	0.009	98	237317	8.00	8.18	
24 Isopropyl alcohol	45	4.767	4.730	0.037	98	4216383	24.0	24.7	
25 Ethyl ether	31	4.832	4.833	-0.001	90	1154411	8.00	8.05	
26 1,1-Dichloroethene	96	5.096	5.085	0.011	99	1206654	8.00	8.28	
27 Acrylonitrile	53	5.182	5.167	0.015	94	573224	8.00	7.61	
28 2-Methyl-2-propanol	59	5.258	5.241	0.017	70	2039406	8.00	8.70	
29 1,1,2-Trichloro-1,2,2-trif	101	5.258	5.253	0.005	95	2420971	8.00	8.12	
30 Methylene Chloride	84	5.387	5.375	0.012	93	984458	8.00	7.05	
31 3-Chloro-1-propene	39	5.403	5.391	0.012	96	1130259	8.00	8.19	
32 Carbon disulfide	76	5.517	5.508	0.009	100	3058904	8.00	8.33	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 trans-1,2-Dichloroethene	96	6.099	6.086	0.013	98	1233201	8.00	8.14	
34 Methyl tert-butyl ether	73	6.218	6.223	-0.005	96	2904342	8.00	8.05	
35 1,1-Dichloroethane	63	6.466	6.453	0.013	100	2231497	8.00	8.15	
37 Vinyl acetate	43	6.584	6.571	0.013	100	2455920	8.00	7.64	
38 2-Butanone (MEK)	72	6.978	6.963	0.015	99	466984	8.00	6.82	
39 Hexane	56	7.016	7.013	0.003	91	880858	8.00	7.89	
40 cis-1,2-Dichloroethene	96	7.361	7.349	0.012	92	1373070	8.00	8.11	
41 Ethyl acetate	43	7.560	7.552	0.008	98	2152026	8.00	7.85	
42 Chloroform	83	7.684	7.673	0.011	96	3017155	8.00	8.09	
43 Tetrahydrofuran	42	8.040	8.044	-0.004	90	1147813	8.00	8.09	
44 1,1,1-Trichloroethane	97	8.639	8.631	0.008	94	3431354	8.00	8.37	
45 1,2-Dichloroethane	62	8.730	8.718	0.012	98	1943087	8.00	8.36	
46 Benzene	78	9.221	9.209	0.012	97	3869542	8.00	7.89	
47 Cyclohexane	69	9.221	9.216	0.005	91	656658	8.00	7.90	
48 Carbon tetrachloride	117	9.248	9.238	0.010	98	3467279	8.00	8.42	
49 n-Butanol	31	9.264	9.285	-0.021	61	602258	8.00	8.99	
52 Isooctane	57	10.062	10.056	0.006	97	6318793	8.00	8.20	
53 n-Heptane	71	10.478	10.472	0.006	92	1504438	8.00	8.17	
54 1,2-Dichloropropane	63	10.494	10.483	0.011	87	1429981	8.00	8.01	
55 Trichloroethene	130	10.548	10.538	0.010	96	2157096	8.00	8.37	
56 Dibromomethane	93	10.612	10.597	0.015	91	1752213	8.00	8.14	
57 Dichlorobromomethane	83	10.785	10.769	0.016	98	3512219	8.00	8.48	
58 1,4-Dioxane	88	10.806	10.804	0.002	93	590340	8.00	8.16	
59 Methyl methacrylate	41	10.931	10.924	0.007	94	1632009	8.00	8.49	
61 4-Methyl-2-pentanone (MIBK	43	11.815	11.814	0.001	97	3003681	8.00	8.92	
62 cis-1,3-Dichloropropene	75	11.853	11.843	0.010	95	2576140	8.00	8.53	
63 trans-1,3-Dichloropropene	75	12.586	12.577	0.009	98	2466114	8.00	8.12	
64 Toluene	91	12.710	12.703	0.007	93	4731534	8.00	7.56	
65 1,1,2-Trichloroethane	83	12.780	12.772	0.008	98	1475759	8.00	7.54	
66 2-Hexanone	58	13.222	13.219	0.003	93	1595328	8.00	8.98	
67 Chlorodibromomethane	129	13.497	13.485	0.012	98	3654711	8.00	8.74	
68 n-Octane	85	13.492	13.489	0.003	92	1742483	8.00	8.09	
69 Ethylene Dibromide	107	13.783	13.776	0.007	98	2935162	8.00	8.07	
70 Tetrachloroethene	129	13.891	13.887	0.004	95	1924378	8.00	7.86	
71 Chlorobenzene	112	14.786	14.781	0.005	93	4023421	8.00	7.83	
72 Ethylbenzene	91	15.104	15.097	0.007	99	6321314	8.00	7.90	
73 m-Xylene & p-Xylene	91	15.277	15.268	0.009	100	9725450	16.0	15.5	
74 Bromoform	173	15.687	15.676	0.011	97	4312184	8.00	9.08	
75 Styrene	104	15.741	15.736	0.004	99	3675128	8.00	8.13	
76 n-Nonane	57	15.762	15.757	0.005	90	3064123	8.00	8.12	
77 o-Xylene	91	15.805	15.796	0.009	98	4974525	8.00	7.66	
78 1,1,2,2-Tetrachloroethane	83	16.129	16.120	0.009	99	3644497	8.00	8.00	
79 1,2,3-Trichloropropane	110	16.285	16.274	0.011	97	1173786	8.00	8.16	
80 Isopropylbenzene	105	16.415	16.405	0.010	97	6810043	8.00	7.93	
81 N-Propylbenzene	120	16.970	16.962	0.008	99	1956288	8.00	7.86	
82 2-Chlorotoluene	126	16.997	16.987	0.010	97	1776039	8.00	7.72	
83 4-Ethyltoluene	105	17.132	17.126	0.006	98	7018895	8.00	8.11	
84 1,3,5-Trimethylbenzene	120	17.218	17.211	0.007	93	2878770	8.00	8.03	
85 Alpha Methyl Styrene	118	17.466	17.455	0.011	87	2989931	8.00	8.52	
86 n-Decane	57	17.585	17.576	0.009	93	3624730	8.00	8.06	
87 tert-Butylbenzene	119	17.676	17.667	0.009	93	6472236	8.00	8.02	
88 1,2,4-Trimethylbenzene	105	17.693	17.683	0.010	96	5860970	8.00	7.99	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
89 1,3-Dichlorobenzene	146	17.962	17.954	0.008	98	4376373	8.00	7.62	
90 sec-Butylbenzene	105	17.973	17.963	0.010	98	8192661	8.00	7.96	
91 Benzyl chloride	91	18.043	18.036	0.007	98	5765027	8.00	8.87	
92 1,4-Dichlorobenzene	146	18.059	18.049	0.010	94	4331139	8.00	7.51	
93 4-Isopropyltoluene	119	18.156	18.147	0.009	97	7472670	8.00	7.91	
94 1,2,3-Trimethylbenzene	105	18.194	18.186	0.008	98	5012710	8.00	7.98	
95 1,2-Dichlorobenzene	146	18.437	18.429	0.008	96	4100074	8.00	7.44	
96 n-Butylbenzene	91	18.615	18.611	0.004	99	6765020	8.00	8.13	
99 Undecane	57	18.992	18.987	0.005	93	3707557	8.00	7.89	
100 1,2-Dibromo-3-Chloropropan	157	19.068	19.063	0.005	98	1938943	8.00	8.52	
102 1,2,4,5-Tetramethylbenzene	119	19.407	19.404	0.003	96	8048423	8.00	7.87	
104 Dodecane	57	20.071	20.071	0.000	93	2755119	8.00	6.14	
105 1,2,4-Trichlorobenzene	180	20.189	20.186	0.003	94	3263794	8.00	6.00	
106 Naphthalene	128	20.313	20.309	0.004	99	7257491	8.00	6.75	
107 Hexachlorobutadiene	225	20.545	20.545	0.000	95	3143247	8.00	5.59	
108 1,2,3-Trichlorobenzene	180	20.588	20.585	0.003	95	2774166	8.00	6.12	
109 2-Methylnaphthalene	142	21.381	21.378	0.003	100	3116033	18.4	13.7	
110 1-Methylnaphthalene	142	21.564	21.564	0.000	100	2628856	18.4	13.7	
S 111 Xylenes, Total	100				0		24.0	23.2	
S 112 1,2-Dichloroethene, Total	1				0		16.0	16.3	

Reagents:

40L8DNP_00014	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

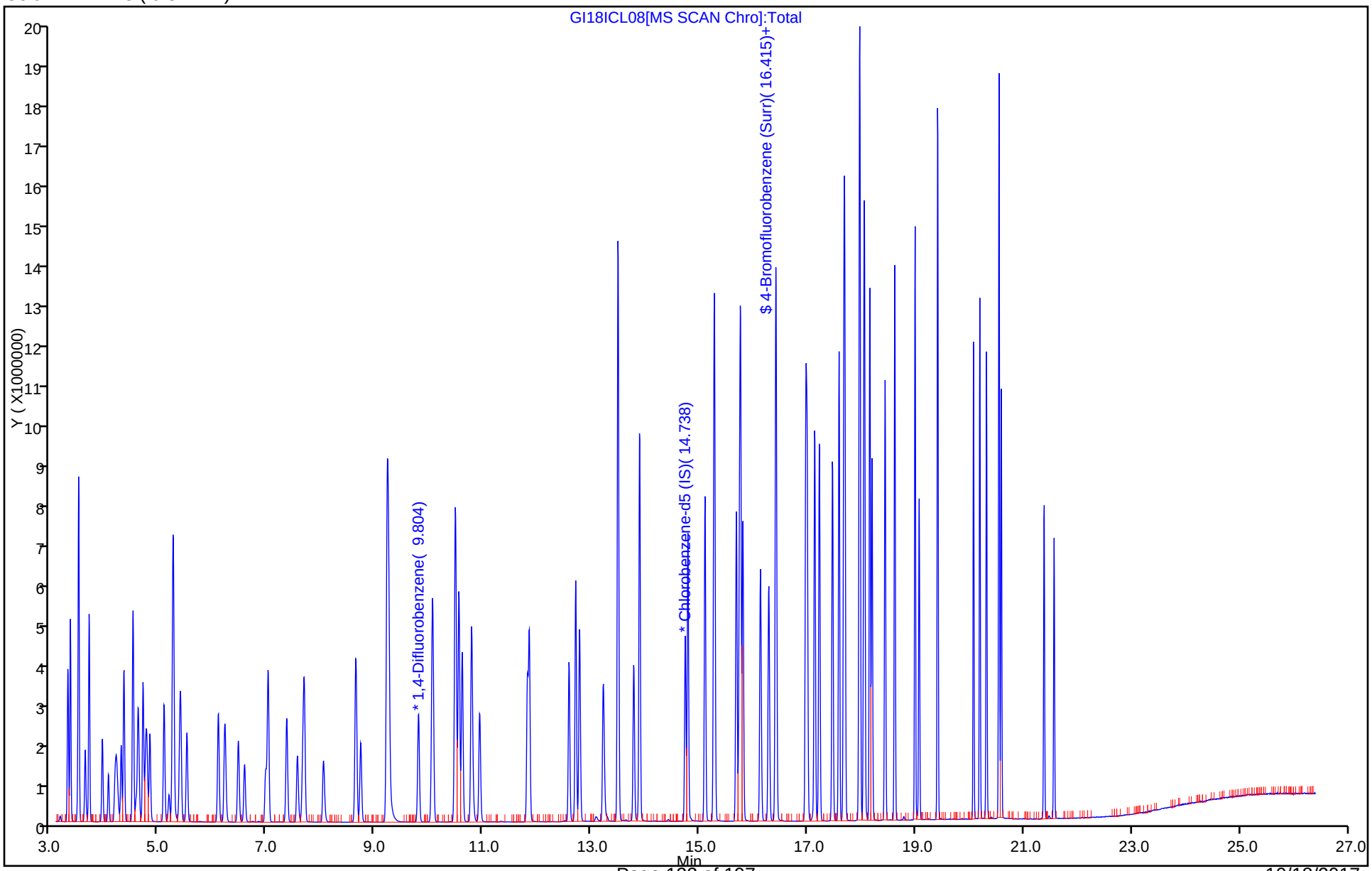
Report Date: 21-Sep-2017 12:10:57 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL08.D

Injection Date:	19-Sep-2017 23:27:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	IC L8			Worklist Smp#:	10
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL09.D
Lims ID: IC L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 20-Sep-2017 00:10:30 ALS Bottle#: 15 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006110-011
Operator ID: 403648 Instrument ID: MG
Sublist: chrom-MG_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 21-Sep-2017 12:10:59 Calib Date: 20-Sep-2017 09:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK030

First Level Reviewer: barlozhetskayaa Date: 20-Sep-2017 11:48:18

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.652	7.645	0.007	87	441828	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.798	9.790	0.008	95	2494005	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.738	14.731	0.007	87	2537796	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.425	16.414	0.011	93	1861271	4.00	3.86	
6 Chlorodifluoromethane	67	3.300	3.309	-0.009	97	682533	16.0	16.5	
7 Propene	41	3.311	3.318	-0.007	97	1744122	16.0	15.0	
8 Dichlorodifluoromethane	85	3.349	3.358	-0.009	100	6981572	16.0	16.7	
9 Chloromethane	52	3.489	3.497	-0.008	98	562214	16.0	14.5	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.505	3.511	-0.006	92	4268913	16.0	15.2	
11 Vinyl chloride	62	3.624	3.632	-0.008	99	2170487	16.0	15.4	
12 Butadiene	54	3.694	3.703	-0.009	84	1571645	16.0	15.2	
13 Butane	43	3.699	3.705	-0.006	93	3150606	16.0	15.0	
14 Bromomethane	94	3.942	3.947	-0.005	98	2349428	16.0	15.6	
15 Chloroethane	64	4.055	4.058	-0.003	93	1193962	16.0	15.7	
16 Ethanol	31	4.185	4.176	0.009	98	4991543	80.0	72.7	
17 Vinyl bromide	106	4.287	4.293	-0.006	97	2200243	16.0	15.6	
18 2-Methylbutane	43	4.341	4.346	-0.005	90	2448943	16.0	15.6	
19 Trichlorofluoromethane	101	4.508	4.512	-0.004	100	7186342	16.0	16.7	
20 Acrolein	56	4.508	4.515	-0.007	93	422593	16.0	16.8	
21 Acetonitrile	40	4.568	4.566	0.002	97	732744	16.0	14.7	
22 Acetone	58	4.605	4.610	-0.005	99	2053359	48.0	37.0	
23 Pentane	72	4.692	4.699	-0.007	97	421502	16.0	15.5	
24 Isopropyl alcohol	45	4.735	4.730	0.005	93	6677951	48.0	41.7	
25 Ethyl ether	31	4.821	4.833	-0.012	91	2078537	16.0	15.5	
26 1,1-Dichloroethene	96	5.085	5.085	0.000	98	2077516	16.0	15.2	
27 Acrylonitrile	53	5.171	5.167	0.004	93	1034769	16.0	14.7	
28 2-Methyl-2-propanol	59	5.225	5.241	-0.016	95	3427775	16.0	15.6	
29 1,1,2-Trichloro-1,2,2-trif	101	5.247	5.253	-0.006	94	4241786	16.0	15.2	
30 Methylene Chloride	84	5.376	5.375	0.001	93	1651913	16.0	12.6	
31 3-Chloro-1-propene	39	5.393	5.391	0.002	94	2100866	16.0	16.2	
32 Carbon disulfide	76	5.506	5.508	-0.002	99	5091339	16.0	14.8	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 trans-1,2-Dichloroethene	96	6.088	6.086	0.002	99	2164046	16.0	15.2	
34 Methyl tert-butyl ether	73	6.207	6.223	-0.016	96	5224325	16.0	15.5	
35 1,1-Dichloroethane	63	6.460	6.453	0.007	100	4035525	16.0	15.7	
37 Vinyl acetate	43	6.573	6.571	0.002	100	4671129	16.0	15.5	
38 2-Butanone (MEK)	72	6.962	6.963	-0.001	99	864832	16.0	13.5	
39 Hexane	56	7.010	7.013	-0.003	90	1573223	16.0	15.0	
40 cis-1,2-Dichloroethene	96	7.355	7.349	0.006	92	2467172	16.0	15.6	
41 Ethyl acetate	43	7.550	7.552	-0.002	98	4006926	16.0	15.6	
42 Chloroform	83	7.679	7.673	0.006	96	5550868	16.0	15.9	
43 Tetrahydrofuran	42	8.035	8.044	-0.009	90	2066058	16.0	15.5	
44 1,1,1-Trichloroethane	97	8.633	8.631	0.002	94	6467516	16.0	16.8	
45 1,2-Dichloroethane	62	8.725	8.718	0.007	98	3642185	16.0	16.5	
46 Benzene	78	9.216	9.209	0.007	97	6807955	16.0	14.6	
47 Cyclohexane	69	9.216	9.216	0.000	90	1142856	16.0	14.5	
48 Carbon tetrachloride	117	9.243	9.238	0.005	98	6642826	16.0	17.0	
49 n-Butanol	31	9.264	9.285	-0.021	61	1022592	16.0	16.0	
52 Isooctane	57	10.057	10.056	0.001	96	11283181	16.0	15.4	
53 n-Heptane	71	10.478	10.472	0.006	90	2660758	16.0	15.2	
54 1,2-Dichloropropane	63	10.488	10.483	0.005	85	2537791	16.0	14.9	
55 Trichloroethene	130	10.548	10.538	0.010	95	3817448	16.0	15.6	
56 Dibromomethane	93	10.607	10.597	0.010	91	3221949	16.0	15.7	
57 Dichlorobromomethane	83	10.774	10.769	0.005	98	6427655	16.0	16.3	
58 1,4-Dioxane	88	10.801	10.804	-0.003	95	944373	16.0	13.7	
59 Methyl methacrylate	41	10.931	10.924	0.007	95	2917920	16.0	16.0	
61 4-Methyl-2-pentanone (MIBK	43	11.815	11.814	0.001	97	5126037	16.0	16.0	
62 cis-1,3-Dichloropropene	75	11.847	11.843	0.004	97	4718558	16.0	16.4	
63 trans-1,3-Dichloropropene	75	12.586	12.577	0.009	98	4681728	16.0	16.2	
64 Toluene	91	12.710	12.703	0.007	93	8742690	16.0	14.7	
65 1,1,2-Trichloroethane	83	12.780	12.772	0.008	98	2691030	16.0	14.5	
66 2-Hexanone	58	13.222	13.219	0.003	93	2719003	16.0	16.1	
67 Chlorodibromomethane	129	13.497	13.485	0.012	98	6540900	16.0	16.5	
68 n-Octane	85	13.492	13.489	0.003	90	2998115	16.0	14.6	
69 Ethylene Dibromide	107	13.783	13.776	0.007	98	5416748	16.0	15.7	
70 Tetrachloroethene	129	13.891	13.887	0.004	95	3471207	16.0	14.9	
71 Chlorobenzene	112	14.786	14.781	0.005	92	7286893	16.0	14.9	
72 Ethylbenzene	91	15.104	15.097	0.007	99	11415631	16.0	15.0	
73 m-Xylene & p-Xylene	91	15.277	15.268	0.009	99	17405560	32.0	29.2	
74 Bromoform	173	15.687	15.676	0.011	97	7522030	16.0	16.7	
75 Styrene	104	15.746	15.736	0.010	98	6397527	16.0	14.9	
76 n-Nonane	57	15.762	15.757	0.005	89	5043378	16.0	14.1	
77 o-Xylene	91	15.805	15.796	0.009	98	8686168	16.0	14.1	
78 1,1,2,2-Tetrachloroethane	83	16.129	16.120	0.009	99	6182020	16.0	14.3	
79 1,2,3-Trichloropropane	110	16.285	16.274	0.011	96	2047000	16.0	15.0	
80 Isopropylbenzene	105	16.415	16.405	0.010	97	11757249	16.0	14.4	
81 N-Propylbenzene	120	16.975	16.962	0.013	98	3330168	16.0	14.1	
82 2-Chlorotoluene	126	16.997	16.987	0.010	95	3057954	16.0	14.0	
83 4-Ethyltoluene	105	17.137	17.126	0.011	98	11930132	16.0	14.5	
84 1,3,5-Trimethylbenzene	120	17.223	17.211	0.012	92	4823450	16.0	14.2	
85 Alpha Methyl Styrene	118	17.466	17.455	0.011	86	5055450	16.0	15.2	
86 n-Decane	57	17.585	17.576	0.009	95	5980842	16.0	14.0	
87 tert-Butylbenzene	119	17.676	17.667	0.009	94	10734900	16.0	14.0	
88 1,2,4-Trimethylbenzene	105	17.698	17.683	0.015	96	9652275	16.0	13.8	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
89 1,3-Dichlorobenzene	146	17.962	17.954	0.008	98	7420145	16.0	13.6	
90 sec-Butylbenzene	105	17.973	17.963	0.010	98	13274307	16.0	13.6	
91 Benzyl chloride	91	18.048	18.036	0.012	97	9234676	16.0	14.9	
92 1,4-Dichlorobenzene	146	18.059	18.049	0.010	93	7111569	16.0	13.0	
93 4-Isopropyltoluene	119	18.156	18.147	0.009	97	11802359	16.0	13.1	
94 1,2,3-Trimethylbenzene	105	18.194	18.186	0.008	98	7947590	16.0	13.3	
95 1,2-Dichlorobenzene	146	18.437	18.429	0.008	95	6559825	16.0	12.5	
96 n-Butylbenzene	91	18.620	18.611	0.009	98	10458896	16.0	13.2	
99 Undecane	57	18.992	18.987	0.005	92	5672975	16.0	12.7	
100 1,2-Dibromo-3-Chloropropan	157	19.068	19.063	0.005	98	2936676	16.0	13.6	
104 Dodecane	57	20.076	20.071	0.005	91	5599629	16.0	13.1	
105 1,2,4-Trichlorobenzene	180	20.189	20.186	0.003	94	6567800	16.0	12.7	
106 Naphthalene	128	20.313	20.309	0.004	98	11537518	16.0	11.3	e
107 Hexachlorobutadiene	225	20.545	20.545	0.000	92	7360709	16.0	13.8	
108 1,2,3-Trichlorobenzene	180	20.588	20.585	0.003	95	5656530	16.0	13.1	
109 2-Methylnaphthalene	142	21.381	21.378	0.003	99	6261651	36.8	28.9	
110 1-Methylnaphthalene	142	21.564	21.564	0.000	100	4800318	36.8	26.3	
S 111 Xylenes, Total	100				0		48.0	43.3	
S 112 1,2-Dichloroethene, Total	1				0		32.0	30.8	

QC Flag Legend

Processing Flags

e - Potential Peak Saturated

Reagents:

40L9DNP_00017	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

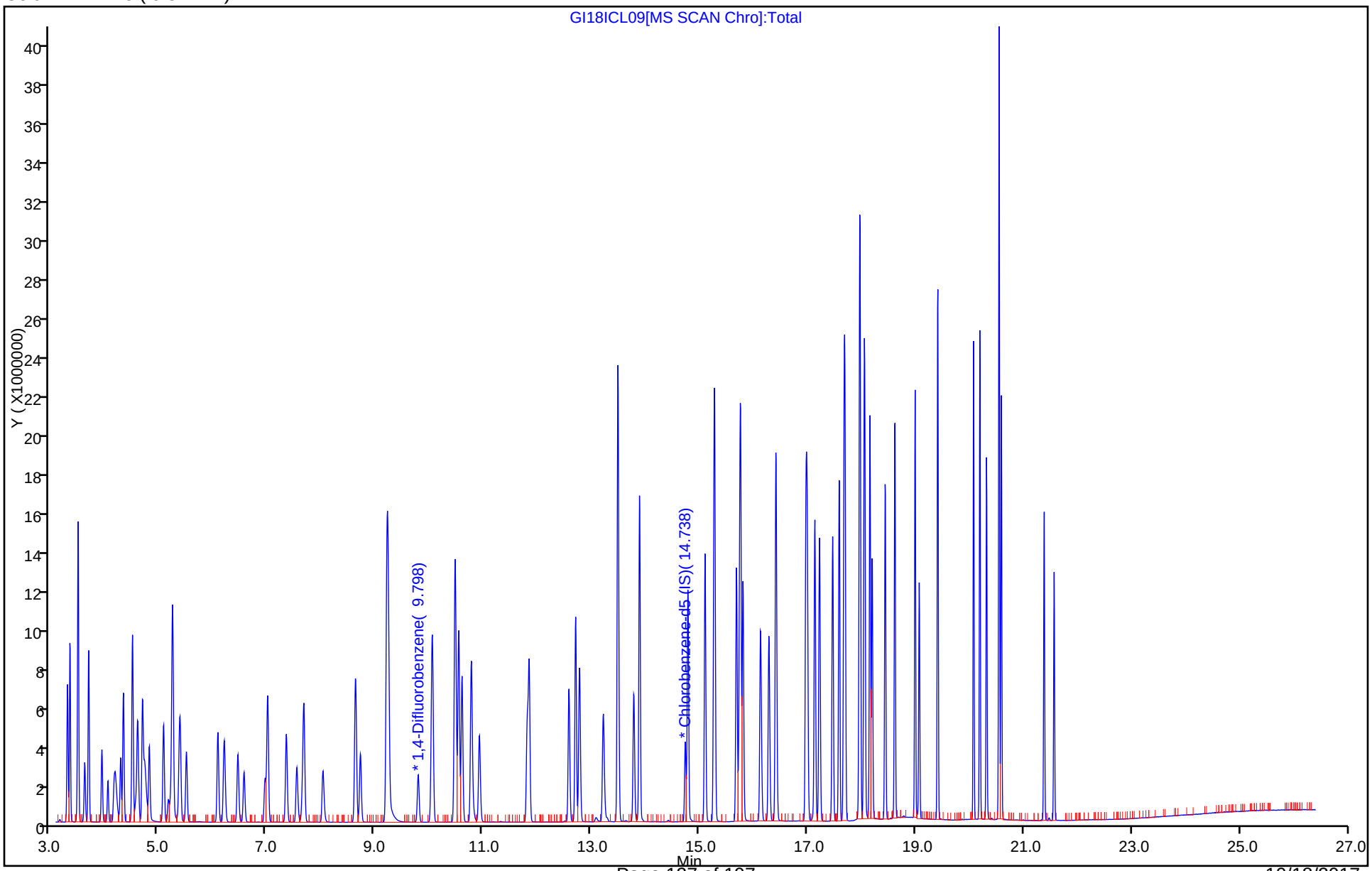
Report Date: 21-Sep-2017 12:10:59 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL09.D

Injection Date:	20-Sep-2017 00:10:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	IC L9			Worklist Smp#:	11
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL02R.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 20-Sep-2017 09:06:30 ALS Bottle#: 9 Worklist Smp#: 17
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006110-004
Misc. Info.: 114780
Operator ID: 403648 Instrument ID: MG
Sublist: chrom-MG_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 21-Sep-2017 12:11:13 Calib Date: 20-Sep-2017 09:06:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK030

First Level Reviewer: barlozhetskayaa Date: 20-Sep-2017 09:53:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.652	7.645	0.007	85	575424	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.793	9.790	0.003	95	3077049	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.732	14.731	0.001	88	2748944	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.414	16.414	0.000	96	2072592	4.00	3.97	
6 Chlorodifluoromethane	67	3.332	3.309	0.023	68	5231	0.0793	0.0972	
7 Propene	41	3.327	3.318	0.009	80	14251	0.0793	0.0943	
8 Dichlorodifluoromethane	85	3.370	3.358	0.012	95	42036	0.0793	0.0774	
9 Chloromethane	52	3.510	3.497	0.013	97	5695	0.0793	0.1124	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.527	3.511	0.016	91	28703	0.0793	0.0785	
11 Vinyl chloride	62	3.645	3.632	0.013	55	15562	0.0793	0.0850	
12 Butadiene	54	3.715	3.703	0.012	57	11645	0.0793	0.0866	
13 Butane	43	3.721	3.705	0.016	84	29919	0.0793	0.1094	
14 Bromomethane	94	3.958	3.947	0.011	97	16047	0.0793	0.0817	
15 Chloroethane	64	4.071	4.058	0.013	91	8238	0.0793	0.0831	
16 Ethanol	31	4.206	4.176	0.030	94	34469	0.3967	0.3854	
17 Vinyl bromide	106	4.309	4.293	0.015	93	15467	0.0793	0.0844	
18 2-Methylbutane	43	4.362	4.346	0.016	95	20834	0.0793	0.1020	
19 Trichlorofluoromethane	101	4.524	4.512	0.012	96	45206	0.0793	0.0806	
20 Acrolein	56	4.546	4.515	0.031	5	3426	0.0793	0.1048	
21 Acetonitrile	40	4.589	4.566	0.023	91	4987	0.0793	0.0769	
22 Acetone	58	4.643	4.610	0.033	70	33936	0.2380	0.4695	
23 Pentane	72	4.718	4.699	0.019	91	3478	0.0793	0.0982	
24 Isopropyl alcohol	45	4.778	4.730	0.048	23	54466	0.2380	0.2611	
25 Ethyl ether	31	4.875	4.833	0.042	90	13424	0.0793	0.0767	
26 1,1-Dichloroethene	96	5.090	5.085	0.005	92	14583	0.0793	0.0820	
27 Acrylonitrile	53	5.182	5.167	0.015	84	7270	0.0793	0.0791	
28 2-Methyl-2-propanol	59	5.328	5.241	0.087	72	19870	0.0793	0.0695	
29 1,1,2-Trichloro-1,2,2-trif	101	5.268	5.253	0.015	93	31697	0.0793	0.0871	
30 Methylene Chloride	84	5.387	5.375	0.012	91	33612	0.0793	0.1972	
31 3-Chloro-1-propene	39	5.398	5.391	0.007	67	14154	0.0793	0.0840	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.516	5.508	0.008	98	45739	0.0793	0.1021	
33 trans-1,2-Dichloroethene	96	6.099	6.086	0.013	90	16358	0.0793	0.0885	
34 Methyl tert-butyl ether	73	6.277	6.223	0.054	92	33595	0.0793	0.0763	
35 1,1-Dichloroethane	63	6.455	6.453	0.002	94	27177	0.0793	0.0813	
37 Vinyl acetate	43	6.589	6.571	0.018	98	28738	0.0793	0.0732	
38 2-Butanone (MEK)	72	6.989	6.963	0.026	97	7551	0.0793	0.0903	
39 Hexane	56	7.032	7.013	0.019	89	13071	0.0793	0.0960	
40 cis-1,2-Dichloroethene	96	7.355	7.349	0.006	81	16686	0.0793	0.0808	
41 Ethyl acetate	43	7.587	7.552	0.035	93	23015	0.0793	0.0688	
42 Chloroform	83	7.679	7.673	0.006	41	38093	0.0793	0.0838	
43 Tetrahydrofuran	42	8.089	8.044	0.045	88	12493	0.0793	0.0721	
44 1,1,1-Trichloroethane	97	8.639	8.631	0.008	86	39049	0.0793	0.0780	
45 1,2-Dichloroethane	62	8.725	8.718	0.007	69	21646	0.0793	0.0793	
46 Benzene	78	9.216	9.209	0.007	95	49481	0.0793	0.0859	
47 Cyclohexane	69	9.216	9.216	0.000	62	9679	0.0793	0.0992	
48 Carbon tetrachloride	117	9.243	9.238	0.005	92	37293	0.0793	0.0772	
49 n-Butanol	31	9.377	9.285	0.092	86	6395	0.0793	0.0813	
52 Isooctane	57	10.062	10.056	0.006	96	74319	0.0793	0.0821	
53 n-Heptane	71	10.477	10.472	0.005	82	17818	0.0793	0.0824	
54 1,2-Dichloropropane	63	10.488	10.483	0.005	60	17771	0.0793	0.0848	
55 Trichloroethene	130	10.542	10.538	0.004	82	24071	0.0793	0.0796	
56 Dibromomethane	93	10.596	10.597	-0.001	81	21240	0.0793	0.0840	
57 Dichlorobromomethane	83	10.769	10.769	0.000	95	34987	0.0793	0.0719	
58 1,4-Dioxane	88	10.839	10.804	0.035	69	6369	0.0793	0.0750	
59 Methyl methacrylate	41	10.947	10.924	0.023	89	15608	0.0793	0.0692	
61 4-Methyl-2-pentanone (MIBK	43	11.842	11.814	0.028	82	23997	0.0793	0.0607	
62 cis-1,3-Dichloropropene	75	11.842	11.843	-0.001	95	26515	0.0793	0.0748	
63 trans-1,3-Dichloropropene	75	12.575	12.577	-0.002	90	22099	0.0793	0.0707	
64 Toluene	91	12.704	12.703	0.001	91	52045	0.0793	0.0807	
65 1,1,2-Trichloroethane	83	12.775	12.772	0.003	93	15851	0.0793	0.0787	
66 2-Hexanone	58	13.244	13.219	0.025	90	12647	0.0793	0.0691	
67 Chlorodibromomethane	129	13.486	13.485	0.001	95	29565	0.0793	0.0687	
68 n-Octane	85	13.497	13.489	0.008	87	18000	0.0793	0.0811	
69 Ethylene Dibromide	107	13.778	13.776	0.002	97	28585	0.0793	0.0763	
70 Tetrachloroethene	129	13.891	13.887	0.004	95	21646	0.0793	0.0859	
71 Chlorobenzene	112	14.780	14.781	-0.001	38	43038	0.0793	0.0814	
72 Ethylbenzene	91	15.099	15.097	0.002	98	61974	0.0793	0.0752	
73 m-Xylene & p-Xylene	91	15.266	15.268	-0.002	100	97434	0.1587	0.1510	
74 Bromoform	173	15.670	15.676	-0.006	86	30955	0.0793	0.0633	
75 Styrene	104	15.735	15.736	-0.001	94	32171	0.0793	0.0692	
76 n-Nonane	57	15.757	15.757	-0.001	89	29284	0.0793	0.0753	
77 o-Xylene	91	15.794	15.796	-0.002	82	49346	0.0793	0.0738	
78 1,1,2,2-Tetrachloroethane	83	16.118	16.120	-0.002	96	34202	0.0793	0.0729	
79 1,2,3-Trichloropropane	110	16.269	16.274	-0.005	92	11288	0.0793	0.0762	
80 Isopropylbenzene	105	16.404	16.405	-0.001	48	67205	0.0793	0.0760	
81 N-Propylbenzene	120	16.959	16.962	-0.003	98	18833	0.0793	0.0735	
82 2-Chlorotoluene	126	16.986	16.987	-0.001	96	18092	0.0793	0.0764	
83 4-Ethyltoluene	105	17.126	17.126	0.000	98	66843	0.0793	0.0750	
84 1,3,5-Trimethylbenzene	120	17.207	17.211	-0.004	91	26999	0.0793	0.0731	
85 Alpha Methyl Styrene	118	17.450	17.455	-0.005	85	21123	0.0793	0.0585	
86 n-Decane	57	17.574	17.576	-0.002	91	34140	0.0793	0.0737	
87 tert-Butylbenzene	119	17.665	17.667	-0.002	90	59997	0.0793	0.0722	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.682	17.683	-0.001	93	53697	0.0793	0.0711	
89 1,3-Dichlorobenzene	146	17.951	17.954	-0.003	94	47783	0.0793	0.0808	
90 sec-Butylbenzene	105	17.962	17.963	-0.001	98	78015	0.0793	0.0736	
91 Benzyl chloride	91	18.037	18.036	0.001	98	42557	0.0793	0.0636	
92 1,4-Dichlorobenzene	146	18.043	18.049	-0.006	94	50201	0.0793	0.0846	
93 4-Isopropyltoluene	119	18.145	18.147	-0.002	70	71734	0.0793	0.0738	
94 1,2,3-Trimethylbenzene	105	18.183	18.186	-0.003	59	48454	0.0793	0.0749	
95 1,2-Dichlorobenzene	146	18.426	18.429	-0.003	95	46115	0.0793	0.0812	
96 n-Butylbenzene	91	18.609	18.611	-0.002	96	62508	0.0793	0.0730	
99 Undecane	57	18.987	18.987	0.000	88	34009	0.0793	0.0703	
100 1,2-Dibromo-3-Chloropropan	157	19.062	19.063	-0.001	90	16789	0.0793	0.0717	
102 1,2,4,5-Tetramethylbenzene	119	19.402	19.404	-0.002	95	80747	0.0793	0.0767	
104 Dodecane	57	20.070	20.071	-0.001	92	36908	0.0793	0.0799	
105 1,2,4-Trichlorobenzene	180	20.184	20.186	-0.002	92	58510	0.0793	0.1044	
106 Naphthalene	128	20.308	20.309	-0.001	99	102200	0.0793	0.0923	
107 Hexachlorobutadiene	225	20.545	20.545	0.000	75	47543	0.0793	0.0822	
108 1,2,3-Trichlorobenzene	180	20.588	20.585	0.003	87	55855	0.0793	0.1198	
109 2-Methylnaphthalene	142	21.375	21.378	-0.003	98	75634	0.1825	0.3228	
110 1-Methylnaphthalene	142	21.564	21.564	0.000	95	62984	0.1825	0.3188	
S 111 Xylenes, Total	100				0		0.2380	0.2248	
S 112 1,2-Dichloroethene, Total	1				0		0.1587	0.1693	

Reagents:

40L3DNP_00015	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

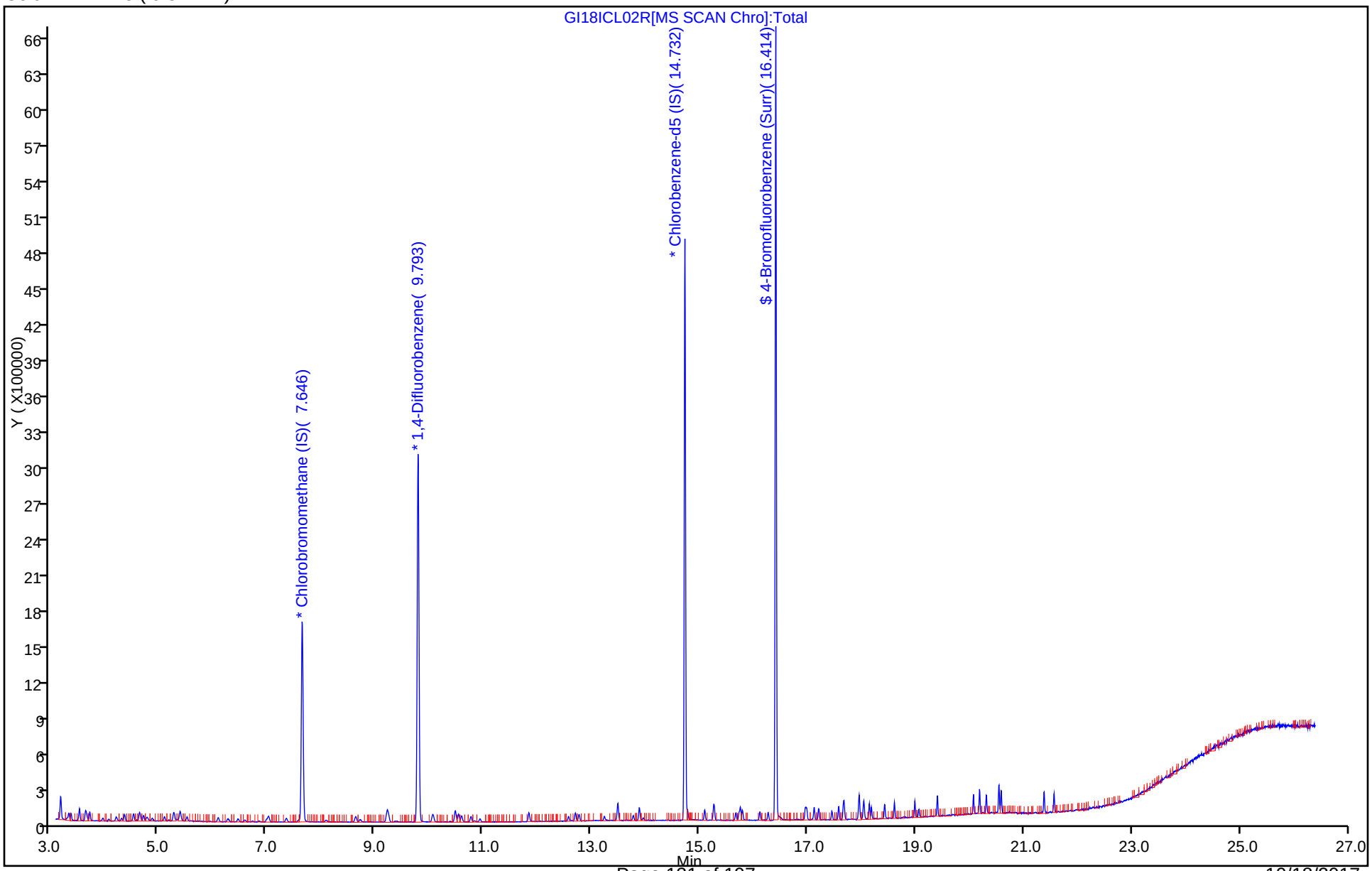
Report Date: 21-Sep-2017 12:11:14 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL02R.D

Injection Date:	20-Sep-2017 09:06:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	IC L2			Worklist Smp#:	17
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1

SDG No.:

Lab Sample ID: ICV 140-14546/13 Calibration Date: 09/20/2017 01:35

Instrument ID: MG Calib Start Date: 09/19/2017 18:30

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 09/20/2017 09:06

Lab File ID: GI18ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3740	0.3340		1.79	2.00	-10.7	35.0
Propene	Ave	1.051	0.9135		1.74	2.00	-13.0	35.0
Dichlorodifluoromethane	Ave	3.776	3.572		1.89	2.00	-5.4	35.0
Chloromethane	Ave	0.3521	0.3189		1.81	2.00	-9.4	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.541	2.398		1.89	2.00	-5.6	35.0
Vinyl chloride	Ave	1.272	1.188		1.87	2.00	-6.6	35.0
1,3-Butadiene	Ave	0.9346	0.8698		1.86	2.00	-6.9	35.0
Butane	Ave	1.901	1.798		1.89	2.00	-5.5	35.0
Bromomethane	Ave	1.365	1.267		1.86	2.00	-7.2	35.0
Chloroethane	Ave	0.6889	0.6584		1.91	2.00	-4.4	35.0
Ethanol	Ave	0.6218	0.5862		9.43	10.0	-5.7	35.0
Vinyl bromide	Ave	1.273	1.301		2.04	2.00	2.2	35.0
2-Methylbutane	Ave	1.420	1.381		1.95	2.00	-2.7	35.0
Trichlorofluoromethane	Ave	3.900	3.750		1.92	2.00	-3.8	35.0
Acrolein	Ave	0.2272	0.2814		2.48	2.00	23.9	35.0
Acetonitrile	Ave	0.4510	0.4425		1.96	2.00	-1.9	35.0
Acetone	Ave	0.5024	0.4292		5.13	6.00	-14.6	35.0
Pentane	Ave	0.2462	0.2533		2.06	2.00	2.9	35.0
Isopropyl alcohol	Ave	1.450	1.241		5.13	6.00	-14.4	35.0
Ethyl ether	Ave	1.216	1.227		2.02	2.00	0.9	35.0
1,1-Dichloroethene	Ave	1.237	1.244		2.01	2.00	0.6	35.0
Acrylonitrile	Ave	0.6387	0.6484		2.03	2.00	1.5	35.0
tert-Butyl alcohol	Ave	1.988	1.940		1.95	2.00	-2.4	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.530	2.511		1.99	2.00	-0.7	35.0
Methylene Chloride	Ave	1.185	1.067		1.80	2.00	-9.9	35.0
3-Chloropropene	Ave	1.171	1.074		1.84	2.00	-8.2	35.0
Carbon disulfide	Ave	3.114	3.026		1.94	2.00	-2.8	35.0
trans-1,2-Dichloroethene	Ave	1.286	1.268		1.97	2.00	-1.3	35.0
Methyl tert-butyl ether	Ave	3.061	3.178		2.08	2.00	3.8	35.0
1,1-Dichloroethane	Ave	2.324	2.287		1.97	2.00	-1.6	35.0
Vinyl acetate	Ave	2.728	2.867		2.10	2.00	5.1	35.0
2-Butanone (MEK)	Ave	0.5811	0.5389		1.85	2.00	-7.3	35.0
Hexane	Ave	0.9465	0.9003		1.90	2.00	-4.9	35.0
cis-1,2-Dichloroethene	Ave	1.436	1.430		1.99	2.00	-0.4	35.0
Ethyl acetate	Ave	2.325	2.284		1.97	2.00	-1.7	35.0
Chloroform	Ave	3.162	3.124		1.98	2.00	-1.2	35.0
Tetrahydrofuran	Ave	1.204	1.217		2.02	2.00	1.1	35.0
1,1,1-Trichloroethane	Ave	3.479	3.449		1.98	2.00	-0.9	35.0
1,2-Dichloroethane	Ave	0.3547	0.3498		1.97	2.00	-1.4	35.0
Benzene	Ave	0.7484	0.7513		2.01	2.00	0.4	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1

SDG No.:

Lab Sample ID: ICV 140-14546/13 Calibration Date: 09/20/2017 01:35

Instrument ID: MG Calib Start Date: 09/19/2017 18:30

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 09/20/2017 09:06

Lab File ID: GI18ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Cyclohexane	Ave	0.1268	0.1249		1.97	2.00	-1.5	35.0
Carbon tetrachloride	Ave	0.6279	0.6380		2.03	2.00	1.6	35.0
1-Butanol	Ave	0.1022	0.1015		1.99	2.00	-0.7	35.0
2,2,4-Trimethylpentane	Ave	1.176	1.208		2.05	2.00	2.7	35.0
Heptane	Ave	0.2810	0.2869		2.04	2.00	2.1	35.0
1,2-Dichloropropane	Ave	0.2723	0.2790		2.05	2.00	2.5	35.0
Trichloroethene	Ave	0.3931	0.4096		2.08	2.00	4.2	35.0
Dibromomethane	Ave	0.3286	0.3360		2.05	2.00	2.3	35.0
Bromodichloromethane	Ave	0.6322	0.6575		2.08	2.00	4.0	35.0
1,4-Dioxane	Ave	0.1104	0.1135		2.06	2.00	2.8	35.0
Methyl methacrylate	Ave	0.2931	0.3082		2.10	2.00	5.1	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5140	0.5433		2.11	2.00	5.7	35.0
cis-1,3-Dichloropropene	Ave	0.4606	0.4818		2.09	2.00	4.6	35.0
trans-1,3-Dichloropropene	Ave	0.4551	0.4736		2.08	2.00	4.1	35.0
Toluene	Ave	0.9379	0.9550		2.04	2.00	1.8	35.0
1,1,2-Trichloroethane	Ave	0.2931	0.2899		1.98	2.00	-1.1	35.0
2-Hexanone	Ave	0.2663	0.2888		2.17	2.00	8.5	35.0
Dibromochloromethane	Ave	0.6262	0.6752		2.16	2.00	7.8	35.0
Octane	Ave	0.3228	0.3531		2.19	2.00	9.4	35.0
1,2-Dibromoethane (EDB)	Ave	0.5450	0.5741		2.11	2.00	5.3	35.0
Tetrachloroethene	Ave	0.3669	0.3811		2.08	2.00	3.9	35.0
Chlorobenzene	Ave	0.7696	0.8011		2.08	2.00	4.1	35.0
Ethylbenzene	Ave	1.199	1.291		2.15	2.00	7.7	35.0
m-Xylene & p-Xylene	Ave	0.9391	1.010		4.30	4.00	7.6	35.0
Bromoform	Ave	0.7116	0.7540		2.12	2.00	6.0	35.0
Styrene	Ave	0.6769	0.7667		2.27	2.00	13.3	35.0
Nonane	Ave	0.5657	0.6218		2.20	2.00	9.9	35.0
o-Xylene	Ave	0.9731	1.032		2.12	2.00	6.0	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6826	0.7368		2.16	2.00	7.9	35.0
1,2,3-Trichloropropane	Ave	0.2154	0.2358		2.19	2.00	9.4	35.0
Isopropylbenzene	Ave	1.286	1.426		2.22	2.00	10.9	35.0
Propylbenzene	Ave	0.3730	0.4071		2.18	2.00	9.1	35.0
2-Chlorotoluene	Ave	0.3448	0.3802		2.21	2.00	10.3	35.0
4-Ethyltoluene	Ave	1.297	1.374		2.12	2.00	5.9	35.0
1,3,5-Trimethylbenzene	Ave	0.5373	0.5915		2.20	2.00	10.1	35.0
Alpha Methyl Styrene	Ave	0.5257	0.6010		2.29	2.00	14.3	35.0
Decane	Ave	0.6737	0.7412		2.20	2.00	10.0	35.0
tert-Butylbenzene	Ave	1.209	1.351		2.24	2.00	11.8	35.0
1,2,4-Trimethylbenzene	Ave	1.099	1.214		2.21	2.00	10.4	35.0
1,3-Dichlorobenzene	Ave	0.8603	0.8942		2.08	2.00	3.9	35.0
sec-Butylbenzene	Ave	1.542	1.741		2.26	2.00	12.9	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1

SDG No.:

Lab Sample ID: ICV 140-14546/13 Calibration Date: 09/20/2017 01:35

Instrument ID: MG Calib Start Date: 09/19/2017 18:30

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 09/20/2017 09:06

Lab File ID: GI18ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzyl chloride	Ave	0.9737	1.026		2.11	2.00	5.4	35.0
1,4-Dichlorobenzene	Ave	0.8638	0.8857		2.05	2.00	2.5	35.0
4-Isopropyltoluene	Ave	1.415	1.572		2.22	2.00	11.1	35.0
1,2,3-Trimethylbenzene	Ave	0.9411	1.110		2.36	2.00	18.0	35.0
1,2-Dichlorobenzene	Ave	0.8260	0.8571		2.08	2.00	3.8	35.0
Butylbenzene	Ave	1.246	1.433		2.30	2.00	15.0	35.0
Undecane	Ave	0.7038	0.7977		2.27	2.00	13.3	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.3408	0.2682		1.57	2.00	-21.3	35.0
1,2,4,5-Tetramethylbenzene	LinF		0.9443		1.23	2.00	-38.4*	35.0
Dodecane	Ave	0.6718	0.6844		2.04	2.00	1.9	35.0
1,2,4-Trichlorobenzene	Ave	0.8155	0.7432		1.82	2.00	-8.9	35.0
Naphthalene	Ave	1.611	1.549		1.92	2.00	-3.8	35.0
Hexachlorobutadiene	Ave	0.8419	0.7222		1.72	2.00	-14.2	35.0
1,2,3-Trichlorobenzene	Ave	0.6786	0.6914		2.04	2.00	1.9	35.0
2-Methylnaphthalene	Ave	0.3409	0.1772		2.39	4.59	-48.0	50.0
1-Methylnaphthalene	Ave	0.2875	0.1637		2.62	4.60	-43.0	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7592	0.7659		4.04	4.00	0.9	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICV.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 20-Sep-2017 01:35:30 ALS Bottle#: 1 Worklist Smp#: 13
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006110-013
Operator ID: 403648 Instrument ID: MG
Sublist:

Method: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 21-Sep-2017 12:11:07 Calib Date: 20-Sep-2017 09:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK030

First Level Reviewer: barlozhetskayaa Date: 20-Sep-2017 08:55:18

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.657	7.645	0.012	86	527662	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.798	9.790	0.008	95	2864967	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.732	14.731	0.001	87	2784192	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.414	16.414	0.000	92	2132344	4.00	4.04	
6 Chlorodifluoromethane	67	3.311	3.309	0.002	97	88112	2.00	1.79	
7 Propene	41	3.316	3.318	-0.002	97	241014	2.00	1.74	
8 Dichlorodifluoromethane	85	3.360	3.358	0.002	100	942414	2.00	1.89	
9 Chloromethane	52	3.500	3.497	0.003	99	84147	2.00	1.81	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.516	3.511	0.005	96	632657	2.00	1.89	
11 Vinyl chloride	62	3.635	3.632	0.003	99	313348	2.00	1.87	
12 Butadiene	54	3.710	3.703	0.007	91	229478	2.00	1.86	
13 Butane	43	3.710	3.705	0.005	94	474255	2.00	1.89	
14 Bromomethane	94	3.953	3.947	0.006	98	334264	2.00	1.86	
15 Chloroethane	64	4.066	4.058	0.008	94	173692	2.00	1.91	
16 Ethanol	31	4.201	4.176	0.025	98	773291	10.0	9.43	
17 Vinyl bromide	106	4.303	4.293	0.010	97	343322	2.00	2.04	
18 2-Methylbutane	43	4.357	4.346	0.011	92	364371	2.00	1.95	
19 Trichlorofluoromethane	101	4.519	4.512	0.007	99	989449	2.00	1.92	
20 Acrolein	56	4.530	4.515	0.015	31	74236	2.00	2.48	
21 Acetonitrile	40	4.584	4.566	0.018	98	116756	2.00	1.96	
22 Acetone	58	4.616	4.610	0.006	98	339750	6.00	5.13	
23 Pentane	72	4.708	4.699	0.009	98	66826	2.00	2.06	
24 Isopropyl alcohol	45	4.751	4.730	0.021	95	982092	6.00	5.13	
25 Ethyl ether	31	4.837	4.833	0.004	94	323731	2.00	2.02	
26 1,1-Dichloroethene	96	5.096	5.085	0.011	100	328178	2.00	2.01	
27 Acrylonitrile	53	5.188	5.167	0.021	94	171079	2.00	2.03	
28 2-Methyl-2-propanol	59	5.247	5.241	0.006	95	511835	2.00	1.95	
29 1,1,2-Trichloro-1,2,2-trif	101	5.263	5.253	0.010	96	662400	2.00	1.99	
30 Methylene Chloride	84	5.382	5.375	0.007	91	281623	2.00	1.80	
31 3-Chloro-1-propene	39	5.403	5.391	0.012	97	283479	2.00	1.84	
32 Carbon disulfide	76	5.517	5.508	0.008	100	798436	2.00	1.94	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 trans-1,2-Dichloroethene	96	6.099	6.086	0.013	96	334615	2.00	1.97	
34 Methyl tert-butyl ether	73	6.228	6.223	0.005	96	838531	2.00	2.08	
35 1,1-Dichloroethane	63	6.466	6.453	0.013	100	603453	2.00	1.97	
37 Vinyl acetate	43	6.579	6.571	0.008	100	756433	2.00	2.10	
38 2-Butanone (MEK)	72	6.978	6.963	0.015	99	142168	2.00	1.85	
39 Hexane	56	7.021	7.013	0.008	91	237537	2.00	1.90	
40 cis-1,2-Dichloroethene	96	7.361	7.349	0.012	93	377336	2.00	1.99	
41 Ethyl acetate	43	7.560	7.552	0.008	98	602633	2.00	1.97	
42 Chloroform	83	7.684	7.673	0.011	96	824177	2.00	1.98	
43 Tetrahydrofuran	42	8.046	8.044	0.002	91	321176	2.00	2.02	
44 1,1,1-Trichloroethane	97	8.644	8.631	0.013	94	910006	2.00	1.98	
45 1,2-Dichloroethane	62	8.730	8.718	0.012	98	501075	2.00	1.97	
46 Benzene	78	9.221	9.209	0.012	96	1076259	2.00	2.01	
47 Cyclohexane	69	9.226	9.216	0.010	96	178882	2.00	1.97	
48 Carbon tetrachloride	117	9.248	9.238	0.010	97	913929	2.00	2.03	
49 n-Butanol	31	9.286	9.285	0.001	83	145404	2.00	1.99	
52 Isooctane	57	10.062	10.056	0.006	97	1730527	2.00	2.05	
53 n-Heptane	71	10.477	10.472	0.005	91	411011	2.00	2.04	
54 1,2-Dichloropropane	63	10.494	10.483	0.011	88	399703	2.00	2.05	
55 Trichloroethene	130	10.548	10.538	0.010	97	586723	2.00	2.08	
56 Dibromomethane	93	10.607	10.597	0.010	92	481366	2.00	2.05	
57 Dichlorobromomethane	83	10.779	10.769	0.010	98	941843	2.00	2.08	
58 1,4-Dioxane	88	10.801	10.804	-0.003	91	162620	2.00	2.06	
59 Methyl methacrylate	41	10.930	10.924	0.006	95	441505	2.00	2.10	
61 4-Methyl-2-pentanone (MIBK	43	11.815	11.814	0.001	97	778282	2.00	2.11	
62 cis-1,3-Dichloropropene	75	11.853	11.843	0.010	95	690192	2.00	2.09	
63 trans-1,3-Dichloropropene	75	12.581	12.577	0.003	98	659359	2.00	2.08	
64 Toluene	91	12.705	12.703	0.002	93	1329419	2.00	2.04	
65 1,1,2-Trichloroethane	83	12.775	12.772	0.003	97	403536	2.00	1.98	
66 2-Hexanone	58	13.217	13.219	-0.002	94	402023	2.00	2.17	
67 Chlorodibromomethane	129	13.492	13.485	0.007	97	939880	2.00	2.16	
68 n-Octane	85	13.492	13.489	0.003	91	491574	2.00	2.19	
69 Ethylene Dibromide	107	13.778	13.776	0.002	98	799207	2.00	2.11	
70 Tetrachloroethene	129	13.891	13.887	0.004	95	530466	2.00	2.08	
71 Chlorobenzene	112	14.781	14.781	0.000	93	1115186	2.00	2.08	
72 Ethylbenzene	91	15.099	15.097	0.002	98	1797445	2.00	2.15	
73 m-Xylene & p-Xylene	91	15.271	15.268	0.003	100	2812804	4.00	4.30	
74 Bromoform	173	15.676	15.676	0.000	97	1049684	2.00	2.12	
75 Styrene	104	15.735	15.736	-0.001	98	1067373	2.00	2.27	
76 n-Nonane	57	15.757	15.757	0.000	90	865558	2.00	2.20	
77 o-Xylene	91	15.800	15.796	0.004	98	1436486	2.00	2.12	
78 1,1,2,2-Tetrachloroethane	83	16.123	16.120	0.003	99	1025636	2.00	2.16	
79 1,2,3-Trichloropropane	110	16.274	16.274	0.000	97	328190	2.00	2.19	
80 Isopropylbenzene	105	16.404	16.405	-0.001	97	1985623	2.00	2.22	
81 N-Propylbenzene	120	16.965	16.962	0.002	99	566708	2.00	2.18	
82 2-Chlorotoluene	126	16.986	16.987	-0.001	97	529199	2.00	2.21	
83 4-Ethyltoluene	105	17.126	17.126	0.000	98	1912271	2.00	2.12	
84 1,3,5-Trimethylbenzene	120	17.213	17.211	0.002	93	823408	2.00	2.20	
85 Alpha Methyl Styrene	118	17.455	17.455	0.000	88	836604	2.00	2.29	
86 n-Decane	57	17.579	17.576	0.003	92	1031750	2.00	2.20	
87 tert-Butylbenzene	119	17.671	17.667	0.004	94	1880947	2.00	2.24	
88 1,2,4-Trimethylbenzene	105	17.682	17.683	-0.001	96	1689928	2.00	2.21	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
89 1,3-Dichlorobenzene	146	17.951	17.954	-0.003	98	1244855	2.00	2.08	
90 sec-Butylbenzene	105	17.962	17.963	-0.001	98	2423881	2.00	2.26	
91 Benzyl chloride	91	18.038	18.036	0.002	98	1428371	2.00	2.11	
92 1,4-Dichlorobenzene	146	18.048	18.049	-0.001	95	1232981	2.00	2.05	
93 4-Isopropyltoluene	119	18.145	18.147	-0.002	97	2188301	2.00	2.22	
94 1,2,3-Trimethylbenzene	105	18.189	18.186	0.003	97	1545386	2.00	2.36	
95 1,2-Dichlorobenzene	146	18.431	18.429	0.002	97	1193223	2.00	2.08	
96 n-Butylbenzene	91	18.609	18.611	-0.002	98	1994386	2.00	2.30	
99 Undecane	57	18.987	18.987	0.000	94	1110436	2.00	2.27	
100 1,2-Dibromo-3-Chloropropan	157	19.062	19.063	-0.001	98	373359	2.00	1.57	
102 1,2,4,5-Tetramethylbenzene	119	19.407	19.404	0.003	96	1314492	2.00	1.23	
104 Dodecane	57	20.071	20.071	-0.001	94	952676	2.00	2.04	
105 1,2,4-Trichlorobenzene	180	20.189	20.186	0.003	94	1034631	2.00	1.82	
106 Naphthalene	128	20.308	20.309	-0.001	99	2156843	2.00	1.92	
107 Hexachlorobutadiene	225	20.545	20.545	0.000	95	1005351	2.00	1.72	
108 1,2,3-Trichlorobenzene	180	20.583	20.585	-0.002	96	962421	2.00	2.04	
109 2-Methylnaphthalene	142	21.375	21.378	-0.003	100	566225	4.59	2.39	
110 1-Methylnaphthalene	142	21.564	21.564	0.000	99	524280	4.60	2.62	
S 111 Xylenes, Total	100				0		6.00	6.42	
S 112 1,2-Dichloroethene, Total	1				0		4.00	3.97	

Reagents:

40CV102S_00001	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

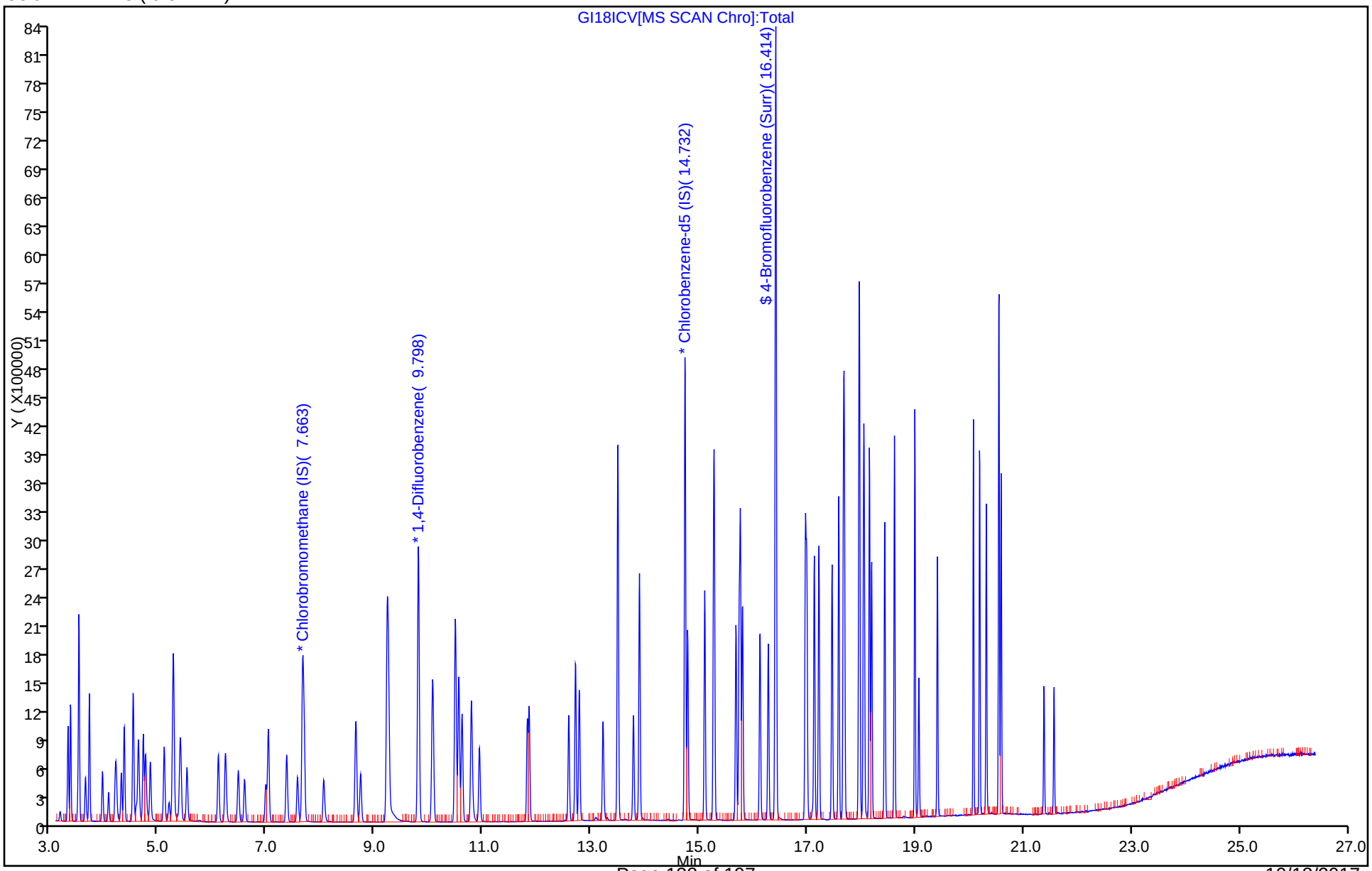
Report Date: 21-Sep-2017 12:11:11 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICV.D

Injection Date:	20-Sep-2017 01:35:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	ICV			Worklist Smp#:	13
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1

SDG No.:

Lab Sample ID: CCVIS 140-15018/2 Calibration Date: 10/07/2017 11:57

Instrument ID: MG Calib Start Date: 09/19/2017 18:30

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 09/20/2017 09:06

Lab File ID: GCCVJ07.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3740	0.4352		2.33	2.00	16.4	30.0
Propene	Ave	1.051	1.244		2.37	2.00	18.4	30.0
Dichlorodifluoromethane	Ave	3.776	4.683		2.48	2.00	24.0	30.0
Chloromethane	Ave	0.3521	0.4260		2.42	2.00	21.0	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.541	3.110		2.45	2.00	22.4	30.0
Vinyl chloride	Ave	1.272	1.503		2.37	2.00	18.2	30.0
1,3-Butadiene	Ave	0.9346	1.123		2.40	2.00	20.1	30.0
Butane	Ave	1.901	2.260		2.38	2.00	18.9	30.0
Bromomethane	Ave	1.365	1.634		2.40	2.00	19.7	30.0
Chloroethane	Ave	0.6889	0.7915		2.30	2.00	14.9	30.0
Ethanol	Ave	0.6218	0.5369		8.64	10.0	-13.6	30.0
Vinyl bromide	Ave	1.273	1.461		2.30	2.00	14.8	30.0
2-Methylbutane	Ave	1.420	1.621		2.28	2.00	14.2	30.0
Acrolein	Ave	0.2272	0.1617		1.42	2.00	-28.8	30.0
Trichlorofluoromethane	Ave	3.900	4.451		2.28	2.00	14.1	30.0
Acetonitrile	Ave	0.4510	0.3773		1.67	2.00	-16.3	30.0
Acetone	Ave	0.5024	0.4095		4.89	6.00	-18.5	30.0
Pentane	Ave	0.2462	0.2880		2.34	2.00	17.0	30.0
Isopropyl alcohol	Ave	1.450	1.270		5.26	6.00	-12.4	30.0
Ethyl ether	Ave	1.216	1.081		1.78	2.00	-11.1	30.0
1,1-Dichloroethene	Ave	1.237	1.486		2.40	2.00	20.2	30.0
Acrylonitrile	Ave	0.6387	0.5543		1.74	2.00	-13.2	30.0
tert-Butyl alcohol	Ave	1.988	1.775		1.79	2.00	-10.7	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.530	3.001		2.37	2.00	18.6	30.0
Methylene Chloride	Ave	1.185	1.286		2.17	2.00	8.5	30.0
3-Chloropropene	Ave	1.171	1.166		1.99	2.00	-0.4	30.0
Carbon disulfide	Ave	3.114	3.854		2.48	2.00	23.8	30.0
trans-1,2-Dichloroethene	Ave	1.286	1.377		2.14	2.00	7.1	30.0
Methyl tert-butyl ether	Ave	3.061	2.453		1.60	2.00	-19.9	30.0
1,1-Dichloroethane	Ave	2.324	2.283		1.97	2.00	-1.8	30.0
Vinyl acetate	Ave	2.728	2.030		1.49	2.00	-25.6	30.0
2-Butanone (MEK)	Ave	0.5811	0.3932		1.35	2.00	-32.3*	30.0
Hexane	Ave	0.9465	0.8630		1.82	2.00	-8.8	30.0
cis-1,2-Dichloroethene	Ave	1.436	1.390		1.94	2.00	-3.2	30.0
Ethyl acetate	Ave	2.325	1.629		1.40	2.00	-29.9	30.0
Chloroform	Ave	3.162	2.882		1.82	2.00	-8.8	30.0
Tetrahydrofuran	Ave	1.204	0.8644		1.44	2.00	-28.2	30.0
1,1,1-Trichloroethane	Ave	3.479	3.110		1.79	2.00	-10.6	30.0
1,2-Dichloroethane	Ave	0.3547	0.3050		1.72	2.00	-14.0	30.0
Benzene	Ave	0.7484	0.6546		1.75	2.00	-12.5	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1

SDG No.:

Lab Sample ID: CCVIS 140-15018/2 Calibration Date: 10/07/2017 11:57

Instrument ID: MG Calib Start Date: 09/19/2017 18:30

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 09/20/2017 09:06

Lab File ID: GCCVJ07.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Cyclohexane	Ave	0.1268	0.1156		1.82	2.00	-8.9	30.0
Carbon tetrachloride	Ave	0.6279	0.5805		1.85	2.00	-7.5	30.0
1-Butanol	Ave	0.1022	0.0680		1.33	2.00	-33.5*	30.0
2,2,4-Trimethylpentane	Ave	1.176	1.013		1.72	2.00	-13.8	30.0
Heptane	Ave	0.2810	0.2486		1.77	2.00	-11.5	30.0
1,2-Dichloropropane	Ave	0.2723	0.2247		1.65	2.00	-17.5	30.0
Trichloroethene	Ave	0.3931	0.4006		2.04	2.00	1.9	30.0
Dibromomethane	Ave	0.3286	0.2946		1.79	2.00	-10.3	30.0
Bromodichloromethane	Ave	0.6322	0.5458		1.73	2.00	-13.7	30.0
1,4-Dioxane	Ave	0.1104	0.0779		1.41	2.00	-29.5	30.0
Methyl methacrylate	Ave	0.2931	0.1880		1.28	2.00	-35.9*	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5140	0.3482		1.36	2.00	-32.3*	30.0
cis-1,3-Dichloropropene	Ave	0.4606	0.3889		1.69	2.00	-15.6	30.0
trans-1,3-Dichloropropene	Ave	0.4551	0.3426		1.51	2.00	-24.7	30.0
Toluene	Ave	0.9379	0.7376		1.57	2.00	-21.4	30.0
1,1,2-Trichloroethane	Ave	0.2931	0.2380		1.63	2.00	-18.8	30.0
2-Hexanone	Ave	0.2663	0.1826		1.37	2.00	-31.4*	30.0
Dibromochloromethane	Ave	0.6262	0.5768		1.84	2.00	-7.9	30.0
Octane	Ave	0.3228	0.2915		1.81	2.00	-9.7	30.0
1,2-Dibromoethane (EDB)	Ave	0.5450	0.4806		1.76	2.00	-11.8	30.0
Tetrachloroethene	Ave	0.3669	0.3482		1.90	2.00	-5.1	30.0
Chlorobenzene	Ave	0.7696	0.6871		1.79	2.00	-10.7	30.0
Ethylbenzene	Ave	1.199	0.8892		1.48	2.00	-25.9	30.0
m-Xylene & p-Xylene	Ave	0.9391	0.6808		2.90	4.00	-27.5	30.0
Bromoform	Ave	0.7116	0.6658		1.87	2.00	-6.4	30.0
Styrene	Ave	0.6769	0.5449		1.61	2.00	-19.5	30.0
Nonane	Ave	0.5657	0.4637		1.64	2.00	-18.0	30.0
o-Xylene	Ave	0.9731	0.7097		1.46	2.00	-27.1	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6826	0.5150		1.51	2.00	-24.6	30.0
1,2,3-Trichloropropane	Ave	0.2154	0.1645		1.53	2.00	-23.6	30.0
Isopropylbenzene	Ave	1.286	1.005		1.56	2.00	-21.8	30.0
Propylbenzene	Ave	0.3730	0.3013		1.62	2.00	-19.2	30.0
2-Chlorotoluene	Ave	0.3448	0.2955		1.72	2.00	-14.3	30.0
4-Ethyltoluene	Ave	1.297	0.9632		1.49	2.00	-25.8	30.0
1,3,5-Trimethylbenzene	Ave	0.5373	0.4294		1.60	2.00	-20.1	30.0
Alpha Methyl Styrene	Ave	0.5257	0.4087		1.56	2.00	-22.3	30.0
Decane	Ave	0.6737	0.4938		1.47	2.00	-26.7	30.0
tert-Butylbenzene	Ave	1.209	0.9552		1.58	2.00	-21.0	30.0
1,2,4-Trimethylbenzene	Ave	1.099	0.8271		1.51	2.00	-24.8	30.0
1,3-Dichlorobenzene	Ave	0.8603	0.7542		1.75	2.00	-12.3	30.0
sec-Butylbenzene	Ave	1.542	1.217		1.58	2.00	-21.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1

SDG No.:

Lab Sample ID: CCVIS 140-15018/2 Calibration Date: 10/07/2017 11:57

Instrument ID: MG Calib Start Date: 09/19/2017 18:30

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 09/20/2017 09:06

Lab File ID: GCCVJ07.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzyl chloride	Ave	0.9737	0.7354		1.51	2.00	-24.5	30.0
1,4-Dichlorobenzene	Ave	0.8638	0.7637		1.77	2.00	-11.6	30.0
4-Isopropyltoluene	Ave	1.415	1.104		1.56	2.00	-22.0	30.0
1,2,3-Trimethylbenzene	Ave	0.9411	0.7272		1.55	2.00	-22.7	30.0
1,2-Dichlorobenzene	Ave	0.8260	0.7223		1.75	2.00	-12.6	30.0
Butylbenzene	Ave	1.246	0.9282		1.49	2.00	-25.5	30.0
Undecane	Ave	0.7038	0.4836		1.37	2.00	-31.3*	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.3408	0.2632		1.55	2.00	-22.8	30.0
1,2,4,5-Tetramethylbenzene	LinF		1.193		1.56	2.00	-22.1	30.0
Dodecane	Ave	0.6718	0.4224		1.26	2.00	-37.1*	30.0
1,2,4-Trichlorobenzene	Ave	0.8155	0.6637		1.63	2.00	-18.6	30.0
Naphthalene	Ave	1.611	1.105		1.37	2.00	-31.4*	30.0
Hexachlorobutadiene	Ave	0.8419	0.7235		1.72	2.00	-14.1	30.0
1,2,3-Trichlorobenzene	Ave	0.6786	0.6210		1.83	2.00	-8.5	30.0
2-Methylnaphthalene	Ave	0.3409	0.2623		3.54	4.60	-23.1	50.0
1-Methylnaphthalene	Ave	0.2875	0.2234		3.58	4.60	-22.3	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7592	0.7523		3.96	4.00	-0.9	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GCCVJ07.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 07-Oct-2017 11:57:30 ALS Bottle#: 15 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006279-002
Misc. Info.: P46
Operator ID: 403648 Instrument ID: MG
Sublist: chrom-MG_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 09-Oct-2017 10:31:32 Calib Date: 20-Sep-2017 09:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 09-Oct-2017 10:31:31

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
*	1 Chlorobromomethane (IS)	128	7.620	7.620	0.000	85	486502	4.00	4.00	
*	2 1,4-Difluorobenzene	114	9.766	9.766	0.000	94	2659165	4.00	4.00	
*	3 Chlorobenzene-d5 (IS)	117	14.716	14.716	0.000	86	2566436	4.00	4.00	
$	4 4-Bromofluorobenzene (Surr	95	16.404	16.404	0.000	95	1930665	4.00	3.96	
	6 Chlorodifluoromethane	67	3.306	3.306	0.000	97	105918	2.00	2.33	
	7 Propene	41	3.311	3.311	0.000	99	302695	2.00	2.37	
	8 Dichlorodifluoromethane	85	3.354	3.354	0.000	100	1139662	2.00	2.48	
	9 Chloromethane	52	3.489	3.489	0.000	98	103691	2.00	2.42	
	10 1,2-Dichloro-1,1,2,2-tetra	135	3.500	3.500	0.000	96	757004	2.00	2.45	
	11 Vinyl chloride	62	3.624	3.624	0.000	98	365913	2.00	2.37	
	12 Butadiene	54	3.694	3.694	0.000	91	273210	2.00	2.40	
	13 Butane	43	3.694	3.694	0.000	94	549965	2.00	2.38	
	14 Bromomethane	94	3.937	3.937	0.000	98	397703	2.00	2.40	
	15 Chloroethane	64	4.044	4.044	0.000	93	192642	2.00	2.30	
	16 Ethanol	31	4.147	4.147	0.000	98	653396	10.0	8.64	
	17 Vinyl bromide	106	4.276	4.276	0.000	96	355681	2.00	2.30	
	18 2-Methylbutane	43	4.330	4.330	0.000	91	394465	2.00	2.28	
	19 Trichlorofluoromethane	101	4.497	4.497	0.000	99	1083185	2.00	2.28	
	20 Acrolein	56	4.497	4.497	0.000	28	39346	2.00	1.42	
	21 Acetonitrile	40	4.540	4.540	0.000	99	91830	2.00	1.67	
	22 Acetone	58	4.584	4.584	0.000	98	299008	6.00	4.89	
	23 Pentane	72	4.681	4.681	0.000	97	70093	2.00	2.34	
	24 Isopropyl alcohol	45	4.686	4.686	0.000	95	927198	6.00	5.26	
	25 Ethyl ether	31	4.805	4.805	0.000	93	263137	2.00	1.78	
	26 1,1-Dichloroethene	96	5.069	5.069	0.000	99	361666	2.00	2.40	
	27 Acrylonitrile	53	5.139	5.139	0.000	94	134895	2.00	1.74	
	28 2-Methyl-2-propanol	59	5.182	5.182	0.000	96	431914	2.00	1.79	
	29 1,1,2-Trichloro-1,2,2-trif	101	5.236	5.236	0.000	95	730285	2.00	2.37	
	30 Methylene Chloride	84	5.355	5.355	0.000	91	312990	2.00	2.17	
	31 3-Chloro-1-propene	39	5.371	5.371	0.000	98	283720	2.00	1.99	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.490	5.490	0.000	100	937963	2.00	2.48	
33 trans-1,2-Dichloroethene	96	6.067	6.067	0.000	96	335230	2.00	2.14	
34 Methyl tert-butyl ether	73	6.191	6.191	0.000	96	597109	2.00	1.60	
35 1,1-Dichloroethane	63	6.433	6.433	0.000	100	555665	2.00	1.97	
37 Vinyl acetate	43	6.546	6.546	0.000	99	493969	2.00	1.49	
38 2-Butanone (MEK)	72	6.935	6.935	0.000	100	95686	2.00	1.35	
39 Hexane	56	6.994	6.994	0.000	89	210029	2.00	1.82	
40 cis-1,2-Dichloroethene	96	7.328	7.328	0.000	89	338191	2.00	1.94	
41 Ethyl acetate	43	7.522	7.522	0.000	98	396555	2.00	1.40	
42 Chloroform	83	7.646	7.646	0.000	96	701481	2.00	1.82	
43 Tetrahydrofuran	42	8.013	8.013	0.000	91	210370	2.00	1.44	
44 1,1,1-Trichloroethane	97	8.612	8.612	0.000	95	757022	2.00	1.79	
45 1,2-Dichloroethane	62	8.693	8.693	0.000	98	405676	2.00	1.72	
46 Benzene	78	9.183	9.183	0.000	96	870848	2.00	1.75	
47 Cyclohexane	69	9.194	9.194	0.000	90	153756	2.00	1.82	
48 Carbon tetrachloride	117	9.221	9.221	0.000	96	772269	2.00	1.85	
49 n-Butanol	31	9.226	9.226	0.000	55	90483	2.00	1.33	
52 Isooctane	57	10.035	10.035	0.000	97	1348207	2.00	1.72	
53 n-Heptane	71	10.451	10.451	0.000	93	330721	2.00	1.77	
54 1,2-Dichloropropane	63	10.461	10.461	0.000	88	298914	2.00	1.65	
55 Trichloroethene	130	10.521	10.521	0.000	98	532969	2.00	2.04	
56 Dibromomethane	93	10.575	10.575	0.000	87	391921	2.00	1.79	
57 Dichlorobromomethane	83	10.752	10.752	0.000	98	726129	2.00	1.73	
58 1,4-Dioxane	88	10.774	10.774	0.000	91	103591	2.00	1.41	
59 Methyl methacrylate	41	10.898	10.898	0.000	96	250031	2.00	1.28	
61 4-Methyl-2-pentanone (MIBK	43	11.788	11.788	0.000	98	463212	2.00	1.36	
62 cis-1,3-Dichloropropene	75	11.826	11.826	0.000	94	517375	2.00	1.69	
63 trans-1,3-Dichloropropene	75	12.559	12.559	0.000	99	439885	2.00	1.51	
64 Toluene	91	12.688	12.688	0.000	94	947042	2.00	1.57	
65 1,1,2-Trichloroethane	83	12.753	12.753	0.000	97	305562	2.00	1.63	
66 2-Hexanone	58	13.201	13.201	0.000	93	234436	2.00	1.37	
67 Chlorodibromomethane	129	13.470	13.470	0.000	97	740544	2.00	1.84	
68 n-Octane	85	13.476	13.476	0.000	92	374303	2.00	1.81	
69 Ethylene Dibromide	107	13.761	13.761	0.000	99	617023	2.00	1.76	
70 Tetrachloroethene	129	13.875	13.875	0.000	95	447050	2.00	1.90	
71 Chlorobenzene	112	14.764	14.764	0.000	95	882168	2.00	1.79	
72 Ethylbenzene	91	15.083	15.083	0.000	98	1141701	2.00	1.48	
73 m-Xylene & p-Xylene	91	15.255	15.255	0.000	98	1748262	4.00	2.90	
74 Bromoform	173	15.665	15.665	0.000	97	854826	2.00	1.87	
75 Styrene	104	15.724	15.724	0.000	96	699570	2.00	1.61	
76 n-Nonane	57	15.746	15.746	0.000	89	595355	2.00	1.64	
77 o-Xylene	91	15.784	15.784	0.000	99	911141	2.00	1.46	
78 1,1,2,2-Tetrachloroethane	83	16.107	16.107	0.000	99	661193	2.00	1.51	
79 1,2,3-Trichloropropane	110	16.263	16.263	0.000	96	211201	2.00	1.53	
80 Isopropylbenzene	105	16.393	16.393	0.000	96	1290782	2.00	1.56	
81 N-Propylbenzene	120	16.948	16.948	0.000	100	386855	2.00	1.62	
82 2-Chlorotoluene	126	16.975	16.975	0.000	97	379380	2.00	1.72	
83 4-Ethyltoluene	105	17.115	17.115	0.000	98	1236706	2.00	1.49	
84 1,3,5-Trimethylbenzene	120	17.202	17.202	0.000	95	551341	2.00	1.60	
85 Alpha Methyl Styrene	118	17.444	17.444	0.000	89	524775	2.00	1.56	
86 n-Decane	57	17.568	17.568	0.000	93	634021	2.00	1.47	
87 tert-Butylbenzene	119	17.655	17.655	0.000	94	1226350	2.00	1.58	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.671	17.671	0.000	95	1061916	2.00	1.51	
89 1,3-Dichlorobenzene	146	17.941	17.941	0.000	96	968310	2.00	1.75	
90 sec-Butylbenzene	105	17.951	17.951	0.000	98	1563104	2.00	1.58	
91 Benzyl chloride	91	18.027	18.027	0.000	99	944191	2.00	1.51	
92 1,4-Dichlorobenzene	146	18.038	18.038	0.000	96	980551	2.00	1.77	
93 4-Isopropyltoluene	119	18.135	18.135	0.000	97	1417040	2.00	1.56	
94 1,2,3-Trimethylbenzene	105	18.178	18.178	0.000	96	933610	2.00	1.55	
95 1,2-Dichlorobenzene	146	18.420	18.420	0.000	98	927355	2.00	1.75	
96 n-Butylbenzene	91	18.598	18.598	0.000	98	1191741	2.00	1.49	
99 Undecane	57	18.976	18.976	0.000	94	620829	2.00	1.37	
100 1,2-Dibromo-3-Chloropropan	157	19.051	19.051	0.000	94	337980	2.00	1.55	
102 1,2,4,5-Tetramethylbenzene	119	19.396	19.396	0.000	98	1531756	2.00	1.56	
104 Dodecane	57	20.065	20.065	0.000	92	542307	2.00	1.26	
105 1,2,4-Trichlorobenzene	180	20.178	20.178	0.000	93	852102	2.00	1.63	
106 Naphthalene	128	20.302	20.302	0.000	99	1418854	2.00	1.37	
107 Hexachlorobutadiene	225	20.534	20.534	0.000	92	928913	2.00	1.72	
108 1,2,3-Trichlorobenzene	180	20.577	20.577	0.000	94	797317	2.00	1.83	
109 2-Methylnaphthalene	142	21.370	21.370	0.000	98	774605	4.60	3.54	
110 1-Methylnaphthalene	142	21.559	21.559	0.000	99	659666	4.60	3.58	
S 111 Xylenes, Total	100				0		6.00	4.36	
S 112 1,2-Dichloroethene, Total	1				0		4.00	4.08	

Reagents:

40CV101P_00046	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

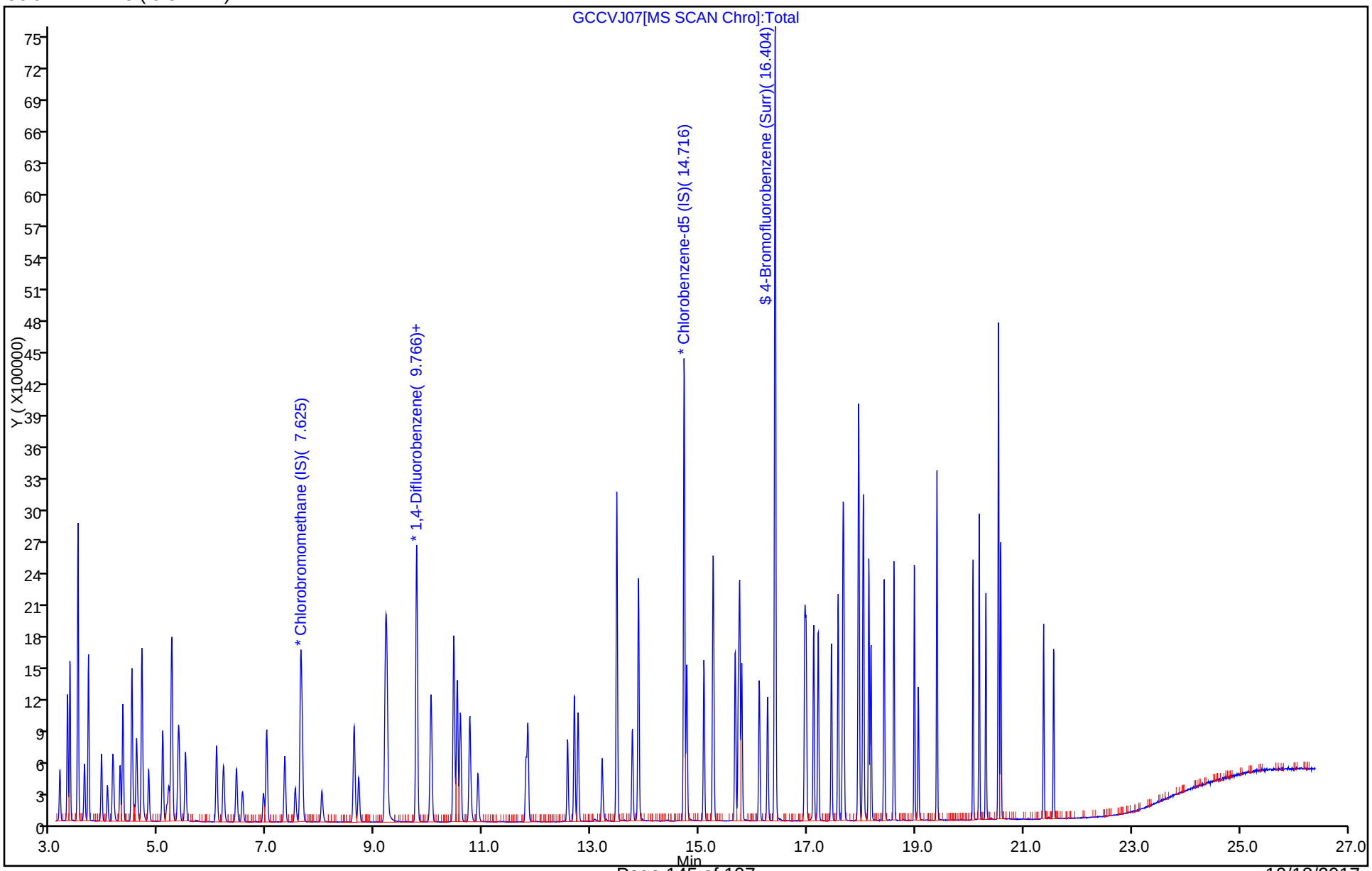
Report Date: 09-Oct-2017 10:31:33 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GCCVJ07.D

Injection Date:	07-Oct-2017 11:57:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GBFBI18.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 19-Sep-2017 17:16:30 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Sample Info: 140-0006110-001
Misc. Info.: BFB
Operator ID: 403648 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 21-Sep-2017 12:11:04 Calib Date: 20-Sep-2017 09:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK030

First Level Reviewer: tajh Date: 20-Sep-2017 13:52:24

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.372	4.372	0.000	0	1871603	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

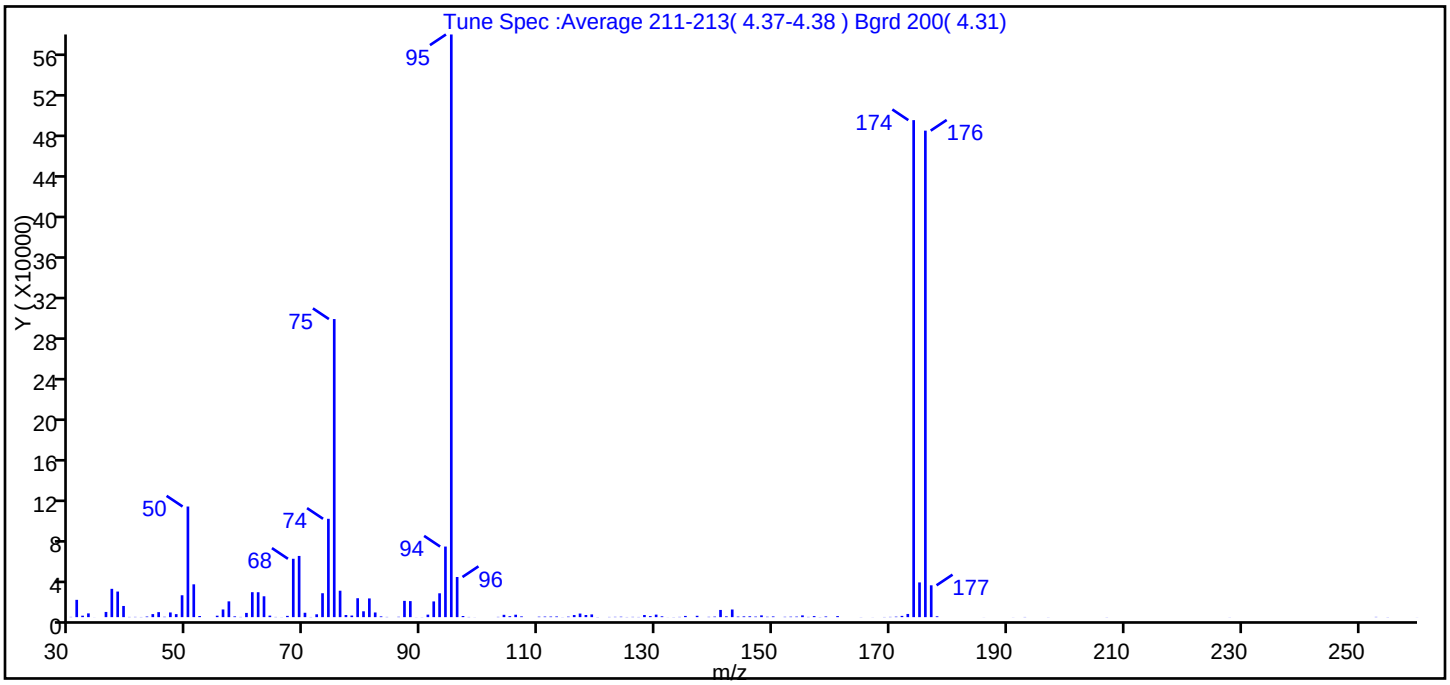
40MXSUR_00002 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GBFBI18.D
Injection Date: 19-Sep-2017 17:16:30 Instrument ID: MG
Lims ID: BFB
Client ID:
Operator ID: 403648 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	19.0
75	30 to 60% of m/z 95	51.2
96	5 to 9% of m/z 95	6.9
173	Less than 2% of m/z 174	0.5 (0.6)
174	50 to 120% of m/z 95	85.3
175	5 to 9% of m/z 174	6.0 (7.0)
176	Greater than 95% but less than 101% of m/z 174	83.5 (97.9)
177	5 to 9% of m/z 176	5.5 (6.5)

Data File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GBFBI18.D\MG_TO15.rslt\spectra.d
Injection Date: 19-Sep-2017 17:16:30
Spectrum: Tune Spec :Average 211-213(4.37-4.38) Bgrd 200(4.31)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 139

m/z	Y	m/z	Y	m/z	Y	m/z	Y
30.00	230	68.00	57256	107.00	717	147.00	554
31.00	16976	69.00	60040	110.00	461	148.00	1745
32.00	1429	70.00	4297	111.00	560	149.00	373
33.00	3691	71.00	164	112.00	590	150.00	687
34.00	60	72.00	2785	113.00	667	152.00	341
36.00	5108	73.00	23464	114.00	101	153.00	468
37.00	27768	74.00	96480	115.00	489	154.00	534
38.00	25104	75.00	292416	116.00	2054	155.00	1721
39.00	10964	76.00	25928	117.00	3530	156.00	237
40.00	210	77.00	2072	118.00	2100	157.00	1027
41.00	246	78.00	1559	119.00	2671	158.00	148
42.00	161	79.00	18568	120.00	135	159.00	669
43.00	598	80.00	5749	122.00	209	161.00	1027
44.00	2987	81.00	18360	123.00	296	165.00	103
45.00	4909	82.00	4567	124.00	416	167.00	65
46.00	359	83.00	749	125.00	157	169.00	164
47.00	4599	84.00	216	126.00	262	170.00	252
48.00	2955	86.00	344	127.00	185	171.00	476
49.00	21464	87.00	15970	128.00	2091	172.00	1232
50.00	108520	88.00	15731	129.00	990	173.00	3136
51.00	32200	89.00	79	130.00	2469	174.00	487552
52.00	1108	90.00	105	131.00	816	175.00	34064
55.00	1411	91.00	2454	132.00	61	176.00	477248
56.00	7543	92.00	15426	133.00	130	177.00	31232
57.00	15490	93.00	23400	134.00	243	178.00	823
58.00	767	94.00	69248	135.00	1189	186.00	54
59.00	209	95.00	571584	137.00	1324	191.00	66
60.00	4157	96.00	39376	139.00	303	193.00	175
61.00	24480	97.00	1119	140.00	546	197.00	85
62.00	24440	98.00	189	141.00	7067	207.00	102
63.00	20464	99.00	74	142.00	772	228.00	79
64.00	1496	103.00	254	143.00	7493	253.00	249
65.00	205	104.00	2287	144.00	541	255.00	117

Report Date: 21-Sep-2017 12:11:04 Chrom Revision: 2.2 16-Aug-2017 16:24:46
Data File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GBFBI18.D\MG_TO15.rslt\spectra.d
Injection Date: 19-Sep-2017 17:16:30
Spectrum: Tune Spec :Average 211-213(4.37-4.38) Bgrd 200(4.31)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 139

m/z	Y	m/z	Y	m/z	Y	m/z	Y
66.00	90	105.00	922	145.00	751	260.00	51
67.00	1246	106.00	2387	146.00	830		

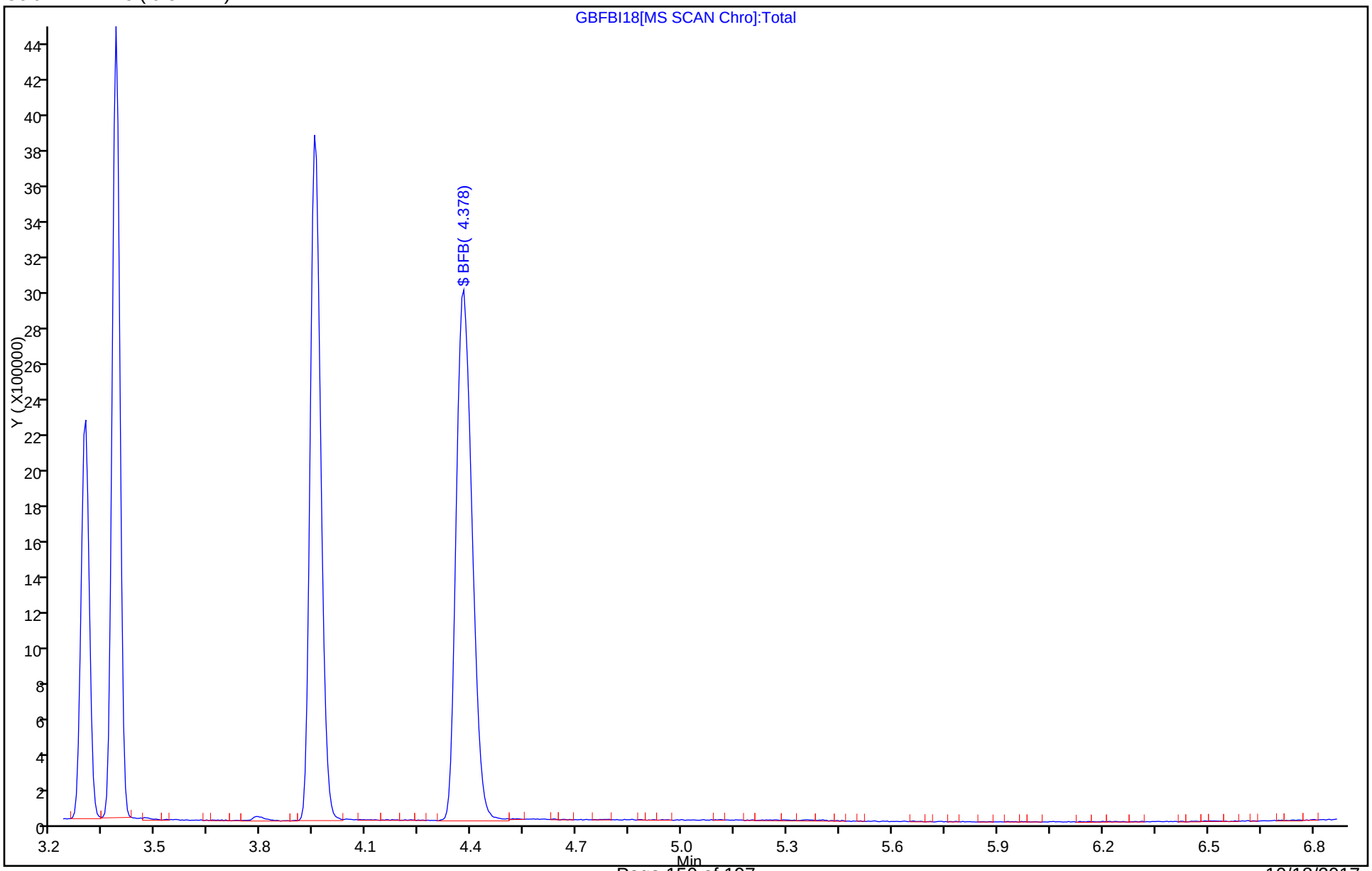
Report Date: 21-Sep-2017 12:11:04 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GBFBI18.D

Injection Date:	19-Sep-2017 17:16:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GBFBJ07.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	07-Oct-2017 11:26:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006279-001				
Misc. Info.:	BFB				
Operator ID:	403648	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	09-Oct-2017 10:28:10	Calib Date:	20-Sep-2017 09:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL02R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				
First Level Reviewer: barlozhetskayaa		Date:	09-Oct-2017 10:28:10		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.383	4.383	0.000	0	2558984	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

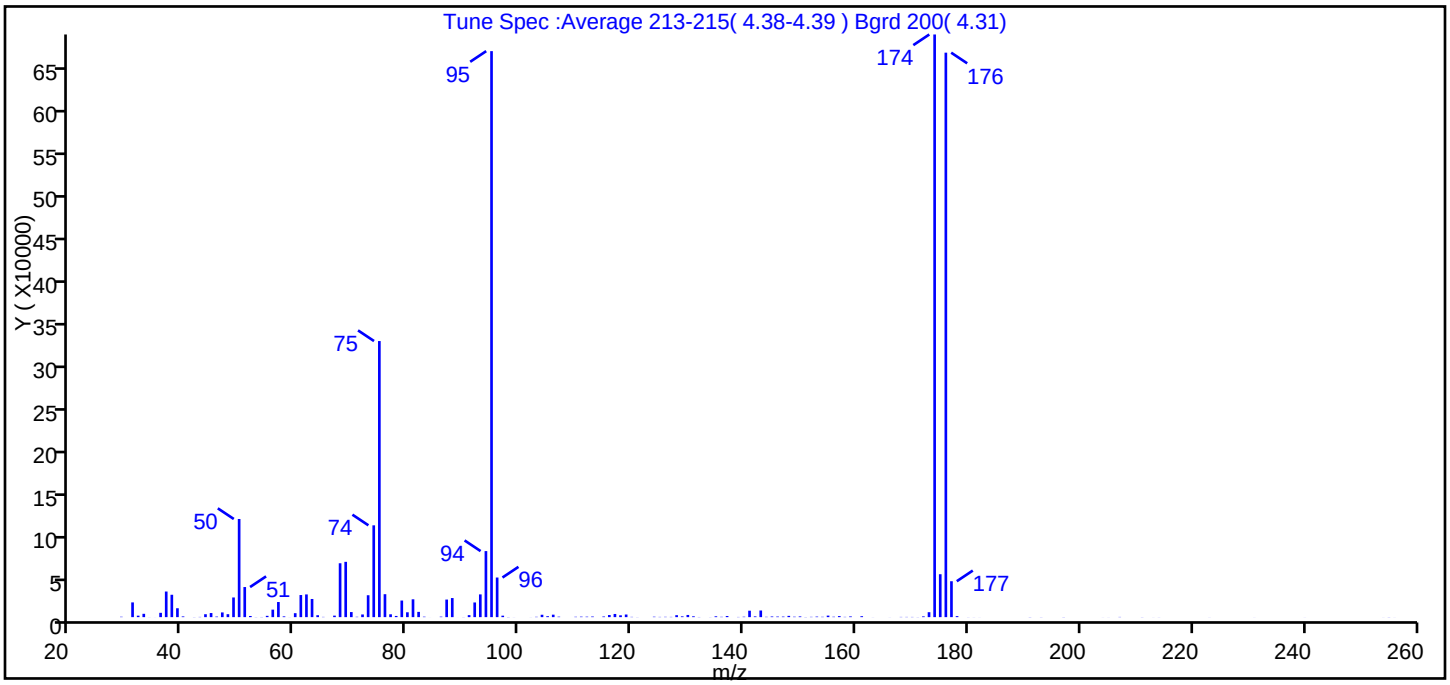
40MXSUR_00002 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GBFBJ07.D
Injection Date: 07-Oct-2017 11:26:30 Instrument ID: MG
Lims ID: BFB
Client ID:
Operator ID: 403648 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	17.3
75	30 to 60% of m/z 95	48.8
96	5 to 9% of m/z 95	7.0
173	Less than 2% of m/z 174	0.9 (0.8)
174	50 to 120% of m/z 95	102.9
175	5 to 9% of m/z 174	7.6 (7.4)
176	Greater than 95% but less than 101% of m/z 174	99.7 (96.9)
177	5 to 9% of m/z 176	6.3 (6.4)

Data File: \\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GBFBJ07.D\MG_TO15.rslt\spectra.d
Injection Date: 07-Oct-2017 11:26:30
Spectrum: Tune Spec :Average 213-215(4.38-4.39) Bgrd 200(4.31)
Base Peak: 174.00
Minimum % Base Peak: 0
Number of Points: 151

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	444	70.00	5943	113.00	712	156.00	486
31.00	17272	71.00	411	115.00	747	157.00	1233
32.00	1723	72.00	3140	116.00	2469	158.00	306
33.00	3906	73.00	25672	117.00	3722	159.00	842
34.00	72	74.00	107584	118.00	2141	161.00	1082
35.00	38	75.00	323520	119.00	3081	163.00	68
36.00	5059	76.00	26896	120.00	309	166.00	59
37.00	30024	77.00	3336	121.00	105	168.00	261
38.00	26224	78.00	1398	124.00	500	169.00	264
39.00	10441	79.00	19456	125.00	281	170.00	243
40.00	836	80.00	5696	126.00	370	171.00	121
42.00	132	81.00	20912	127.00	289	172.00	872
43.00	256	82.00	6165	128.00	2298	173.00	5774
44.00	3426	83.00	527	129.00	903	174.00	682752
45.00	4805	84.00	29	130.00	2563	175.00	50296
46.00	640	86.00	573	131.00	972	176.00	661440
47.00	5516	87.00	20600	132.00	184	177.00	42080
48.00	3468	88.00	22368	134.00	99	178.00	1175
49.00	23056	89.00	22	135.00	976	180.00	87
50.00	115000	90.00	109	136.00	377	181.00	71
51.00	35272	91.00	2348	137.00	1309	182.00	52
52.00	1351	92.00	17200	139.00	226	191.00	163
53.00	130	93.00	26656	140.00	494	193.00	124
54.00	183	94.00	77400	141.00	7542	197.00	148
55.00	1531	95.00	663232	142.00	888	204.00	51
56.00	8800	96.00	46424	143.00	7785	205.00	56
57.00	17720	97.00	1717	144.00	386	207.00	248
58.00	885	98.00	173	145.00	774	208.00	6
59.00	65	99.00	63	146.00	681	211.00	121
60.00	4640	102.00	64	147.00	648	213.00	52
61.00	25912	103.00	381	148.00	1493	214.00	79
62.00	26624	104.00	2803	149.00	505	223.00	65
63.00	21280	105.00	1092	150.00	844	231.00	53

Report Date: 09-Oct-2017 10:28:11 Chrom Revision: 2.2 16-Aug-2017 16:24:46
Data File: \\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GBFBJ07.D\MG_TO15.rslt\spectra.d
Injection Date: 07-Oct-2017 11:26:30
Spectrum: Tune Spec :Average 213-215(4.38-4.39) Bgrd 200(4.31)
Base Peak: 174.00
Minimum % Base Peak: 0
Number of Points: 151

m/z	Y	m/z	Y	m/z	Y	m/z	Y
64.00	2246	106.00	2904	151.00	172	240.00	51
65.00	287	107.00	545	152.00	347	254.00	57
67.00	1780	110.00	422	153.00	640	255.00	136
68.00	63144	111.00	581	154.00	391	256.00	55
69.00	64808	112.00	555	155.00	1791		

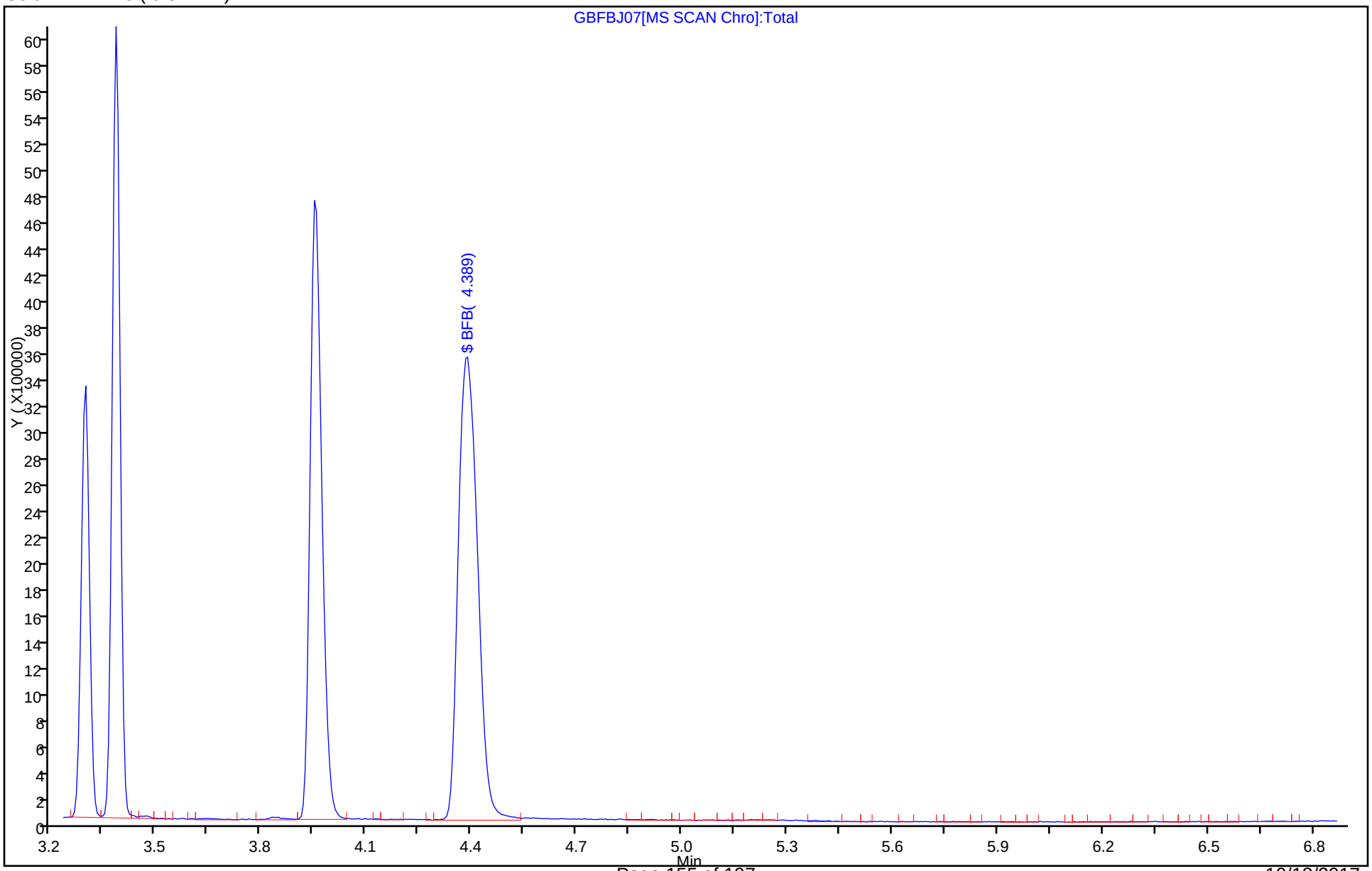
Report Date: 09-Oct-2017 10:28:11 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GBFBJ07.D

Injection Date:	07-Oct-2017 11:26:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-15018/5

Matrix: Air Lab File ID: GMB500J07.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 10/07/2017 15:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 15018 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-15018/5

Matrix: Air Lab File ID: GMB500J07.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 10/07/2017 15:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 15018 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GMB500J07.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 07-Oct-2017 15:03:30 ALS Bottle#: 16 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006279-005
Misc. Info.: MB500ML
Operator ID: 403648 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 09-Oct-2017 10:32:49 Calib Date: 20-Sep-2017 09:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 09-Oct-2017 10:32:49

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.614	7.620	-0.006	83	511984	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.760	9.766	-0.006	94	2707979	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.716	14.716	0.000	86	2458217	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.398	16.404	-0.006	96	1754040	4.00	3.76	
36 2-Methylpentane	43	6.530	6.552	-0.022	1	299		NC	
50 2,3-Dimethylpentane	71	9.760	9.776	-0.016	27	4100		NC	
51 Thiophene	84	9.760	9.776	-0.016	39	2836		NC	
60 Methylcyclohexane	83	11.572	11.583	-0.011	1	97		NC	
97 2,3-Dihydroindene	117	18.458	18.431	0.027	1	250		NC	
101 1,2,3,5-Tetramethylbenzene	119	19.402	19.396	0.006	1	519		NC	
103 1,2,3,4-Tetramethylbenzene	119	19.892	19.849	0.043	1	188		NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

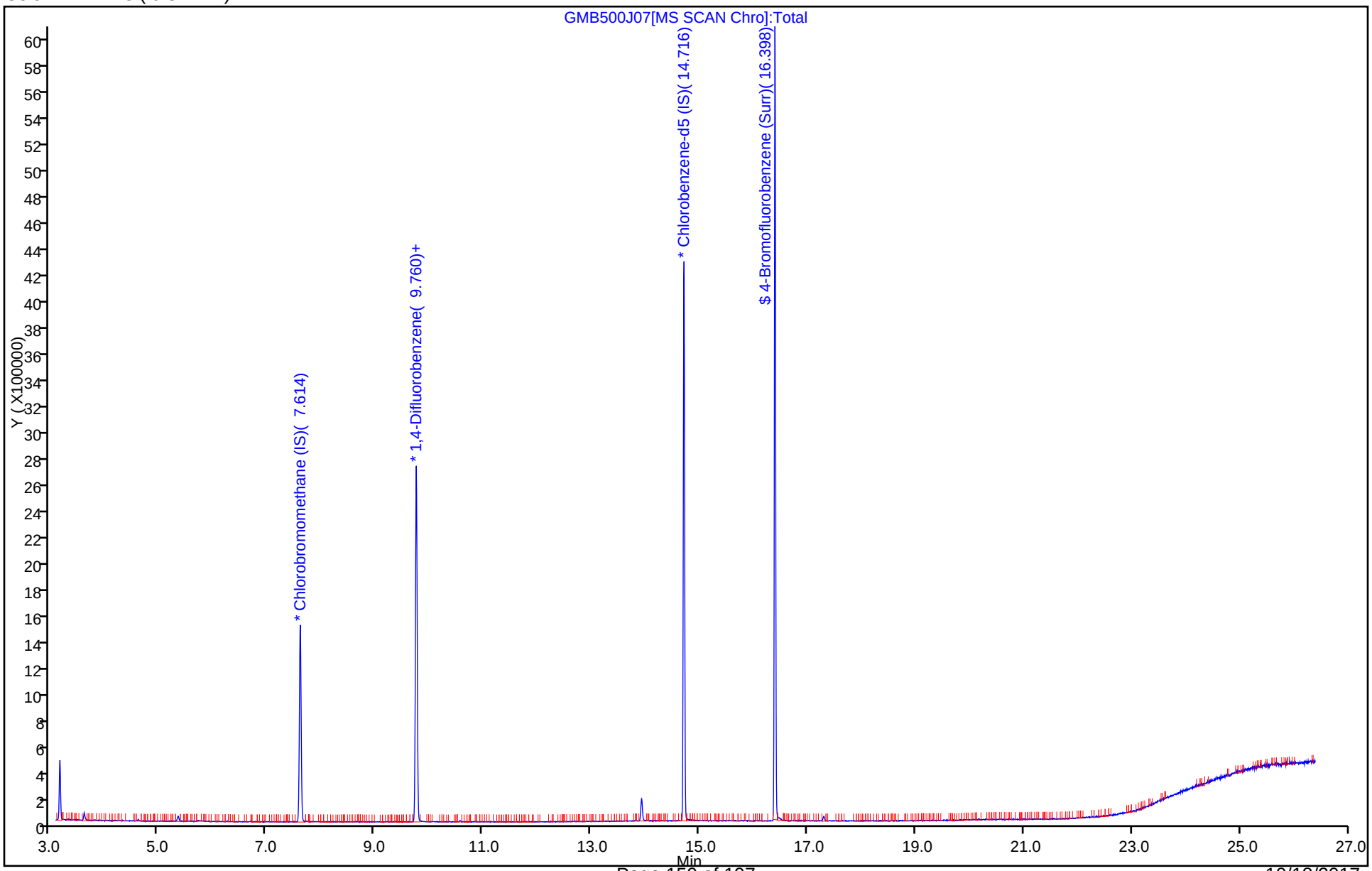
Report Date: 09-Oct-2017 10:32:50 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GMB500J07.D

Injection Date:	07-Oct-2017 15:03:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	MB			Worklist Smp#:	5
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GMB500J07.D				
Lims ID:	MB				
Client ID:					
Sample Type:	MB				
Inject. Date:	07-Oct-2017 15:03:30	ALS Bottle#:	16	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006279-005				
Misc. Info.:	MB500ML				
Operator ID:	403648	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	09-Oct-2017 10:32:49	Calib Date:	20-Sep-2017 09:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL02R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				

First Level Reviewer: barlozhetskayaa Date: 09-Oct-2017 10:32:49

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.76	93.99

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9485-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 140-15018/1002

Matrix: Air | Lab File ID: GCCVJ07-LCS.d

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 10/07/2017 11:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15018 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.75		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	1.85		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.33		0.080	0.015
67-66-3	Chloroform	119.38	1.82		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	1.94		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.48		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	1.97		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	1.72		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	2.40		0.080	0.014
100-41-4	Ethylbenzene	106.17	1.48		0.080	0.027
75-09-2	Methylene Chloride	84.93	2.17		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.60		0.40	0.068
91-20-3	Naphthalene	128.17	1.37		0.040	0.040
127-18-4	Tetrachloroethene	165.83	1.90		0.080	0.016
108-88-3	Toluene	92.14	1.57		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	2.14		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	1.63		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	1.79		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	1.63		0.080	0.021
79-01-6	Trichloroethene	131.39	2.04		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	1.55		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	1.51		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.60		0.080	0.026
75-01-4	Vinyl chloride	62.50	2.37		0.040	0.029
1330-20-7	Xylenes, Total	106.17	4.36		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GCCVJ07-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 07-Oct-2017 11:57:30 ALS Bottle#: 15 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006279-002
Misc. Info.: P46
Operator ID: 403648 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 09-Oct-2017 10:31:32 Calib Date: 20-Sep-2017 09:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 09-Oct-2017 10:31:31

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
*	1 Chlorobromomethane (IS)	128	7.620	7.620	0.000	85	486502	4.00	4.00	
*	2 1,4-Difluorobenzene	114	9.766	9.766	0.000	94	2659165	4.00	4.00	
*	3 Chlorobenzene-d5 (IS)	117	14.716	14.716	0.000	86	2566436	4.00	4.00	
$	4 4-Bromofluorobenzene (Surr	95	16.404	16.404	0.000	95	1930665	4.00	3.96	
	6 Chlorodifluoromethane	67	3.306	3.306	0.000	97	105918	2.00	2.33	
	7 Propene	41	3.311	3.311	0.000	99	302695	2.00	2.37	
	8 Dichlorodifluoromethane	85	3.354	3.354	0.000	100	1139662	2.00	2.48	
	9 Chloromethane	52	3.489	3.489	0.000	98	103691	2.00	2.42	
	10 1,2-Dichloro-1,1,2,2-tetra	135	3.500	3.500	0.000	96	757004	2.00	2.45	
	11 Vinyl chloride	62	3.624	3.624	0.000	98	365913	2.00	2.37	
	13 Butane	43	3.694	3.694	0.000	94	549965	2.00	2.38	
	12 Butadiene	54	3.694	3.694	0.000	91	273210	2.00	2.40	
	14 Bromomethane	94	3.937	3.937	0.000	98	397703	2.00	2.40	
	15 Chloroethane	64	4.044	4.044	0.000	93	192642	2.00	2.30	
	16 Ethanol	31	4.147	4.147	0.000	98	653396	10.0	8.64	
	17 Vinyl bromide	106	4.276	4.276	0.000	96	355681	2.00	2.30	
	18 2-Methylbutane	43	4.330	4.330	0.000	91	394465	2.00	2.28	
	20 Acrolein	56	4.497	4.497	0.000	28	39346	2.00	1.42	
	19 Trichlorofluoromethane	101	4.497	4.497	0.000	99	1083185	2.00	2.28	
	21 Acetonitrile	40	4.540	4.540	0.000	99	91830	2.00	1.67	
	22 Acetone	58	4.584	4.584	0.000	98	299008	6.00	4.89	
	23 Pentane	72	4.681	4.681	0.000	97	70093	2.00	2.34	
	24 Isopropyl alcohol	45	4.686	4.686	0.000	95	927198	6.00	5.26	
	25 Ethyl ether	31	4.805	4.805	0.000	93	263137	2.00	1.78	
	26 1,1-Dichloroethene	96	5.069	5.069	0.000	99	361666	2.00	2.40	
	27 Acrylonitrile	53	5.139	5.139	0.000	94	134895	2.00	1.74	
	28 2-Methyl-2-propanol	59	5.182	5.182	0.000	96	431914	2.00	1.79	
	29 1,1,2-Trichloro-1,2,2-trif	101	5.236	5.236	0.000	95	730285	2.00	2.37	
	30 Methylene Chloride	84	5.355	5.355	0.000	91	312990	2.00	2.17	
	31 3-Chloro-1-propene	39	5.371	5.371	0.000	98	283720	2.00	1.99	
	32 Carbon disulfide	76	5.490	5.490	0.000	100	937963	2.00	2.48	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 trans-1,2-Dichloroethene	96	6.067	6.067	0.000	96	335230	2.00	2.14	
34 Methyl tert-butyl ether	73	6.191	6.191	0.000	96	597109	2.00	1.60	
35 1,1-Dichloroethane	63	6.433	6.433	0.000	100	555665	2.00	1.97	
37 Vinyl acetate	43	6.546	6.546	0.000	99	493969	2.00	1.49	
38 2-Butanone (MEK)	72	6.935	6.935	0.000	100	95686	2.00	1.35	
39 Hexane	56	6.994	6.994	0.000	89	210029	2.00	1.82	
40 cis-1,2-Dichloroethene	96	7.328	7.328	0.000	89	338191	2.00	1.94	
41 Ethyl acetate	43	7.522	7.522	0.000	98	396555	2.00	1.40	
42 Chloroform	83	7.646	7.646	0.000	96	701481	2.00	1.82	
43 Tetrahydrofuran	42	8.013	8.013	0.000	91	210370	2.00	1.44	
44 1,1,1-Trichloroethane	97	8.612	8.612	0.000	95	757022	2.00	1.79	
45 1,2-Dichloroethane	62	8.693	8.693	0.000	98	405676	2.00	1.72	
46 Benzene	78	9.183	9.183	0.000	96	870848	2.00	1.75	
47 Cyclohexane	69	9.194	9.194	0.000	90	153756	2.00	1.82	
48 Carbon tetrachloride	117	9.221	9.221	0.000	96	772269	2.00	1.85	
49 n-Butanol	31	9.226	9.226	0.000	55	90483	2.00	1.33	
52 Isooctane	57	10.035	10.035	0.000	97	1348207	2.00	1.72	
53 n-Heptane	71	10.451	10.451	0.000	93	330721	2.00	1.77	
54 1,2-Dichloropropane	63	10.461	10.461	0.000	88	298914	2.00	1.65	
55 Trichloroethene	130	10.521	10.521	0.000	98	532969	2.00	2.04	
56 Dibromomethane	93	10.575	10.575	0.000	87	391921	2.00	1.79	
57 Dichlorobromomethane	83	10.752	10.752	0.000	98	726129	2.00	1.73	
58 1,4-Dioxane	88	10.774	10.774	0.000	91	103591	2.00	1.41	
59 Methyl methacrylate	41	10.898	10.898	0.000	96	250031	2.00	1.28	
61 4-Methyl-2-pentanone (MIBK	43	11.788	11.788	0.000	98	463212	2.00	1.36	
62 cis-1,3-Dichloropropene	75	11.826	11.826	0.000	94	517375	2.00	1.69	
63 trans-1,3-Dichloropropene	75	12.559	12.559	0.000	99	439885	2.00	1.51	
64 Toluene	91	12.688	12.688	0.000	94	947042	2.00	1.57	
65 1,1,2-Trichloroethane	83	12.753	12.753	0.000	97	305562	2.00	1.63	
66 2-Hexanone	58	13.201	13.201	0.000	93	234436	2.00	1.37	
67 Chlorodibromomethane	129	13.470	13.470	0.000	97	740544	2.00	1.84	
68 n-Octane	85	13.476	13.476	0.000	92	374303	2.00	1.81	
69 Ethylene Dibromide	107	13.761	13.761	0.000	99	617023	2.00	1.76	
70 Tetrachloroethene	129	13.875	13.875	0.000	95	447050	2.00	1.90	
71 Chlorobenzene	112	14.764	14.764	0.000	95	882168	2.00	1.79	
72 Ethylbenzene	91	15.083	15.083	0.000	98	1141701	2.00	1.48	
73 m-Xylene & p-Xylene	91	15.255	15.255	0.000	98	1748262	4.00	2.90	
74 Bromoform	173	15.665	15.665	0.000	97	854826	2.00	1.87	
75 Styrene	104	15.724	15.724	0.000	96	699570	2.00	1.61	
76 n-Nonane	57	15.746	15.746	0.000	89	595355	2.00	1.64	
77 o-Xylene	91	15.784	15.784	0.000	99	911141	2.00	1.46	
78 1,1,2,2-Tetrachloroethane	83	16.107	16.107	0.000	99	661193	2.00	1.51	
79 1,2,3-Trichloropropane	110	16.263	16.263	0.000	96	211201	2.00	1.53	
80 Isopropylbenzene	105	16.393	16.393	0.000	96	1290782	2.00	1.56	
81 N-Propylbenzene	120	16.948	16.948	0.000	100	386855	2.00	1.62	
82 2-Chlorotoluene	126	16.975	16.975	0.000	97	379380	2.00	1.72	
83 4-Ethyltoluene	105	17.115	17.115	0.000	98	1236706	2.00	1.49	
84 1,3,5-Trimethylbenzene	120	17.202	17.202	0.000	95	551341	2.00	1.60	
85 Alpha Methyl Styrene	118	17.444	17.444	0.000	89	524775	2.00	1.56	
86 n-Decane	57	17.568	17.568	0.000	93	634021	2.00	1.47	
87 tert-Butylbenzene	119	17.655	17.655	0.000	94	1226350	2.00	1.58	
88 1,2,4-Trimethylbenzene	105	17.671	17.671	0.000	95	1061916	2.00	1.51	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
89 1,3-Dichlorobenzene	146	17.941	17.941	0.000	96	968310	2.00	1.75	
90 sec-Butylbenzene	105	17.951	17.951	0.000	98	1563104	2.00	1.58	
91 Benzyl chloride	91	18.027	18.027	0.000	99	944191	2.00	1.51	
92 1,4-Dichlorobenzene	146	18.038	18.038	0.000	96	980551	2.00	1.77	
93 4-Isopropyltoluene	119	18.135	18.135	0.000	97	1417040	2.00	1.56	
94 1,2,3-Trimethylbenzene	105	18.178	18.178	0.000	96	933610	2.00	1.55	
95 1,2-Dichlorobenzene	146	18.420	18.420	0.000	98	927355	2.00	1.75	
96 n-Butylbenzene	91	18.598	18.598	0.000	98	1191741	2.00	1.49	
99 Undecane	57	18.976	18.976	0.000	94	620829	2.00	1.37	
100 1,2-Dibromo-3-Chloropropan	157	19.051	19.051	0.000	94	337980	2.00	1.55	
102 1,2,4,5-Tetramethylbenzene	119	19.396	19.396	0.000	98	1531756	2.00	1.56	
104 Dodecane	57	20.065	20.065	0.000	92	542307	2.00	1.26	
105 1,2,4-Trichlorobenzene	180	20.178	20.178	0.000	93	852102	2.00	1.63	
106 Naphthalene	128	20.302	20.302	0.000	99	1418854	2.00	1.37	
107 Hexachlorobutadiene	225	20.534	20.534	0.000	92	928913	2.00	1.72	
108 1,2,3-Trichlorobenzene	180	20.577	20.577	0.000	94	797317	2.00	1.83	
109 2-Methylnaphthalene	142	21.370	21.370	0.000	98	774605	4.60	3.54	
110 1-Methylnaphthalene	142	21.559	21.559	0.000	99	659666	4.60	3.58	
S 111 Xylenes, Total	100				0		6.00	4.36	
S 112 1,2-Dichloroethene, Total	1				0		4.00	4.08	

Reagents:

40CV101P_00046	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

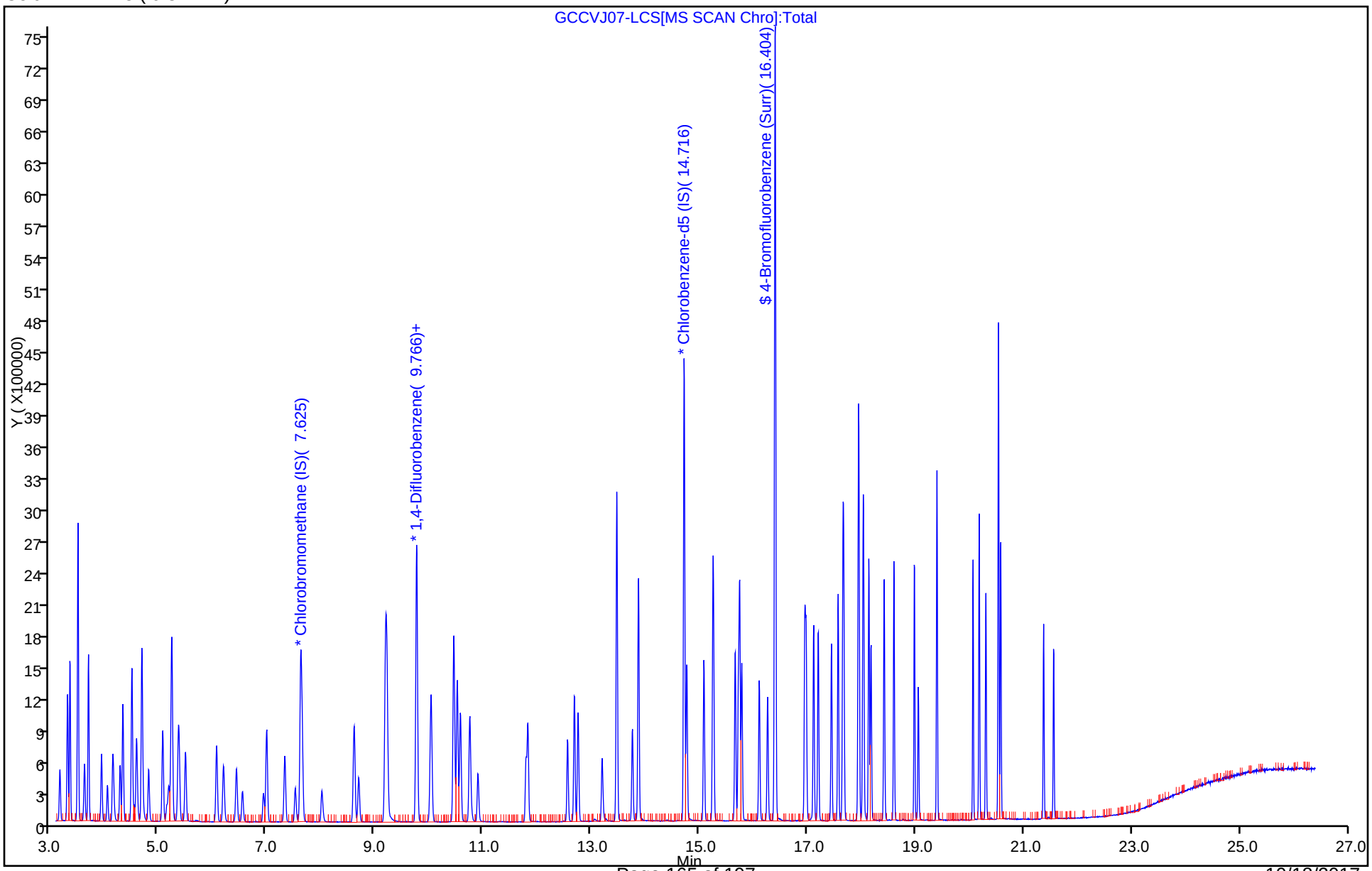
Report Date: 09-Oct-2017 10:31:37 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Laboratories

Data File: \\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GCCVJ07-LCS.d

Injection Date:	07-Oct-2017 11:57:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	LCS			Worklist Smp#:	1002
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\GCCVJ07-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 07-Oct-2017 11:57:30 ALS Bottle#: 15 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006279-002
Misc. Info.: P46
Operator ID: 403648 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20171006-6279.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 09-Oct-2017 10:31:32 Calib Date: 20-Sep-2017 09:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 09-Oct-2017 10:31:31

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.96	99.09

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1

SDG No.:

Instrument ID: MG Start Date: 09/19/2017 17:16

Analysis Batch Number: 14546 End Date: 09/20/2017 09:06

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-14546/1		09/19/2017 17:16	1	GBFBI18.D	RTX-5 0.32(mm)
IC 140-14546/3		09/19/2017 18:30	1	GI18ICL01.D	RTX-5 0.32(mm)
140-9223-A-1 MDLV		09/19/2017 18:30	1		RTX-5 0.32(mm)
IC 140-14546/5		09/19/2017 19:54	1	GI18ICL03.D	RTX-5 0.32(mm)
140-9223-A-3 MDLV		09/19/2017 19:54	1		RTX-5 0.32(mm)
IC 140-14546/6		09/19/2017 20:37	1	GI18ICL04.D	RTX-5 0.32(mm)
140-9223-A-4 MDLV		09/19/2017 20:37	1		RTX-5 0.32(mm)
IC 140-14546/7		09/19/2017 21:20	1	GI18ICL05.D	RTX-5 0.32(mm)
140-9223-A-5 MDLV		09/19/2017 21:20	1		RTX-5 0.32(mm)
ICIS 140-14546/8		09/19/2017 22:02	1	GI18ICL06.D	RTX-5 0.32(mm)
IC 140-14546/9		09/19/2017 22:45	1	GI18ICL07.D	RTX-5 0.32(mm)
IC 140-14546/10		09/19/2017 23:27	1	GI18ICL08.D	RTX-5 0.32(mm)
IC 140-14546/11		09/20/2017 00:10	1	GI18ICL09.D	RTX-5 0.32(mm)
ICV 140-14546/13		09/20/2017 01:35	1	GI18ICV.D	RTX-5 0.32(mm)
ZZZZZ		09/20/2017 03:43	1		RTX-5 0.32(mm)
IC 140-14546/17		09/20/2017 09:06	1	GI18ICL02R.D	RTX-5 0.32(mm)
140-9223-A-2 MDLV		09/20/2017 09:06	1		RTX-5 0.32(mm)

170919.ZZZ

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 101 mL	31.8	9/19/2017	5:16:51 PM
MDL	8 - 52 mL	30.2	9/19/2017	5:47:42 PM
ICL01	8 - 100 mL	30.4	9/19/2017	6:29:58 PM
ICL02	8 - 202 mL	30.1	9/19/2017	7:12:27 PM
ICL03	9 - 200 mL	28	9/19/2017	7:54:55 PM
ICL04	10 - 201 mL	30.4	9/19/2017	8:37:21 PM
ICL05	11 - 200 mL	31.5	9/19/2017	9:19:58 PM
ICL06	12 - 200 mL	31.1	9/19/2017	10:02:30 PM
ICL07	13 - 200 mL	27.8	9/19/2017	10:45:15 PM
ICL08	14 - 201 mL	25.5	9/19/2017	11:27:39 PM
ICL09	15 - 201 mL	29.9	9/20/2017	12:09:59 AM
BLK	16 - 500 mL	31.4	9/20/2017	12:53:00 AM
ICV	1 - 101 mL	35.6	9/20/2017	1:35:26 AM
LCS	2 - 100 mL	29.4	9/20/2017	2:17:46 AM
BLK	16 - 500 mL	31	9/20/2017	3:00:02 AM
BLK	16 - 501 mL	30.8	9/20/2017	3:43:33 AM
ICL02R	9 - 101 mL	24.1	9/20/2017	9:06:07 AM

MG WL 6110 ICAL

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 18 & KNOX-MS-0023, Rev 2

Analysis Date: 9/19/17	Instrument: HG	Chrom WL #: 6/10	TALS Batch & Event #	TO14/15: 1242 / 14546	
				DOD: 1244 / 14548	OHIO: 14547 1243

Chrom/Worklist Review	1st	Comments	2nd
1. Re-read each Limit Group [method editor-limit groups]	✓		na
2. Verify LODV in Chrom [method editor -> edit -> MDL]	✓		na
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]	✓		✓
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]	✓		✓
5. Did BFB meet tune criteria? [F8]	✓		✓
6. Were all standards injected within 24 hr of BFB? [F7]	✓	(5) 9/20/17th	✓
7. High point checked for saturation and point removed if so? [Chrom]	✓	1245-(5) high ok	✓
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]	✓		NA
9. RT for each IS ±20 sec avg. RT? [F6 IstdRec]	✓		✓
10. Area for each IS ± 40% avg. area? [F6 IstdRec]	✓		✓
11. Each analyte ± 0.06 RRT of avg. RRT? [F6 - RRT]	✓		✓
12. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/ sec-butylbenzene/1,2,3-trimethylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		NA
• 1,2,4- and 1,2,3-trichlorobenzenes	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	✓		NA

MLG Review	TO	DOD	OH	Comments	TO-	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1& 2 methylnaphthalene ≤ 50% [F6 ∑]	✓	✓	✓		✓	✓	✓
15. Were at least 5 levels of each compound analyzed? [F6]	✓	✓	✓		✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.? [F6]	✓	✓	✓		✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? (Note: Ohio does not allow quad) [F6]	✓	NA	NA	fm 9/21/17	NA ✓	NA	NA
18. If curves were used, is correlation coefficient ≥0.990? [F6]	✓	NA	NA		✓	NA	NA
19. Is the intercept less than the RL for each curve? [F6]	✓	NA	NA		✓	NA	NA
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntrl-C, details]	NA	→	na		NA	NA	na
21. Is low point RSE ≤ 50 %? [F6]	✓	✓	✓		✓	✓	✓
22. Is the second source analysis within limits? [F8 - icv]	✓	✓	✓		✓	✓	✓

1245 MB7

Mecl2 @ 53%, 1245 @ 61%

Analyst/Date: 9/20/17	2nd Level Reviewer/Date: AVS 9/21/17

TALS Review	TO	DOD	OH	Comments	TO	DOD	OH
23. Upload ICAL	✓				na	na	na
24. Graphics uploaded? [paperclip]	✓	✓	✓		✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events –'Fix ICAL linkage' if needed]	✓	✓	✓		✓	✓	✓
26. Runs linked to BFB? [QC Links]	✓	✓	✓		✓	✓	✓
27. Run Checklist and acknowledge findings [F8]	✓	✓	✓		✓	✓	✓
28. If criteria not met, was a NCM generated?	NA	→			NA	→	
29. After review in TALS, approve the method in TALS.	na	na	na		✓	✓	✓
30. After verifying TALS is correct, lock method in Chrom <resolve any error issues>		na	na		✓	✓	✓
31. Checklist & Entech report scanned, attached & assigned properly?		na	na		✓	✓	✓

Analyst/date: 9/20/17	2nd Level Reviewer/date: AVS 9/21/17
Comments:	Comments: Reran LV2 due to 3-chloropropene contamination

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-9485-1

SDG No.:

Instrument ID: MG Start Date: 10/07/2017 11:26

Analysis Batch Number: 15018 End Date: 10/08/2017 04:54

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-15018/1		10/07/2017 11:26	1	GBFBJ07.D	RTX-5 0.32(mm)
CCVIS 140-15018/2		10/07/2017 11:57	1	GCCVJ07.D	RTX-5 0.32(mm)
LCS 140-15018/1002		10/07/2017 11:57	1	GCCVJ07-LCS.d	RTX-5 0.32(mm)
ZZZZZ		10/07/2017 14:20	1		RTX-5 0.32(mm)
MB 140-15018/5		10/07/2017 15:03	1	GMB500J07.D	RTX-5 0.32(mm)
140-9485-1		10/07/2017 18:36	1	GJ08P105.D	RTX-5 0.32(mm)
140-9485-2		10/07/2017 19:19	1	GJ08P106.D	RTX-5 0.32(mm)
140-9485-3		10/07/2017 20:02	1	GJ08P107.D	RTX-5 0.32(mm)
ZZZZZ		10/07/2017 20:45	1		RTX-5 0.32(mm)
ZZZZZ		10/07/2017 21:28	1		RTX-5 0.32(mm)
ZZZZZ		10/07/2017 22:11	82.45		RTX-5 0.32(mm)
ZZZZZ		10/07/2017 22:54	82.45		RTX-5 0.32(mm)
ZZZZZ		10/08/2017 02:33	1.6		RTX-5 0.32(mm)
ZZZZZ		10/08/2017 03:20	1.61		RTX-5 0.32(mm)
ZZZZZ		10/08/2017 04:07	1.5		RTX-5 0.32(mm)
ZZZZZ		10/08/2017 04:54	1.55		RTX-5 0.32(mm)

171007.ZZZ

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 101 mL	35.5	10/7/2017	11:26:18 AM
CCVIS	10 - 101 mL	21.2	10/7/2017	11:57:34 AM
FLUSH	16 - 101 mL	35.5	10/7/2017	1:48:15 PM
MB200	16 - 200 mL	35.3	10/7/2017	2:20:56 PM
MB500	16 - 500 mL	34.9	10/7/2017	3:03:52 PM
9471-01	1 - 81 mL	17.1	10/7/2017	3:47:11 PM
9471-02	2 - 81 mL	17.6	10/7/2017	4:30:29 PM
9472-01	3 - 76 mL	16.5	10/7/2017	5:11:46 PM
9472-02	4 - 76 mL	17	10/7/2017	5:53:55 PM
9485-01	5 - 101 mL	9.3	10/7/2017	6:36:31 PM
9485-02	6 - 21 mL	12.2	10/7/2017	7:19:20 PM
9485-03	7 - 51 mL	10.7	10/7/2017	8:02:17 PM
9500-01	8 - 51 mL	10.7	10/7/2017	8:45:18 PM
9500-02	9 - 51 mL	8.3	10/7/2017	9:28:16 PM
143985-01	10 - 51 mL	13.6	10/7/2017	10:11:11 PM
143985-01	10 - 51 mL	13.4	10/7/2017	10:53:59 PM
9501-01	11 - 11 mL	14.6	10/7/2017	11:36:47 PM
9501-02	12 - 21 mL	15	10/8/2017	12:19:53 AM
9501-03	13 - 51 mL	13.6	10/8/2017	1:03:00 AM
BLK	16 - 501 mL	34	10/8/2017	1:46:49 AM
9471-01R	1 - 801 mL	14.4	10/8/2017	2:33:29 AM
9471-002	2 - 801 mL	14.8	10/8/2017	3:20:19 AM
9472-01R	3 - 750 mL	14	10/8/2017	4:07:00 AM
9472-02R	4 - 776 mL	14.6	10/8/2017	4:54:14 AM
9501-01R	11 - 21 mL	14.4	10/8/2017	5:36:58 AM
9501-02R	12 - 61 mL	14.8	10/8/2017	6:19:46 AM
9501-03R	13 - 68 mL	13.4	10/8/2017	7:02:29 AM
BLK	16 - 501 mL	33.3	10/8/2017	7:47:36 AM

MG WL 6279

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 18 & KNOX-MS-0023, Rev 2

Instrument/Date	MG 10/9/17		Routine	DOD	OHIO
CCAL Chrom WL #	6279	CCAL Batch #	15018	15028	N/A
ICAL Chrom WL #	6110	ICAL Batch # / Event #	14546 / 1242	14548 / 1244	

Chrom Review	1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	✓		na
2. Did BFB meet tune criteria? [F8]	✓	□ [Failed TO-14A, but passes TO-15] (NCM#)	✓
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICal File batch #/start/end Cal date/time)? [F8]	✓		✓
4. Is the %D ≤ 30% for all target analytes? MEK, MIBK, 2Hex [≤ 50% for 1&2 methylnaphthalene] naphth. n-butanol [Chrom-F8] [TALS-Sample Results Tab]	✓	□ CCV - %D - LCS criteria met (NCM# 9807) □ CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM#)	✓
5. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene/1,2,3-trimethylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	N/A		NA
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
6. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	NA		NA
7. Has the RT been updated to the method?	✓		✓
Analyst/date MG 10/9/17		**2nd Level Reviewer/date** ✓ 10/11/17	
8. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]	✓		✓
9. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]	✓		✓
10. Were all samples/QC analyzed within 24 hr of BFB? [F7]	✓		✓
11. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). *If no, list blank ID:*	✓	□ Method Blank – Report, ND (NCM#) □ Method Blank – Report, 10X (NCM#)	✓
12. All runs - peaks ID'd correctly and false positives removed?	✓		✓
13. If manual integrations performed, are they properly performed, correctly ID'd, baseline clearly identified, and reason given?	✓		✓
14. IS/Surr within limits? *List samples and reason (e.g., 1 thru 5):* [Batch Results IS & SUR Tab] Sample / Reason / Sample / Reason	✓	□ (1) Surrogate – Matrix (NCM#) □ (2) Surrogate – High, ND (NCM#) □ (3) ISTD – RA/RA Concurs (NCM#) □ (4) Surrogate –RX concur, Report both (NCM#) □ (5) ISTD – Matrix, DL required (NCM#)	✓
15. Samples outside calibration range scheduled for dilution?	NA	□ ICAL – Range Exceeded; Minimum Dilution	✓
Chrom Review	**1st**	**If No, why is data reportable?**	**2nd**
16. For first analysis that is at a dilution, is highest target analyte >20% cal range? *List samples and reason:* Sample / Reason / Sample / Reason	✓	□ (1) Reporting Limit – Dilution, Matrix (NCM#) □ (2) Reporting Limit – Dilution, Non-Target (NCM#) □ (3) Issues with initial collection volume; see DRC.	✓
17. RIC inspected for proper integration for TPH?	NA		NA
18. Obvious non-TPH peaks excluded?			
19. Individual TPH peak area < octane high point area?	✓		✓

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 18 & KNOX-MS-0023, Rev 2

TALS Review	1st	If No, why is data reportable?	2nd
20. Graphics uploaded? [paperclip]	✓		✓
21. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	✓		na
22. Sample special instructions verified?	✓		✓
23. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	✓	□ Marginal Exceedances - Within ME Limits and Random; Report (NCM# ___) □ LCS/LCSD - %R High (NCM#_____)	✓
24. Suffixes assigned properly (DL/RE)? [Sample List Tab]	✓		✓
25. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	✓		✓
26. Analytes over calibration range set to secondary [Conditions Review Tab]	✓		✓
27. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	✓		✓
28. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) *(If DUP not reported - set to 'Acceptable' for each job)*	✓		✓
29. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	✓	**500 mL blank ID:** (5) **200 mL blank ID:** (4)	✓
30. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	✓		✓
31. Correct ICV linked to each MB? [QC Links]	✓		✓
32. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	✓		✓
33. Run Checklist and acknowledge findings [TCR]	✓		✓
34. Runs set to 1st level review?	✓	Runs set to 2nd level review?	✓
35. QC checker run and items addressed?	-na-		✓
36. Checklist & Entech report scanned, attached & assigned properly?	-na-		✓

Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed
>90	5
71 - 90	4
51 - 70	3
31 - 50	2
11 - 30	1
<11	0

Analyst:	Date: 10/10/17	2nd Level Reviewer :	Date: 10/11/17
Comments:		Comments:	

Example Calculation:

On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF

620-143985

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9059-1

SDG No.:

Client Sample ID: 10746 | Lab Sample ID: 140-9059-1

Matrix: Air | Lab File ID: JH22LOT9059.D

Analysis Method: TO-15 | Date Collected: 08/18/2017 16:35

Sample wt/vol: 200(mL) | Date Analyzed: 08/23/2017 05:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 13775 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	NC		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	NC		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	NC		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	NC		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9059-1

SDG No.:

Client Sample ID: 10746 | Lab Sample ID: 140-9059-1

Matrix: Air | Lab File ID: JH22LOT9059.D

Analysis Method: TO-15 | Date Collected: 08/18/2017 16:35

Sample wt/vol: 200(mL) | Date Analyzed: 08/23/2017 05:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 13775 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	NC		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	NC		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	NC		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9059-1

SDG No.:

Client Sample ID: 10746 | Lab Sample ID: 140-9059-1

Matrix: Air | Lab File ID: JH22LOT9059.D

Analysis Method: TO-15 | Date Collected: 08/18/2017 16:35

Sample wt/vol: 200(mL) | Date Analyzed: 08/23/2017 05:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 13775 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	NC		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-9059-1

SDG No.:

Client Sample ID: 10746 Lab Sample ID: 140-9059-1

Matrix: Air Lab File ID: JH22LOT9059.D

Analysis Method: TO-15 Date Collected: 08/18/2017 16:35

Sample wt/vol: 200(mL) Date Analyzed: 08/23/2017 05:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 13775 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170819-5821.b\JH22LOT9059.D				
Lims ID:	140-9059-A-1				
Client ID:	10746				
Sample Type:	Client				
Inject. Date:	23-Aug-2017 05:10:30	ALS Bottle#:	1	Worklist Smp#:	26
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0005821-026				
Misc. Info.:	10746				
Operator ID:	007126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20170819-5821.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	23-Aug-2017 10:49:29	Calib Date:	17-Aug-2017 22:56:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20170817-5809.b\JICH17L9.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK032				
First Level Reviewer: tajh		Date:	23-Aug-2017 10:49:29		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.716	9.716	0.000	76	322968	4.00	
* 2 1,4-Difluorobenzene	114	11.836	11.841	-0.005	95	1857207	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.462	16.462	0.000	86	1691758	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	18.060	18.065	-0.005	94	1006545	3.79	
11 Acetaldehyde	44	4.573	4.583	-0.010	95	13332	NC	
31 Methylene Chloride	84	7.037	7.031	0.006	91	12013	0.1210	
35 2-Methylpentane	43	7.893	7.914	-0.021	9	1165	NC	
40 Hexane	56	8.947	8.925	0.022	91	2330	0.0333	
76 Tetrachloroethene	129	15.655	15.644	0.011	90	3044	0.0167	
77 2,3-Dimethylheptane	43	16.500	16.494	0.006	1	112	NC	
103 Butylcyclohexane	83	19.663	19.657	0.006	1	212	NC	
104 2,3-Dihydroindene	117	19.856	19.856	0.000	1	434	NC	
111 1,2,4,5-Tetramethylbenzene	119	20.749	20.722	0.027	1	222	NC	
112 1,2,3,5-Tetramethylbenzene	119	20.749	20.782	-0.033	1	222	NC	
113 1,2,3,4-Tetramethylbenzene	119	21.201	21.206	-0.005	1	154	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

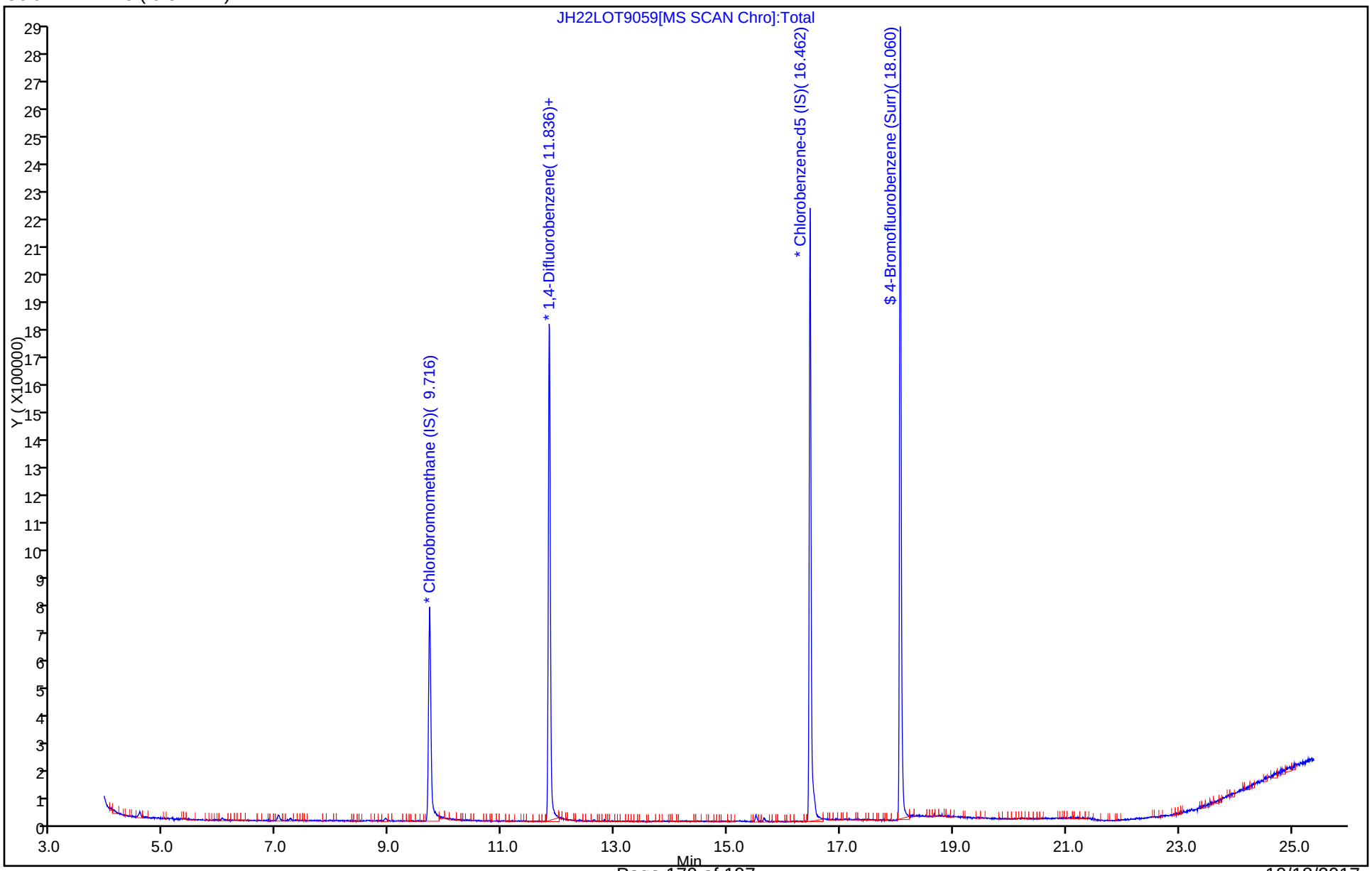
Report Date: 23-Aug-2017 10:49:59 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170819-5821.b\JH22LOT9059.D

Injection Date:	23-Aug-2017 05:10:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-9059-A-1	Lab Sample ID:	140-9059-1	Worklist Smp#:	26
Client ID:	10746				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

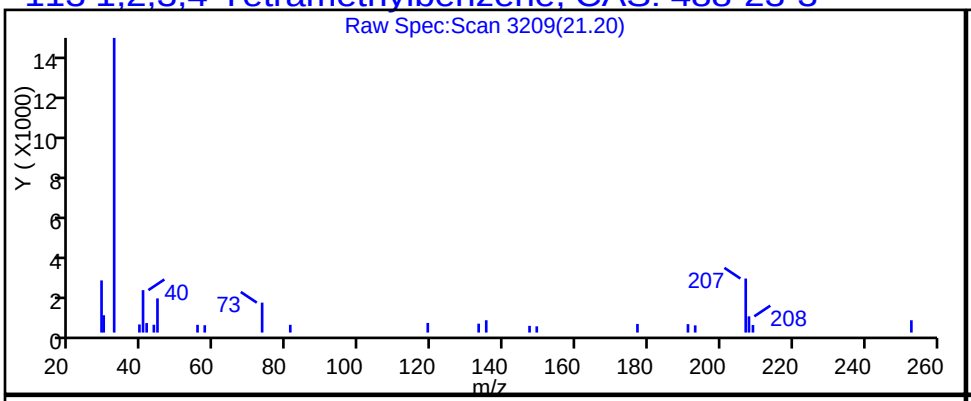
Column: RTX-5 (0.32 mm)

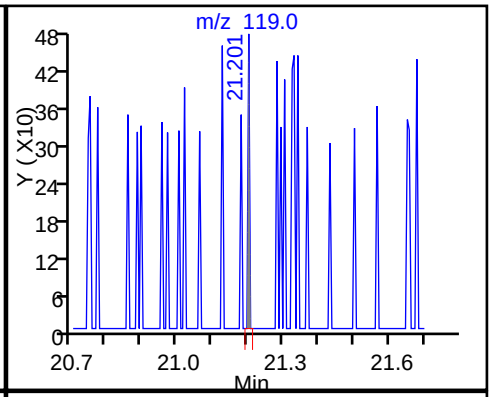


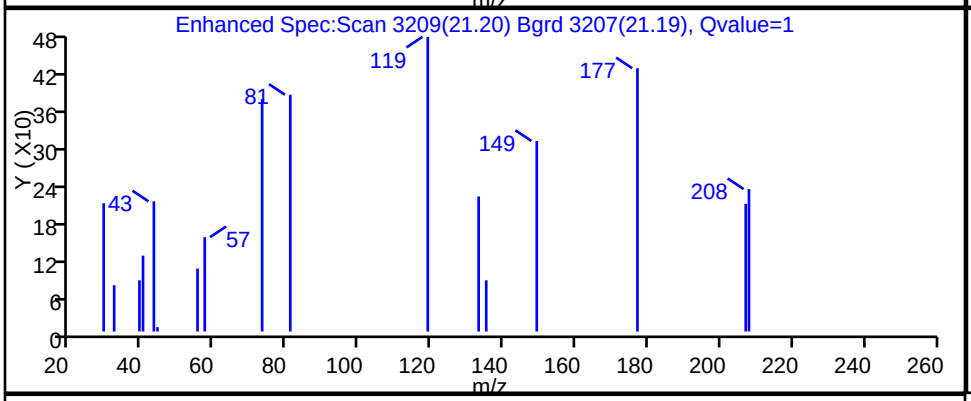
TestAmerica Knoxville

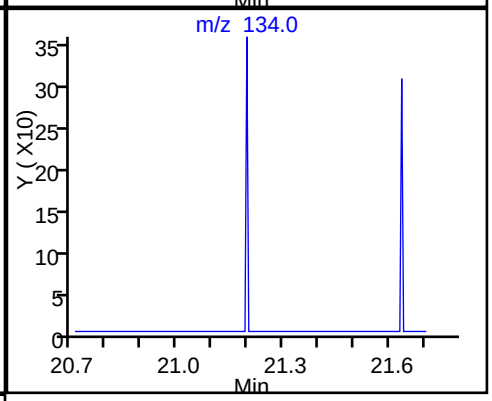
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170819-5821.b\JH22LOT9059.D		
Injection Date:	23-Aug-2017 05:10:30	Instrument ID:	MJ
Lims ID:	140-9059-A-1	Lab Sample ID:	140-9059-1
Client ID:	10746		
Operator ID:	007126	ALS Bottle#:	1 Worklist Smp#: 26
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

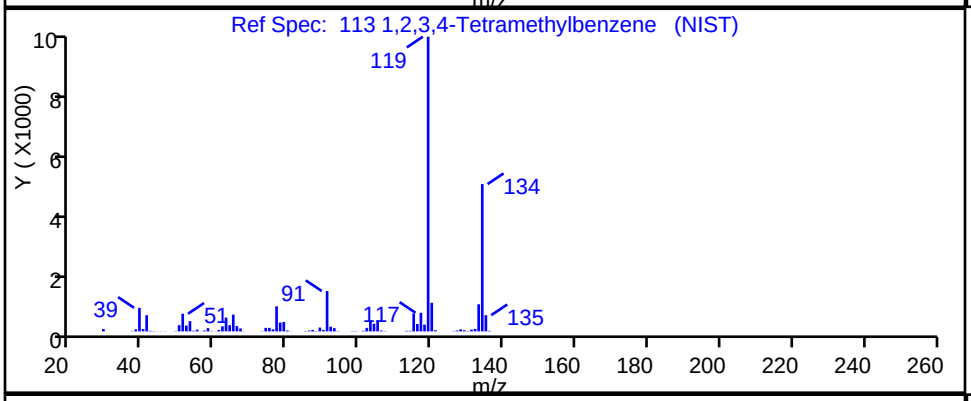
113 1,2,3,4-Tetramethylbenzene, CAS: 488-23-3

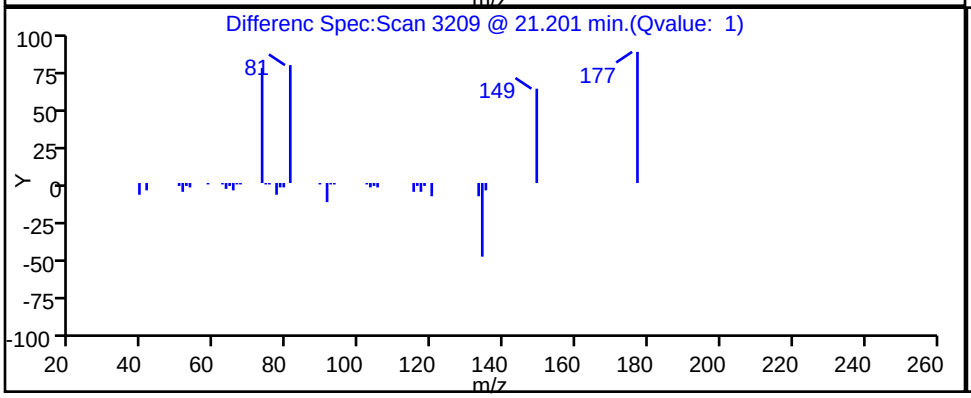


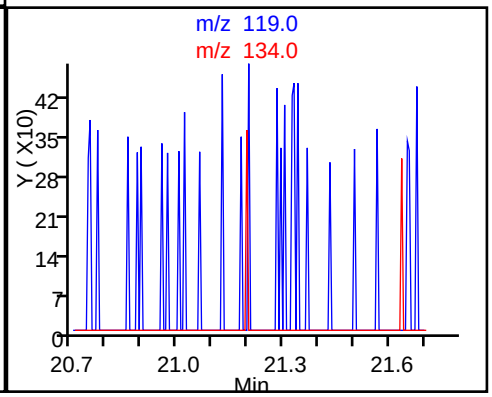








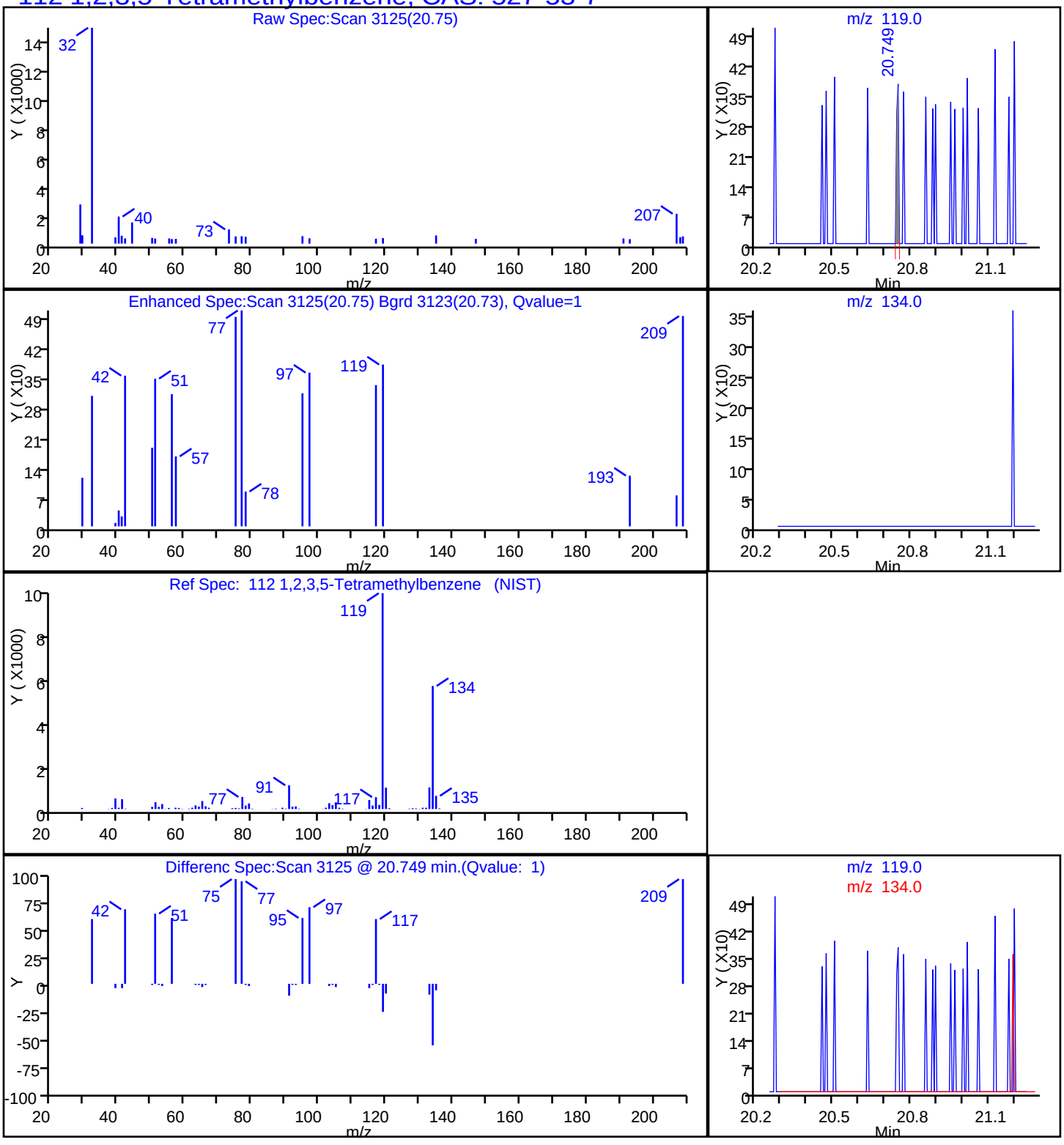




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170819-5821.b\JH22LOT9059.D				
Injection Date:	23-Aug-2017 05:10:30	Instrument ID:	MJ		
Lims ID:	140-9059-A-1	Lab Sample ID:	140-9059-1		
Client ID:	10746				
Operator ID:	007126	ALS Bottle#:	1	Worklist Smp#:	26
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

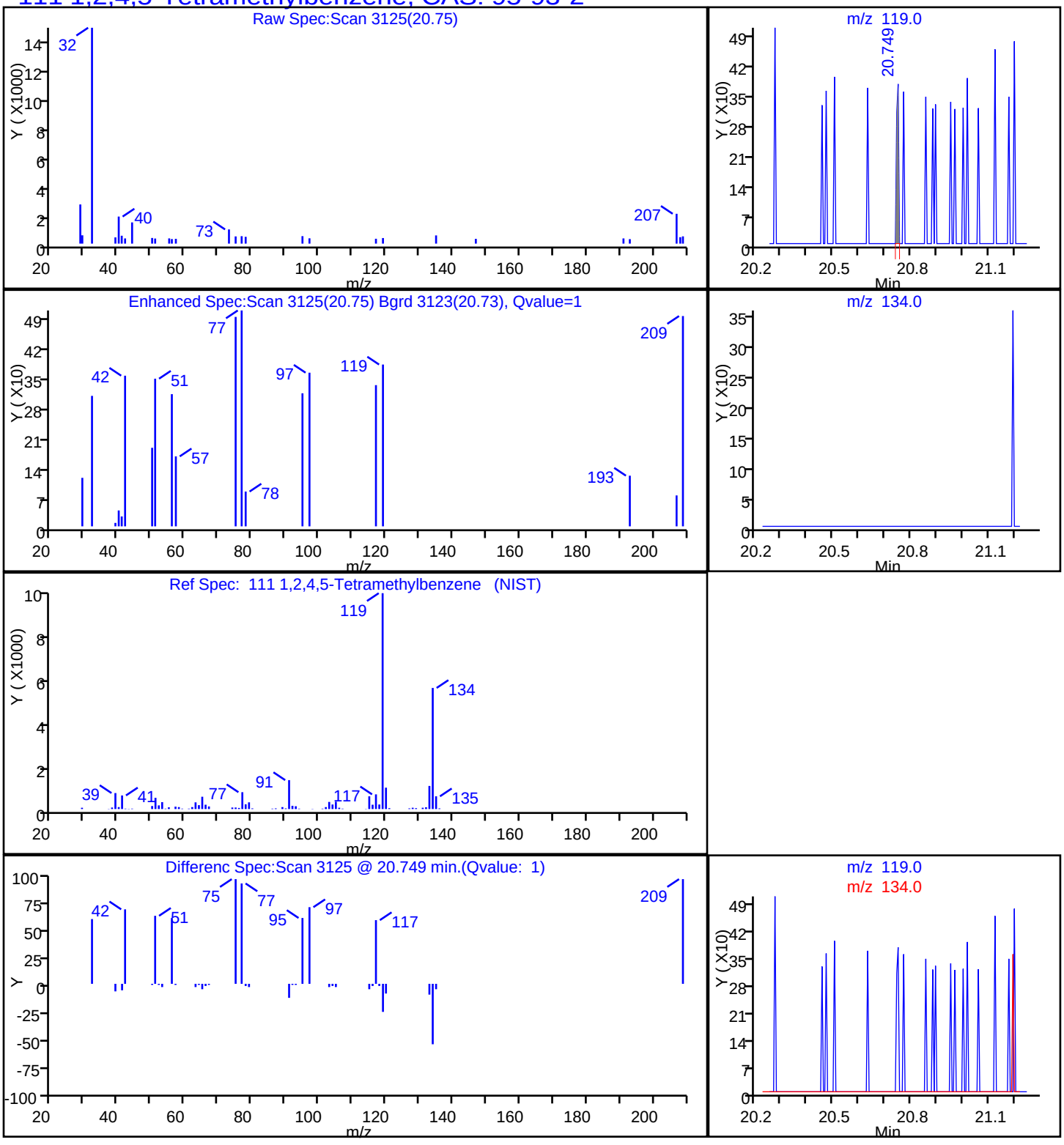
112 1,2,3,5-Tetramethylbenzene, CAS: 527-53-7



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170819-5821.b\JH22LOT9059.D				
Injection Date:	23-Aug-2017 05:10:30	Instrument ID:	MJ		
Lims ID:	140-9059-A-1	Lab Sample ID:	140-9059-1		
Client ID:	10746				
Operator ID:	007126	ALS Bottle#:	1	Worklist Smp#:	26
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

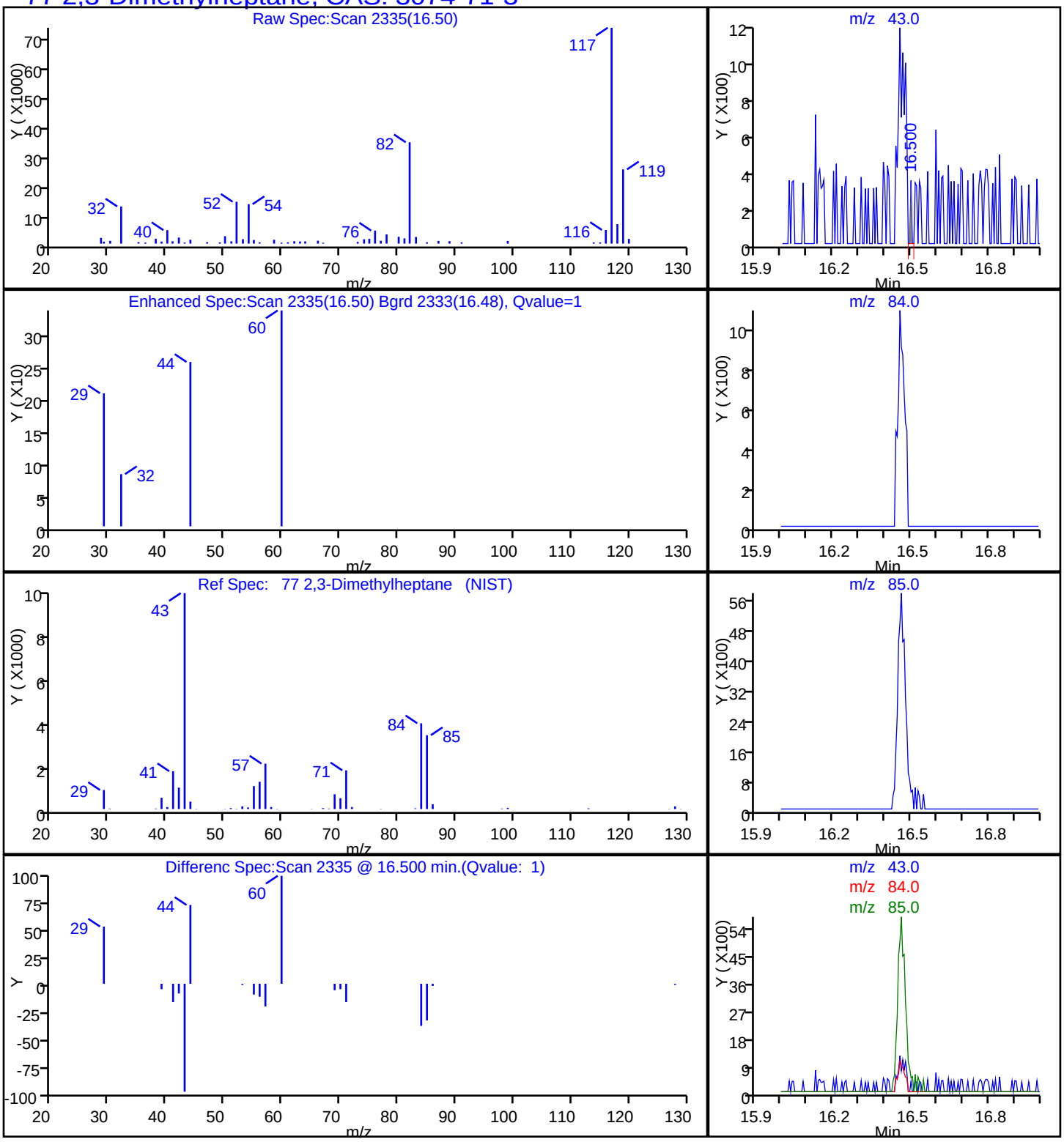
111 1,2,4,5-Tetramethylbenzene, CAS: 95-93-2



TestAmerica Knoxville

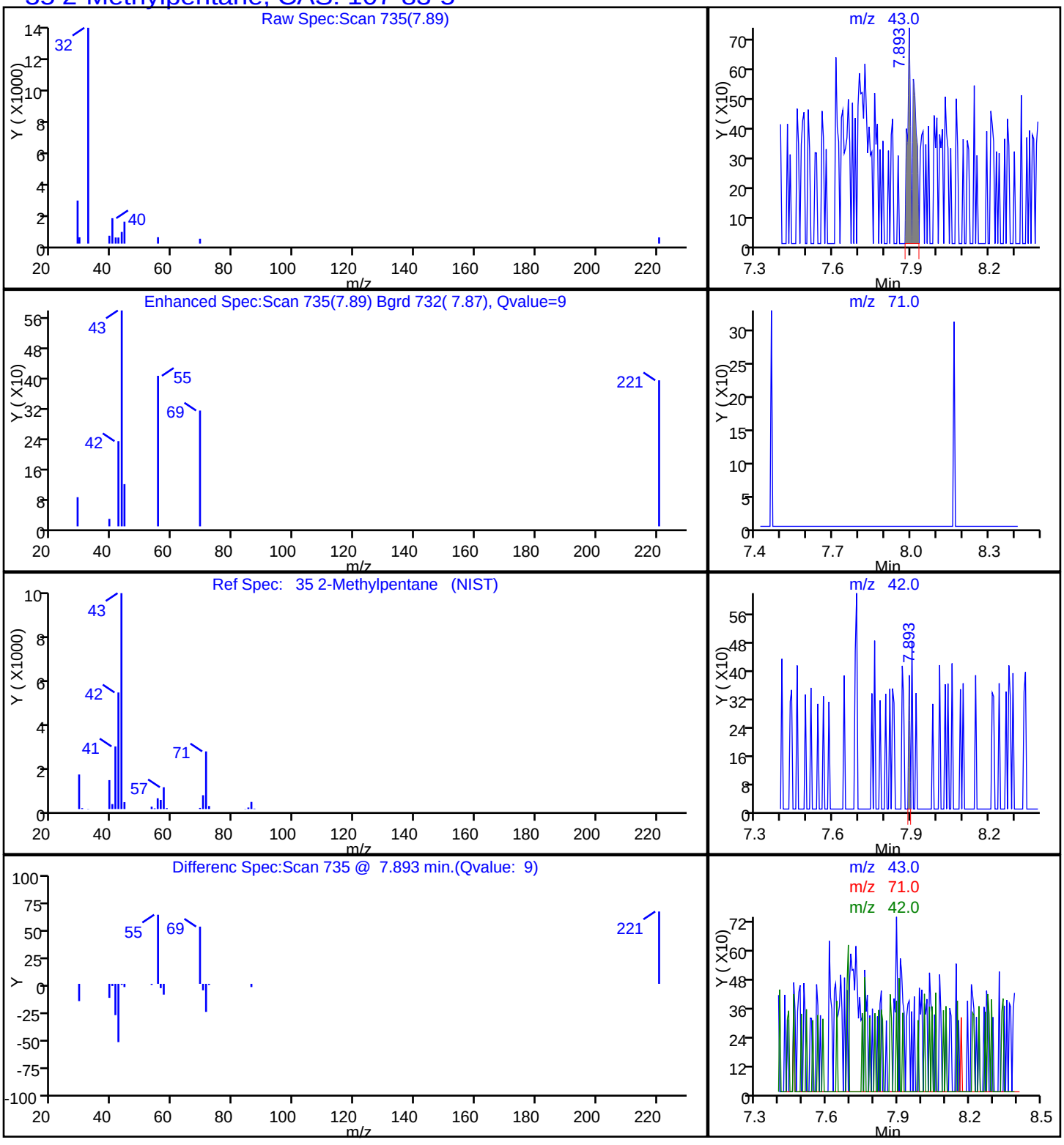
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170819-5821.b\JH22LOT9059.D		
Injection Date:	23-Aug-2017 05:10:30	Instrument ID:	MJ
Lims ID:	140-9059-A-1	Lab Sample ID:	140-9059-1
Client ID:	10746		
Operator ID:	007126	ALS Bottle#:	1 Worklist Smp#: 26
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

77 2,3-Dimethylheptane, CAS: 3074-71-3



Data File: \\ChromNA\Knoxville\ChromData\MJ\20170819-5821.b\JH22LOT9059.D
Injection Date: 23-Aug-2017 05:10:30 Instrument ID: MJ
Lims ID: 140-9059-A-1 Lab Sample ID: 140-9059-1
Client ID: 10746
Operator ID: 007126 ALS Bottle#: 1 Worklist Smp#: 26
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

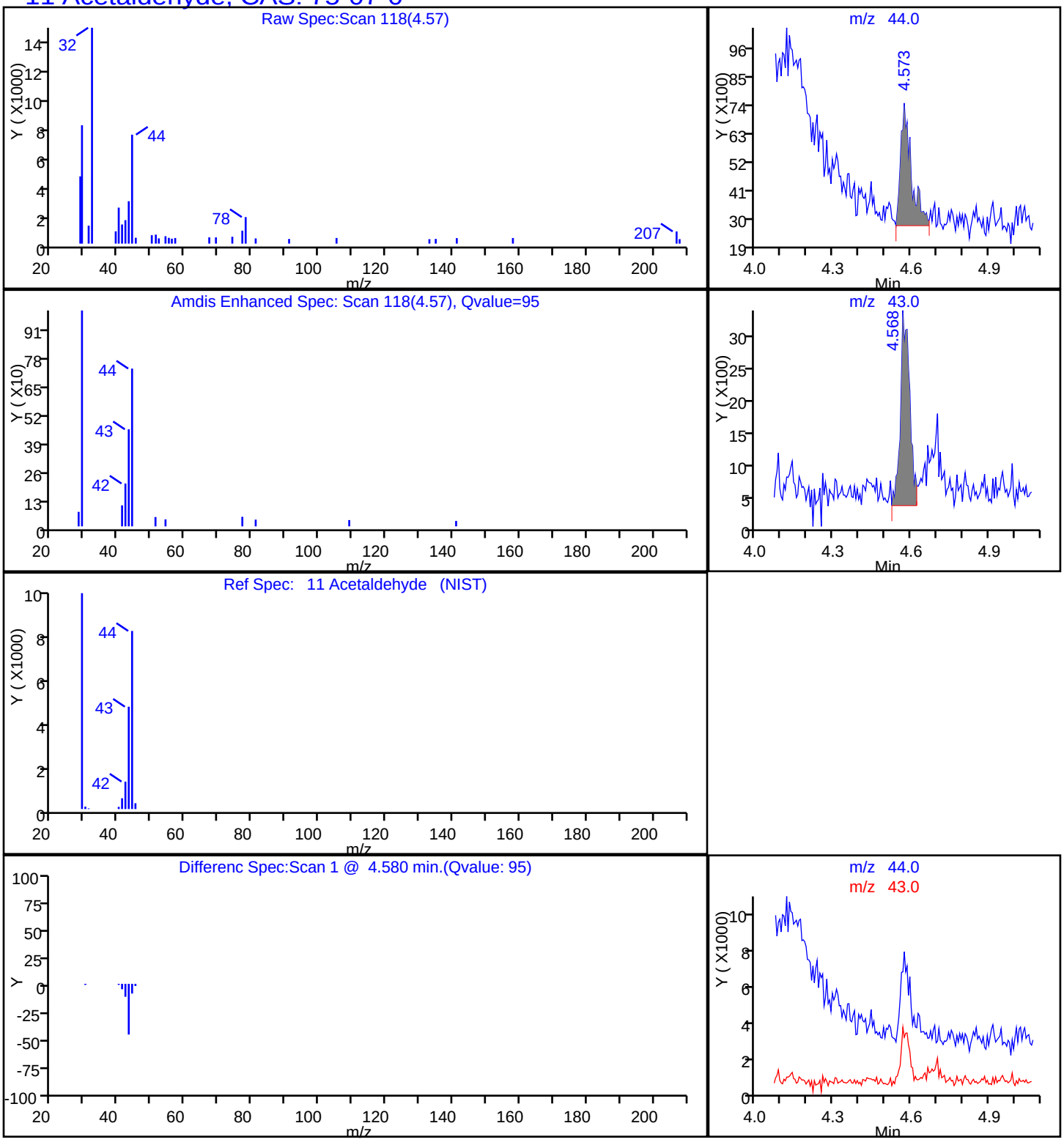
35 2-Methylpentane, CAS: 107-83-5



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170819-5821.b\JH22LOT9059.D		
Injection Date:	23-Aug-2017 05:10:30	Instrument ID:	MJ
Lims ID:	140-9059-A-1	Lab Sample ID:	140-9059-1
Client ID:	10746		
Operator ID:	007126	ALS Bottle#:	1 Worklist Smp#: 26
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

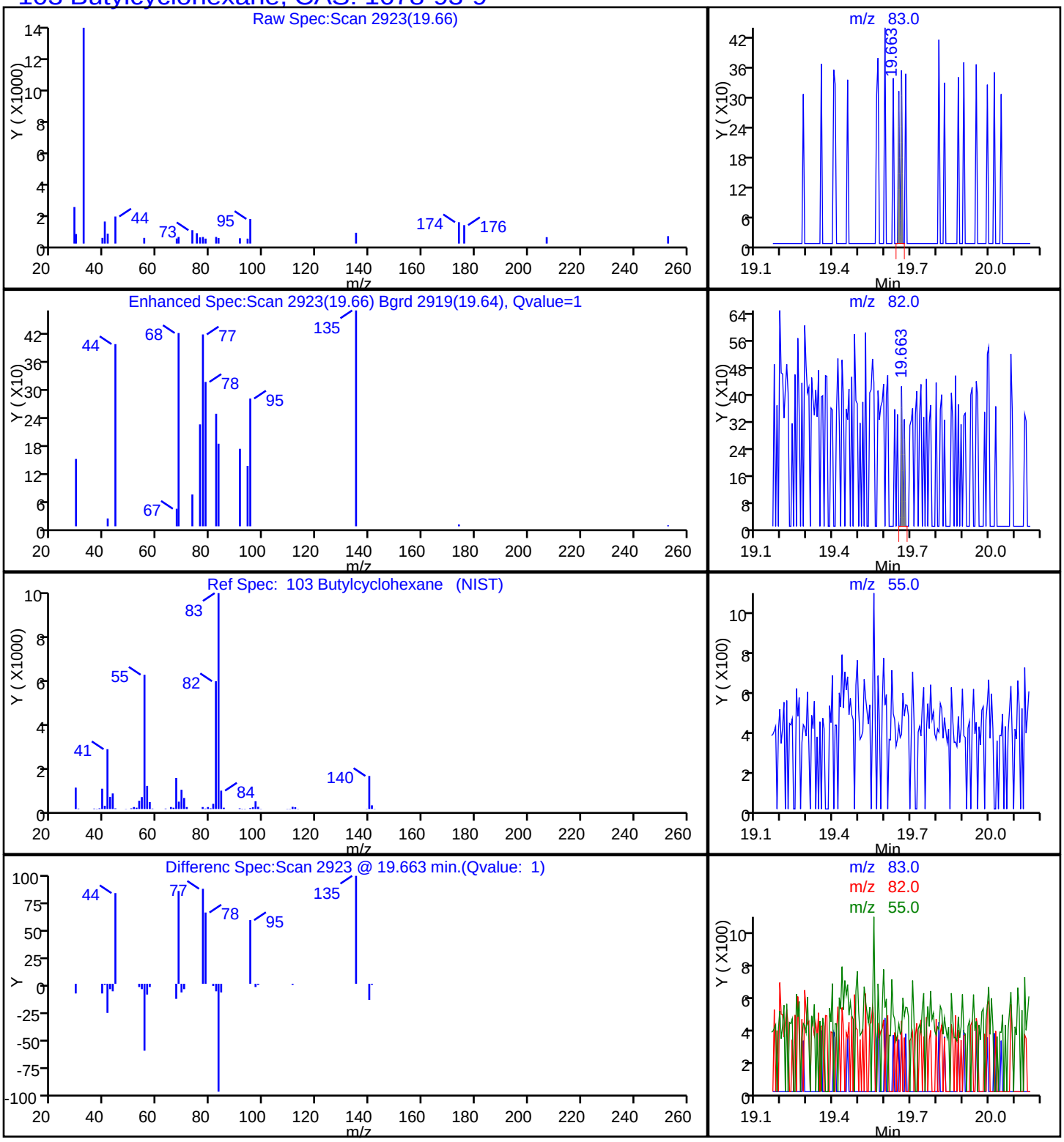
11 Acetaldehyde, CAS: 75-07-0



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170819-5821.b\JH22LOT9059.D		
Injection Date:	23-Aug-2017 05:10:30	Instrument ID:	MJ
Lims ID:	140-9059-A-1	Lab Sample ID:	140-9059-1
Client ID:	10746		
Operator ID:	007126	ALS Bottle#:	1 Worklist Smp#: 26
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

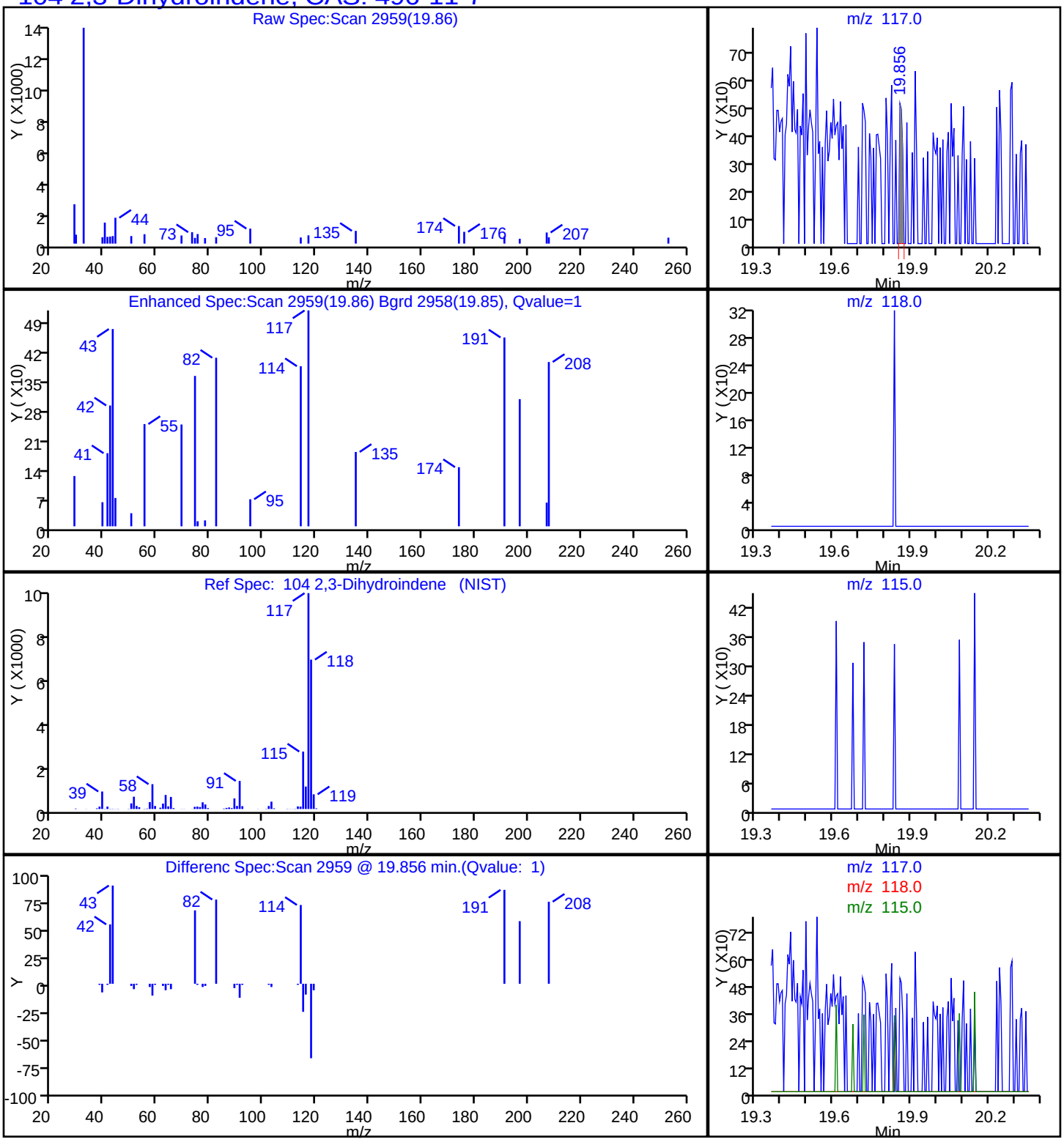
103 Butylcyclohexane, CAS: 1678-93-9



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170819-5821.b\JH22LOT9059.D		
Injection Date:	23-Aug-2017 05:10:30	Instrument ID:	MJ
Lims ID:	140-9059-A-1	Lab Sample ID:	140-9059-1
Client ID:	10746		
Operator ID:	007126	ALS Bottle#:	1 Worklist Smp#: 26
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

104 2,3-Dihydroindene, CAS: 496-11-7



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-9249-1

SDG No.:

Client Sample ID: 10524 Lab Sample ID: 140-9249-8

Matrix: Air Lab File ID: I11L9249.D

Analysis Method: TO-15 Date Collected: 09/10/2017 11:00

Sample wt/vol: 200(mL) Date Analyzed: 09/11/2017 18:45

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 14263 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	NC		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9249-1

SDG No.:

Client Sample ID: 10524 | Lab Sample ID: 140-9249-8

Matrix: Air | Lab File ID: I11L9249.D

Analysis Method: TO-15 | Date Collected: 09/10/2017 11:00

Sample wt/vol: 200(mL) | Date Analyzed: 09/11/2017 18:45

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 14263 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-9249-1

SDG No.:

Client Sample ID: 10524 Lab Sample ID: 140-9249-8

Matrix: Air Lab File ID: I11L9249.D

Analysis Method: TO-15 Date Collected: 09/10/2017 11:00

Sample wt/vol: 200(mL) Date Analyzed: 09/11/2017 18:45

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 14263 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170907-6005.b\I11L9249.D				
Lims ID:	140-9249-A-8				
Client ID:	10524				
Sample Type:	Client				
Inject. Date:	11-Sep-2017 18:45:30	ALS Bottle#:	5	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006005-014				
Misc. Info.:	10524				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20170907-6005.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	12-Sep-2017 10:44:46	Calib Date:	24-Aug-2017 23:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20170818-5819.b\RICH24L9.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK030				
First Level Reviewer: tajh		Date:	12-Sep-2017 09:47:03		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.821	7.827	-0.006	95	287387	4.00	
* 2 1,4-Difluorobenzene	114	9.957	9.957	0.000	97	1650582	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.923	14.923	0.000	93	1455877	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.627	16.627	0.000	79	1219288	4.70	
31 Methylene Chloride	84	5.600	5.605	-0.005	96	12546	0.1285	
35 2-Methylpentane	43	6.462	6.430	0.032	1	490	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

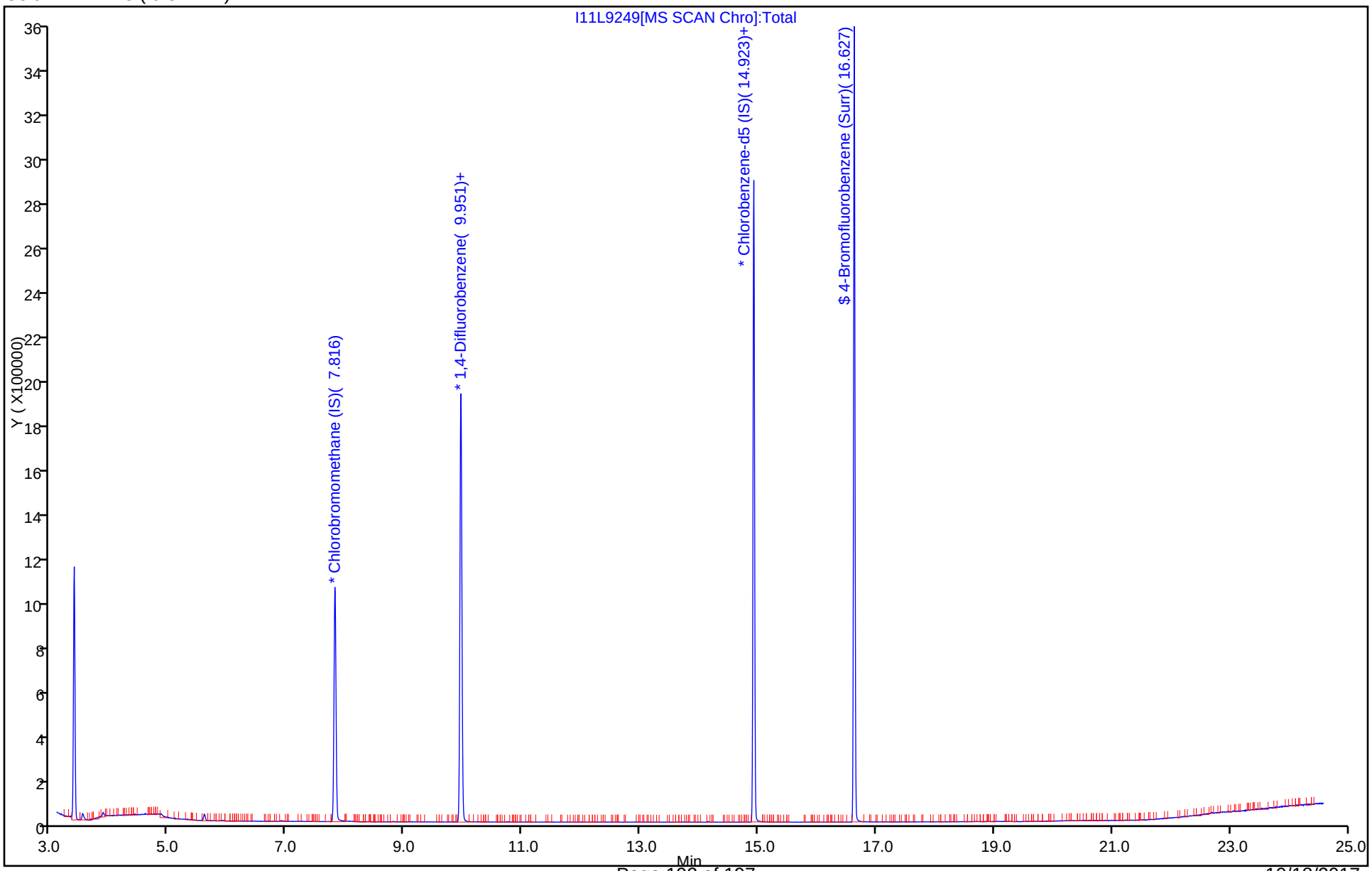
Report Date: 12-Sep-2017 10:44:55 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170907-6005.b\I11L9249.D

Injection Date:	11-Sep-2017 18:45:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-9249-A-8	Lab Sample ID:	140-9249-8	Worklist Smp#:	14
Client ID:	10524				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

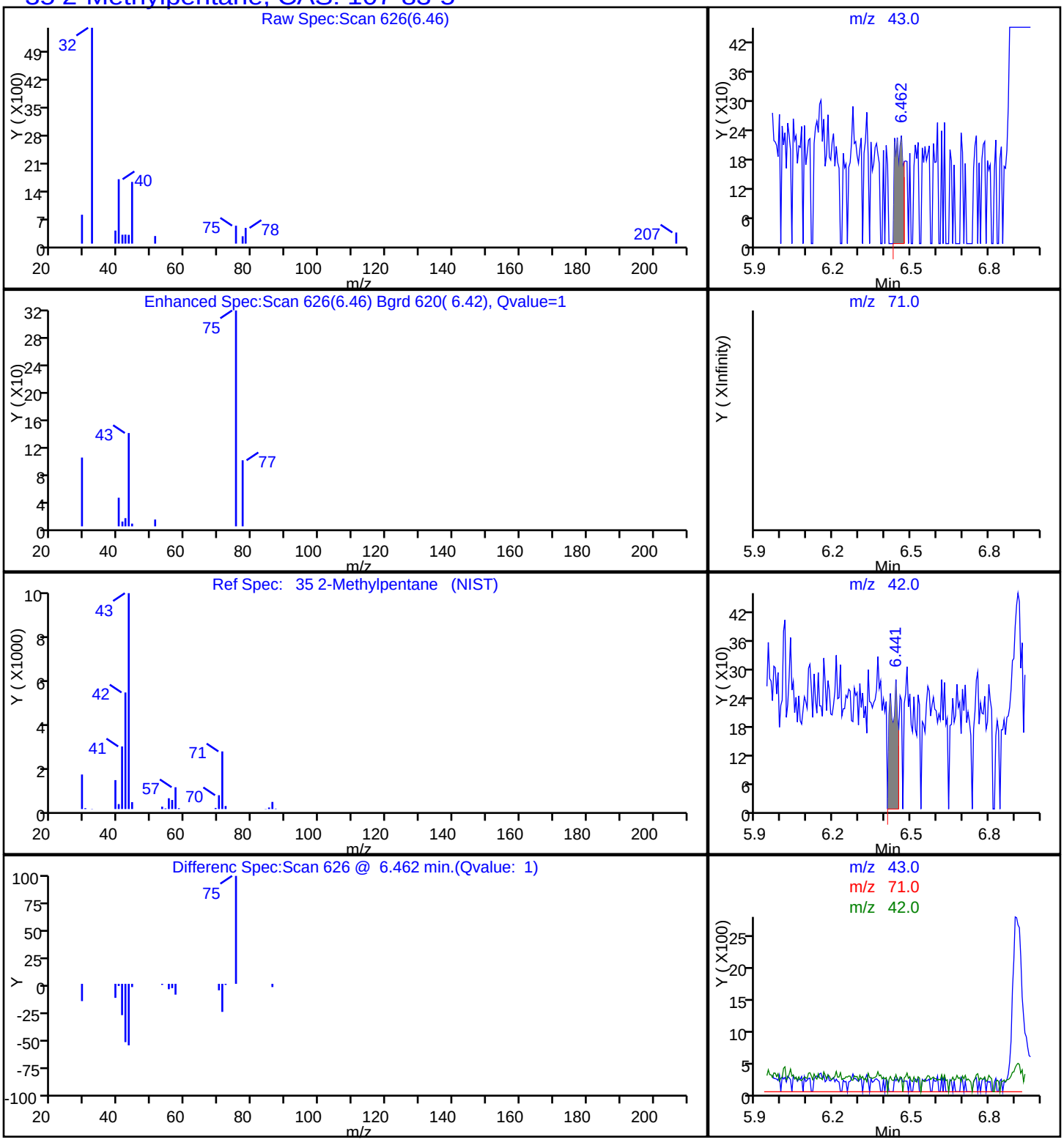
Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170907-6005.b\I11L9249.D		
Injection Date:	11-Sep-2017 18:45:30	Instrument ID:	MR
Lims ID:	140-9249-A-8	Lab Sample ID:	140-9249-8
Client ID:	10524		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

35 2-Methylpentane, CAS: 107-83-5



Shipping and Receiving Documents

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	Project Manager: Peter Rich	Sampled By: J. Michael Willis	1 of 1 COCs
Company: Tetra Tech	Phone: 410-990-4607		
Address: 51 Franklin St	Site Contact:		
City/State/Zip Annapolis/MD/21409	TAL Contact:		
Phone: 410-990-4607			
FAX:			
Project Name: LMC MRC	Analysis Turnaround Time		
Site/location: MRC (BLDG) BLDG-A	Standard (Specify)		
PO # 117-05/2124	Rush (Specify)		

140-9485 Chain of Custody

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
BLDG-A EFFLUENT	10/4/17	1218	1220	27	0	10078	11621	✓											
BLDG-A MID-GAC	"	1222	1224	31	0.5	09569	09738	✓											
BLDG-A INFLUENT	✓	1226	1228	28	0	09958	10746	✓											

Sampled by :

Received @ ambient
1 box, Fedex SO
TK# 7704 2124 0910
Custody seal intact
KW 10/5/17

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

10325

BALTIMORE

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by:	Date/Time: 10/4/17/1520	Received by: 10-4-2017/1520
Relinquished by:	Date/Time: 10/4/17 1710	Received by: LA 10/5/17 0940

3 cans
3 KR

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST **Log In Number:**

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	✓			☐ **Containers, Broken**
2. Were ambient air containers received intact?			✓	☑ Checked in lab
3. The coolers/containers custody seal if present, is it intact?	✓			☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			✓	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	✓			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	✓			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	✓			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	✓			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?	✓			☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	✓			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	✓			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	✓			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	✓			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			✓	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:_____			✓	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			✓	☐ If no, lab will adjust
20. For rad samples was sample activity info. Provided?			✓	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:	
Lot Number:	
Exp Date:	
Analyst:	
Date:	
Time:	

Project #: 1400292l PM Instructions: _____

Sample Receiving Associate: _____ Date: 10/5/17

QA026R30.doc, 080916

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 10/5/2017

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
BKK	140-9485-a-1	11621	9249	B	1	0.0	1515	
BKK	140-9485-a-2	09738	9249	B	1	0.0	1516	
BKK	140-9485-a-3	10746	9059	B	1	0.6	1517	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

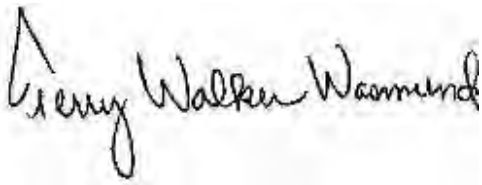
ANALYTICAL REPORT

Job Number: 140-9854-1

Job Description: LMC-Middle River - BLDG A&C, Middle Rive

For:
Tetra Tech GEO
51 Franklin Street
Suite 400
Annapolis, MD 21401

Attention: Peter Rich



Approved for release.
Terry Walker Wasmund
Project Manager II
11/15/2017 1:35 PM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
11/15/2017

cc: Belssi Chang
Amy Thomson
Michael Wilks

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Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-9854-1

Receipt
The samples were received on 11/9/2017 at 10:00 AM. The samples arrived in good condition and properly preserved.

Air - GC/MS VOA - Method TO-15 LL
EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

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

Comments
No additional comments.

Detection Summary

Client: Tetra Tech GEO
Project/Site: LMC-Middle River - BLDG A&C, Middle Rive

TestAmerica Job ID: 140-9854-1

Client Sample ID: BLDG-A EFFLUENT — Lab Sample ID: 140-9854-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	6.9		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.22	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	5.9		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.60		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	2.0		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.92	J	1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	14		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.8		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	22		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.78	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	23		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	2.4		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	8.1		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.2	J	3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	75		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	9.6		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-A MID — Lab Sample ID: 140-9854-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.38	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.44		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.54		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	18		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.64		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	4.4		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	15		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.94	J	1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.32	J	0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	57		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.2	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.6		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	2.6		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	70		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	3.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	18		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	59		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.3	J	3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	1.3	J	1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	310		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-A INFLUENT — Lab Sample ID: 140-9854-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.3	J	4.0	1.2	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	21		4.0	1.2	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	4.2		4.0	0.50	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	22		4.0	0.70	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BLDG-A INFLUENT (Continued) — Lab Sample ID: 140-9854-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	100		4.0	0.60	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	200		2.0	0.70	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	4.0	J	13	3.7	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	83		16	4.8	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	17		16	2.0	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	88		16	2.8	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	550		22	3.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	1100		11	3.8	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-C EFFLUENT — Lab Sample ID: 140-9854-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2.0		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.91	J	1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.69		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.16	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.2		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.61		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.27	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	6.5		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.1	J	3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	2.6		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.89	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	6.4		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	3.0		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.3	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-C MID — Lab Sample ID: 140-9854-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	5.2		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.0		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.17	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.44		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.40		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.96	J	1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.63		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.73		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	17		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	3.5		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.84	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	1.7		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.0		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.3	J	3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	3.4		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	3.9		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech GEO
Project/Site: LMC-Middle River - BLDG A&C, Middle Rive

TestAmerica Job ID: 140-9854-1

Client Sample ID: BLDG-C INFLUENT

Lab Sample ID: 140-9854-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.5		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.088	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.2		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.20	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.81		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.44		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.4		1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.21	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.75		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.12	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	8.0		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.44		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.18	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.57	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	4.8		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.55	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	4.1		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.0	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	3.2		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	5.0		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	1.4	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	2.8		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.66	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	43		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	2.2		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.86	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.5	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BLDG-A EFFLUENT
Lab Sample ID: 140-9854-1

Date Collected: 11/08/17 10:56
Matrix: Air
Date Received: 11/09/17 10:00
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**6.9**		0.40	0.12	ppb v/v			11/13/17 18:27	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			11/13/17 18:27	1
Chlorodifluoromethane	**0.22**	**J**	0.40	0.075	ppb v/v			11/13/17 18:27	1
Chloroform	ND		0.40	0.075	ppb v/v			11/13/17 18:27	1
cis-1,2-Dichloroethene	**5.9**		0.40	0.12	ppb v/v			11/13/17 18:27	1
Dichlorodifluoromethane	ND		0.40	0.14	ppb v/v			11/13/17 18:27	1
1,1-Dichloroethane	**0.60**		0.40	0.050	ppb v/v			11/13/17 18:27	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			11/13/17 18:27	1
1,1-Dichloroethene	**2.0**		0.40	0.070	ppb v/v			11/13/17 18:27	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			11/13/17 18:27	1
Methylene Chloride	**0.92**	**J**	1.0	0.65	ppb v/v			11/13/17 18:27	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			11/13/17 18:27	1
Naphthalene	ND		0.20	0.20	ppb v/v			11/13/17 18:27	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			11/13/17 18:27	1
Toluene	ND		0.60	0.60	ppb v/v			11/13/17 18:27	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			11/13/17 18:27	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			11/13/17 18:27	1
1,1,1-Trichloroethane	**14**		0.40	0.060	ppb v/v			11/13/17 18:27	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			11/13/17 18:27	1
Trichloroethene	**1.8**		0.20	0.070	ppb v/v			11/13/17 18:27	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			11/13/17 18:27	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			11/13/17 18:27	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			11/13/17 18:27	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			11/13/17 18:27	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			11/13/17 18:27	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**22**		1.3	0.37	ug/m3			11/13/17 18:27	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			11/13/17 18:27	1
Chlorodifluoromethane	**0.78**	**J**	1.4	0.27	ug/m3			11/13/17 18:27	1
Chloroform	ND		2.0	0.37	ug/m3			11/13/17 18:27	1
cis-1,2-Dichloroethene	**23**		1.6	0.48	ug/m3			11/13/17 18:27	1
Dichlorodifluoromethane	ND		2.0	0.67	ug/m3			11/13/17 18:27	1
1,1-Dichloroethane	**2.4**		1.6	0.20	ug/m3			11/13/17 18:27	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			11/13/17 18:27	1
1,1-Dichloroethene	**8.1**		1.6	0.28	ug/m3			11/13/17 18:27	1
Ethylbenzene	ND		1.7	0.59	ug/m3			11/13/17 18:27	1
Methylene Chloride	**3.2**	**J**	3.5	2.3	ug/m3			11/13/17 18:27	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			11/13/17 18:27	1
Naphthalene	ND		1.0	1.0	ug/m3			11/13/17 18:27	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			11/13/17 18:27	1
Toluene	ND		2.3	2.3	ug/m3			11/13/17 18:27	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			11/13/17 18:27	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			11/13/17 18:27	1
1,1,1-Trichloroethane	**75**		2.2	0.33	ug/m3			11/13/17 18:27	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			11/13/17 18:27	1
Trichloroethene	**9.6**		1.1	0.38	ug/m3			11/13/17 18:27	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			11/13/17 18:27	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			11/13/17 18:27	1

Client Sample ID: BLDG-A EFFLUENT
Lab Sample ID: 140-9854-1

Date Collected: 11/08/17 10:56
Matrix: Air
Date Received: 11/09/17 10:00
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			11/13/17 18:27	1
Vinyl chloride	ND		0.51	0.37	ug/m3			11/13/17 18:27	1
Xylenes, Total	ND		3.5	0.52	ug/m3			11/13/17 18:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*60 - 140*		*11/13/17 18:27*	*1*

Client Sample ID: BLDG-A MID
Lab Sample ID: 140-9854-2

Date Collected: 11/08/17 11:01
Matrix: Air
Date Received: 11/09/17 10:00
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.38**	**J**	0.40	0.12	ppb v/v			11/13/17 19:14	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			11/13/17 19:14	1
Chlorodifluoromethane	**0.44**		0.40	0.075	ppb v/v			11/13/17 19:14	1
Chloroform	**0.54**		0.40	0.075	ppb v/v			11/13/17 19:14	1
cis-1,2-Dichloroethene	**18**		0.40	0.12	ppb v/v			11/13/17 19:14	1
Dichlorodifluoromethane	**0.64**		0.40	0.14	ppb v/v			11/13/17 19:14	1
1,1-Dichloroethane	**4.4**		0.40	0.050	ppb v/v			11/13/17 19:14	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			11/13/17 19:14	1
1,1-Dichloroethene	**15**		0.40	0.070	ppb v/v			11/13/17 19:14	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			11/13/17 19:14	1
Methylene Chloride	**0.94**	**J**	1.0	0.65	ppb v/v			11/13/17 19:14	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			11/13/17 19:14	1
Naphthalene	ND		0.20	0.20	ppb v/v			11/13/17 19:14	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			11/13/17 19:14	1
Toluene	ND		0.60	0.60	ppb v/v			11/13/17 19:14	1
trans-1,2-Dichloroethene	**0.32**	**J**	0.40	0.10	ppb v/v			11/13/17 19:14	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			11/13/17 19:14	1
1,1,1-Trichloroethane	**57**		0.40	0.060	ppb v/v			11/13/17 19:14	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			11/13/17 19:14	1
Trichloroethene	ND		0.20	0.070	ppb v/v			11/13/17 19:14	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			11/13/17 19:14	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			11/13/17 19:14	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			11/13/17 19:14	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			11/13/17 19:14	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			11/13/17 19:14	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1.2**	**J**	1.3	0.37	ug/m3			11/13/17 19:14	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			11/13/17 19:14	1
Chlorodifluoromethane	**1.6**		1.4	0.27	ug/m3			11/13/17 19:14	1
Chloroform	**2.6**		2.0	0.37	ug/m3			11/13/17 19:14	1
cis-1,2-Dichloroethene	**70**		1.6	0.48	ug/m3			11/13/17 19:14	1
Dichlorodifluoromethane	**3.2**		2.0	0.67	ug/m3			11/13/17 19:14	1
1,1-Dichloroethane	**18**		1.6	0.20	ug/m3			11/13/17 19:14	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			11/13/17 19:14	1
1,1-Dichloroethene	**59**		1.6	0.28	ug/m3			11/13/17 19:14	1
Ethylbenzene	ND		1.7	0.59	ug/m3			11/13/17 19:14	1
Methylene Chloride	**3.3**	**J**	3.5	2.3	ug/m3			11/13/17 19:14	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			11/13/17 19:14	1
Naphthalene	ND		1.0	1.0	ug/m3			11/13/17 19:14	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			11/13/17 19:14	1
Toluene	ND		2.3	2.3	ug/m3			11/13/17 19:14	1
trans-1,2-Dichloroethene	**1.3**	**J**	1.6	0.40	ug/m3			11/13/17 19:14	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			11/13/17 19:14	1
1,1,1-Trichloroethane	**310**		2.2	0.33	ug/m3			11/13/17 19:14	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			11/13/17 19:14	1
Trichloroethene	ND		1.1	0.38	ug/m3			11/13/17 19:14	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			11/13/17 19:14	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			11/13/17 19:14	1

Client Sample ID: BLDG-A MID
Lab Sample ID: 140-9854-2

Date Collected: 11/08/17 11:01
Matrix: Air
Date Received: 11/09/17 10:00
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			11/13/17 19:14	1
Vinyl chloride	ND		0.51	0.37	ug/m3			11/13/17 19:14	1
Xylenes, Total	ND		3.5	0.52	ug/m3			11/13/17 19:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*60 - 140*		*11/13/17 19:14*	*1*

Client Sample ID: BLDG-A INFLUENT
Lab Sample ID: 140-9854-3

Date Collected: 11/08/17 11:07
Matrix: Air
Date Received: 11/09/17 10:00
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1.3**	**J**	4.0	1.2	ppb v/v			11/13/17 20:01	1
Carbon tetrachloride	ND		4.0	0.75	ppb v/v			11/13/17 20:01	1
Chlorodifluoromethane	ND		4.0	0.75	ppb v/v			11/13/17 20:01	1
Chloroform	ND		4.0	0.75	ppb v/v			11/13/17 20:01	1
cis-1,2-Dichloroethene	**21**		4.0	1.2	ppb v/v			11/13/17 20:01	1
Dichlorodifluoromethane	ND		4.0	1.4	ppb v/v			11/13/17 20:01	1
1,1-Dichloroethane	**4.2**		4.0	0.50	ppb v/v			11/13/17 20:01	1
1,2-Dichloroethane	ND		4.0	0.95	ppb v/v			11/13/17 20:01	1
1,1-Dichloroethene	**22**		4.0	0.70	ppb v/v			11/13/17 20:01	1
Ethylbenzene	ND		4.0	1.4	ppb v/v			11/13/17 20:01	1
Methylene Chloride	ND		10	6.5	ppb v/v			11/13/17 20:01	1
Methyl tert-butyl ether	ND		20	3.4	ppb v/v			11/13/17 20:01	1
Naphthalene	ND		2.0	2.0	ppb v/v			11/13/17 20:01	1
Tetrachloroethene	ND		4.0	0.80	ppb v/v			11/13/17 20:01	1
Toluene	ND		6.0	6.0	ppb v/v			11/13/17 20:01	1
trans-1,2-Dichloroethene	ND		4.0	1.0	ppb v/v			11/13/17 20:01	1
1,2,4-Trichlorobenzene	ND		4.0	2.0	ppb v/v			11/13/17 20:01	1
1,1,1-Trichloroethane	**100**		4.0	0.60	ppb v/v			11/13/17 20:01	1
1,1,2-Trichloroethane	ND		4.0	1.1	ppb v/v			11/13/17 20:01	1
Trichloroethene	**200**		2.0	0.70	ppb v/v			11/13/17 20:01	1
1,2,3-Trimethylbenzene	ND		4.0	1.7	ppb v/v			11/13/17 20:01	1
1,2,4-Trimethylbenzene	ND		4.0	1.3	ppb v/v			11/13/17 20:01	1
1,3,5-Trimethylbenzene	ND		4.0	1.3	ppb v/v			11/13/17 20:01	1
Vinyl chloride	ND		2.0	1.5	ppb v/v			11/13/17 20:01	1
Xylenes, Total	ND		8.0	1.2	ppb v/v			11/13/17 20:01	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**4.0**	**J**	13	3.7	ug/m3			11/13/17 20:01	1
Carbon tetrachloride	ND		25	4.7	ug/m3			11/13/17 20:01	1
Chlorodifluoromethane	ND		14	2.7	ug/m3			11/13/17 20:01	1
Chloroform	ND		20	3.7	ug/m3			11/13/17 20:01	1
cis-1,2-Dichloroethene	**83**		16	4.8	ug/m3			11/13/17 20:01	1
Dichlorodifluoromethane	ND		20	6.7	ug/m3			11/13/17 20:01	1
1,1-Dichloroethane	**17**		16	2.0	ug/m3			11/13/17 20:01	1
1,2-Dichloroethane	ND		16	3.8	ug/m3			11/13/17 20:01	1
1,1-Dichloroethene	**88**		16	2.8	ug/m3			11/13/17 20:01	1
Ethylbenzene	ND		17	5.9	ug/m3			11/13/17 20:01	1
Methylene Chloride	ND		35	23	ug/m3			11/13/17 20:01	1
Methyl tert-butyl ether	ND		72	12	ug/m3			11/13/17 20:01	1
Naphthalene	ND		10	10	ug/m3			11/13/17 20:01	1
Tetrachloroethene	ND		27	5.4	ug/m3			11/13/17 20:01	1
Toluene	ND		23	23	ug/m3			11/13/17 20:01	1
trans-1,2-Dichloroethene	ND		16	4.0	ug/m3			11/13/17 20:01	1
1,2,4-Trichlorobenzene	ND		30	14	ug/m3			11/13/17 20:01	1
1,1,1-Trichloroethane	**550**		22	3.3	ug/m3			11/13/17 20:01	1
1,1,2-Trichloroethane	ND		22	5.7	ug/m3			11/13/17 20:01	1
Trichloroethene	**1100**		11	3.8	ug/m3			11/13/17 20:01	1
1,2,3-Trimethylbenzene	ND		20	8.4	ug/m3			11/13/17 20:01	1
1,2,4-Trimethylbenzene	ND		20	6.1	ug/m3			11/13/17 20:01	1

Client Sample ID: BLDG-A INFLUENT
Lab Sample ID: 140-9854-3

Date Collected: 11/08/17 11:07
Matrix: Air
Date Received: 11/09/17 10:00
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		20	6.4	ug/m3			11/13/17 20:01	1
Vinyl chloride	ND		5.1	3.7	ug/m3			11/13/17 20:01	1
Xylenes, Total	ND		35	5.2	ug/m3			11/13/17 20:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*60 - 140*		*11/13/17 20:01*	*1*

Client Sample ID: BLDG-C EFFLUENT
Lab Sample ID: 140-9854-4

Date Collected: 11/08/17 11:23
Matrix: Air
Date Received: 11/09/17 10:00
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**2.0**		0.40	0.12	ppb v/v			11/13/17 20:48	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			11/13/17 20:48	1
Chlorodifluoromethane	ND		0.40	0.075	ppb v/v			11/13/17 20:48	1
Chloroform	ND		0.40	0.075	ppb v/v			11/13/17 20:48	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			11/13/17 20:48	1
Dichlorodifluoromethane	ND		0.40	0.14	ppb v/v			11/13/17 20:48	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			11/13/17 20:48	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			11/13/17 20:48	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			11/13/17 20:48	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			11/13/17 20:48	1
Methylene Chloride	**0.91**	**J**	1.0	0.65	ppb v/v			11/13/17 20:48	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			11/13/17 20:48	1
Naphthalene	ND		0.20	0.20	ppb v/v			11/13/17 20:48	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			11/13/17 20:48	1
Toluene	**0.69**		0.60	0.60	ppb v/v			11/13/17 20:48	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			11/13/17 20:48	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			11/13/17 20:48	1
1,1,1-Trichloroethane	**0.16**	**J**	0.40	0.060	ppb v/v			11/13/17 20:48	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			11/13/17 20:48	1
Trichloroethene	**1.2**		0.20	0.070	ppb v/v			11/13/17 20:48	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			11/13/17 20:48	1
1,2,4-Trimethylbenzene	**0.61**		0.40	0.13	ppb v/v			11/13/17 20:48	1
1,3,5-Trimethylbenzene	**0.27**	**J**	0.40	0.13	ppb v/v			11/13/17 20:48	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			11/13/17 20:48	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			11/13/17 20:48	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**6.5**		1.3	0.37	ug/m3			11/13/17 20:48	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			11/13/17 20:48	1
Chlorodifluoromethane	ND		1.4	0.27	ug/m3			11/13/17 20:48	1
Chloroform	ND		2.0	0.37	ug/m3			11/13/17 20:48	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			11/13/17 20:48	1
Dichlorodifluoromethane	ND		2.0	0.67	ug/m3			11/13/17 20:48	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			11/13/17 20:48	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			11/13/17 20:48	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			11/13/17 20:48	1
Ethylbenzene	ND		1.7	0.59	ug/m3			11/13/17 20:48	1
Methylene Chloride	**3.1**	**J**	3.5	2.3	ug/m3			11/13/17 20:48	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			11/13/17 20:48	1
Naphthalene	ND		1.0	1.0	ug/m3			11/13/17 20:48	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			11/13/17 20:48	1
Toluene	**2.6**		2.3	2.3	ug/m3			11/13/17 20:48	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			11/13/17 20:48	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			11/13/17 20:48	1
1,1,1-Trichloroethane	**0.89**	**J**	2.2	0.33	ug/m3			11/13/17 20:48	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			11/13/17 20:48	1
Trichloroethene	**6.4**		1.1	0.38	ug/m3			11/13/17 20:48	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			11/13/17 20:48	1
1,2,4-Trimethylbenzene	**3.0**		2.0	0.61	ug/m3			11/13/17 20:48	1

Client Sample ID: BLDG-C EFFLUENT
Lab Sample ID: 140-9854-4

Date Collected: 11/08/17 11:23
Matrix: Air
Date Received: 11/09/17 10:00
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	**1.3**	**J**	2.0	0.64	ug/m3			11/13/17 20:48	1
Vinyl chloride	ND		0.51	0.37	ug/m3			11/13/17 20:48	1
Xylenes, Total	ND		3.5	0.52	ug/m3			11/13/17 20:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*60 - 140*		*11/13/17 20:48*	*1*

Client Sample ID: BLDG-C MID
Lab Sample ID: 140-9854-5

Date Collected: 11/08/17 11:30
Matrix: Air
Date Received: 11/09/17 10:00
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**5.2**		0.40	0.12	ppb v/v			11/13/17 21:34	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			11/13/17 21:34	1
Chlorodifluoromethane	**1.0**		0.40	0.075	ppb v/v			11/13/17 21:34	1
Chloroform	**0.17**	**J**	0.40	0.075	ppb v/v			11/13/17 21:34	1
cis-1,2-Dichloroethene	**0.44**		0.40	0.12	ppb v/v			11/13/17 21:34	1
Dichlorodifluoromethane	**0.40**		0.40	0.14	ppb v/v			11/13/17 21:34	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			11/13/17 21:34	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			11/13/17 21:34	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			11/13/17 21:34	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			11/13/17 21:34	1
Methylene Chloride	**0.96**	**J**	1.0	0.65	ppb v/v			11/13/17 21:34	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			11/13/17 21:34	1
Naphthalene	ND		0.20	0.20	ppb v/v			11/13/17 21:34	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			11/13/17 21:34	1
Toluene	ND		0.60	0.60	ppb v/v			11/13/17 21:34	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			11/13/17 21:34	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			11/13/17 21:34	1
1,1,1-Trichloroethane	**0.63**		0.40	0.060	ppb v/v			11/13/17 21:34	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			11/13/17 21:34	1
Trichloroethene	**0.73**		0.20	0.070	ppb v/v			11/13/17 21:34	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			11/13/17 21:34	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			11/13/17 21:34	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			11/13/17 21:34	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			11/13/17 21:34	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			11/13/17 21:34	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**17**		1.3	0.37	ug/m3			11/13/17 21:34	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			11/13/17 21:34	1
Chlorodifluoromethane	**3.5**		1.4	0.27	ug/m3			11/13/17 21:34	1
Chloroform	**0.84**	**J**	2.0	0.37	ug/m3			11/13/17 21:34	1
cis-1,2-Dichloroethene	**1.7**		1.6	0.48	ug/m3			11/13/17 21:34	1
Dichlorodifluoromethane	**2.0**		2.0	0.67	ug/m3			11/13/17 21:34	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			11/13/17 21:34	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			11/13/17 21:34	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			11/13/17 21:34	1
Ethylbenzene	ND		1.7	0.59	ug/m3			11/13/17 21:34	1
Methylene Chloride	**3.3**	**J**	3.5	2.3	ug/m3			11/13/17 21:34	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			11/13/17 21:34	1
Naphthalene	ND		1.0	1.0	ug/m3			11/13/17 21:34	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			11/13/17 21:34	1
Toluene	ND		2.3	2.3	ug/m3			11/13/17 21:34	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			11/13/17 21:34	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			11/13/17 21:34	1
1,1,1-Trichloroethane	**3.4**		2.2	0.33	ug/m3			11/13/17 21:34	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			11/13/17 21:34	1
Trichloroethene	**3.9**		1.1	0.38	ug/m3			11/13/17 21:34	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			11/13/17 21:34	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			11/13/17 21:34	1

Client Sample ID: BLDG-C MID
Lab Sample ID: 140-9854-5

Date Collected: 11/08/17 11:30
Matrix: Air
Date Received: 11/09/17 10:00
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			11/13/17 21:34	1
Vinyl chloride	ND		0.51	0.37	ug/m3			11/13/17 21:34	1
Xylenes, Total	ND		3.5	0.52	ug/m3			11/13/17 21:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*60 - 140*		*11/13/17 21:34*	*1*

Client Sample ID: BLDG-C INFLUENT
Lab Sample ID: 140-9854-6

Date Collected: 11/08/17 11:36
Matrix: Air
Date Received: 11/09/17 10:00
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1.5**		0.40	0.12	ppb v/v			11/13/17 22:21	1
Carbon tetrachloride	**0.088**	**J**	0.40	0.075	ppb v/v			11/13/17 22:21	1
Chlorodifluoromethane	**1.2**		0.40	0.075	ppb v/v			11/13/17 22:21	1
Chloroform	**0.20**	**J**	0.40	0.075	ppb v/v			11/13/17 22:21	1
cis-1,2-Dichloroethene	**0.81**		0.40	0.12	ppb v/v			11/13/17 22:21	1
Dichlorodifluoromethane	**0.44**		0.40	0.14	ppb v/v			11/13/17 22:21	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			11/13/17 22:21	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			11/13/17 22:21	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			11/13/17 22:21	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			11/13/17 22:21	1
Methylene Chloride	**1.4**		1.0	0.65	ppb v/v			11/13/17 22:21	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			11/13/17 22:21	1
Naphthalene	ND		0.20	0.20	ppb v/v			11/13/17 22:21	1
Tetrachloroethene	**0.21**	**J**	0.40	0.080	ppb v/v			11/13/17 22:21	1
Toluene	**0.75**		0.60	0.60	ppb v/v			11/13/17 22:21	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			11/13/17 22:21	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			11/13/17 22:21	1
1,1,1-Trichloroethane	**0.12**	**J**	0.40	0.060	ppb v/v			11/13/17 22:21	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			11/13/17 22:21	1
Trichloroethene	**8.0**		0.20	0.070	ppb v/v			11/13/17 22:21	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			11/13/17 22:21	1
1,2,4-Trimethylbenzene	**0.44**		0.40	0.13	ppb v/v			11/13/17 22:21	1
1,3,5-Trimethylbenzene	**0.18**	**J**	0.40	0.13	ppb v/v			11/13/17 22:21	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			11/13/17 22:21	1
Xylenes, Total	**0.57**	**J**	0.80	0.12	ppb v/v			11/13/17 22:21	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**4.8**		1.3	0.37	ug/m3			11/13/17 22:21	1
Carbon tetrachloride	**0.55**	**J**	2.5	0.47	ug/m3			11/13/17 22:21	1
Chlorodifluoromethane	**4.1**		1.4	0.27	ug/m3			11/13/17 22:21	1
Chloroform	**1.0**	**J**	2.0	0.37	ug/m3			11/13/17 22:21	1
cis-1,2-Dichloroethene	**3.2**		1.6	0.48	ug/m3			11/13/17 22:21	1
Dichlorodifluoromethane	**2.2**		2.0	0.67	ug/m3			11/13/17 22:21	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			11/13/17 22:21	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			11/13/17 22:21	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			11/13/17 22:21	1
Ethylbenzene	ND		1.7	0.59	ug/m3			11/13/17 22:21	1
Methylene Chloride	**5.0**		3.5	2.3	ug/m3			11/13/17 22:21	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			11/13/17 22:21	1
Naphthalene	ND		1.0	1.0	ug/m3			11/13/17 22:21	1
Tetrachloroethene	**1.4**	**J**	2.7	0.54	ug/m3			11/13/17 22:21	1
Toluene	**2.8**		2.3	2.3	ug/m3			11/13/17 22:21	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			11/13/17 22:21	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			11/13/17 22:21	1
1,1,1-Trichloroethane	**0.66**	**J**	2.2	0.33	ug/m3			11/13/17 22:21	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			11/13/17 22:21	1
Trichloroethene	**43**		1.1	0.38	ug/m3			11/13/17 22:21	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			11/13/17 22:21	1
1,2,4-Trimethylbenzene	**2.2**		2.0	0.61	ug/m3			11/13/17 22:21	1

Client Sample ID: BLDG-C INFLUENT
Lab Sample ID: 140-9854-6

Date Collected: 11/08/17 11:36
Matrix: Air
Date Received: 11/09/17 10:00
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	**0.86**	**J**	2.0	0.64	ug/m3			11/13/17 22:21	1
Vinyl chloride	ND		0.51	0.37	ug/m3			11/13/17 22:21	1
Xylenes, Total	**2.5**	**J**	3.5	0.52	ug/m3			11/13/17 22:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*60 - 140*		*11/13/17 22:21*	*1*

Default Detection Limits

Client: Tetra Tech GEO
Project/Site: LMC-Middle River - BLDG A&C, Middle Rive

TestAmerica Job ID: 140-9854-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.20	0.13	ppb v/v	TO 15 LL
Methylene Chloride	0.69	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech GEO
Project/Site: LMC-Middle River - BLDG A&C, Middle Rive

TestAmerica Job ID: 140-9854-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)								
		BFB								
Lab Sample ID	Client Sample ID	(60-140)								
140-9854-1	BLDG-A EFFLUENT	107								
140-9854-2	BLDG-A MID	109								
140-9854-3	BLDG-A INFLUENT	104								
140-9854-4	BLDG-C EFFLUENT	108								
140-9854-5	BLDG-C MID	107								
140-9854-6	BLDG-C INFLUENT	107								
LCS 140-15956/1002	Lab Control Sample	105								
MB 140-15956/4	Method Blank	103								

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-15956/4
Matrix: Air
Analysis Batch: 15956

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			11/13/17 11:43	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			11/13/17 11:43	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			11/13/17 11:43	1
Chloroform	ND		0.080	0.015	ppb v/v			11/13/17 11:43	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			11/13/17 11:43	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			11/13/17 11:43	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			11/13/17 11:43	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			11/13/17 11:43	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			11/13/17 11:43	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			11/13/17 11:43	1
Methylene Chloride	ND		0.20	0.13	ppb v/v			11/13/17 11:43	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			11/13/17 11:43	1
Naphthalene	ND		0.040	0.040	ppb v/v			11/13/17 11:43	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			11/13/17 11:43	1
Toluene	ND		0.12	0.12	ppb v/v			11/13/17 11:43	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			11/13/17 11:43	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			11/13/17 11:43	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			11/13/17 11:43	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			11/13/17 11:43	1
Trichloroethene	ND		0.040	0.014	ppb v/v			11/13/17 11:43	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			11/13/17 11:43	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			11/13/17 11:43	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			11/13/17 11:43	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			11/13/17 11:43	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			11/13/17 11:43	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.26	0.073	ug/m3			11/13/17 11:43	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			11/13/17 11:43	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			11/13/17 11:43	1
Chloroform	ND		0.39	0.073	ug/m3			11/13/17 11:43	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			11/13/17 11:43	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			11/13/17 11:43	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			11/13/17 11:43	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			11/13/17 11:43	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			11/13/17 11:43	1
Ethylbenzene	ND		0.35	0.12	ug/m3			11/13/17 11:43	1
Methylene Chloride	ND		0.69	0.45	ug/m3			11/13/17 11:43	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			11/13/17 11:43	1
Naphthalene	ND		0.21	0.21	ug/m3			11/13/17 11:43	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			11/13/17 11:43	1
Toluene	ND		0.45	0.45	ug/m3			11/13/17 11:43	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			11/13/17 11:43	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			11/13/17 11:43	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			11/13/17 11:43	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			11/13/17 11:43	1
Trichloroethene	ND		0.21	0.075	ug/m3			11/13/17 11:43	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			11/13/17 11:43	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-15956/4
Matrix: Air
Analysis Batch: 15956

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			11/13/17 11:43	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			11/13/17 11:43	1
Vinyl chloride	ND		0.10	0.074	ug/m3			11/13/17 11:43	1
Xylenes, Total	ND		0.69	0.10	ug/m3			11/13/17 11:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*60 - 140*		*11/13/17 11:43*	*1*

Lab Sample ID: LCS 140-15956/1002
Matrix: Air
Analysis Batch: 15956

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2.00	2.06		ppb v/v		103	70 - 130
Carbon tetrachloride	2.00	2.37		ppb v/v		118	70 - 130
Chlorodifluoromethane	2.00	2.26		ppb v/v		113	60 - 140
Chloroform	2.00	2.08		ppb v/v		104	70 - 130
cis-1,2-Dichloroethene	2.00	2.03		ppb v/v		101	70 - 130
Dichlorodifluoromethane	2.00	2.45		ppb v/v		122	60 - 140
1,1-Dichloroethane	2.00	2.04		ppb v/v		102	70 - 130
1,2-Dichloroethane	2.00	2.25		ppb v/v		112	70 - 130
1,1-Dichloroethene	2.00	2.00		ppb v/v		100	70 - 130
Ethylbenzene	2.00	2.23		ppb v/v		112	70 - 130
Methylene Chloride	2.00	1.83		ppb v/v		92	70 - 130
Methyl tert-butyl ether	2.00	2.17		ppb v/v		109	60 - 140
Naphthalene	2.00	2.27		ppb v/v		114	60 - 140
Tetrachloroethene	2.00	2.17		ppb v/v		109	70 - 130
Toluene	2.00	2.14		ppb v/v		107	70 - 130
trans-1,2-Dichloroethene	2.00	1.97		ppb v/v		98	70 - 130
1,2,4-Trichlorobenzene	2.00	2.30		ppb v/v		115	60 - 140
1,1,1-Trichloroethane	2.00	2.18		ppb v/v		109	70 - 130
1,1,2-Trichloroethane	2.00	2.09		ppb v/v		105	70 - 130
Trichloroethene	2.00	2.11		ppb v/v		105	70 - 130
1,2,3-Trimethylbenzene	2.00	2.19		ppb v/v		110	70 - 130
1,2,4-Trimethylbenzene	2.00	2.41		ppb v/v		120	70 - 130
1,3,5-Trimethylbenzene	2.00	2.35		ppb v/v		118	70 - 130
Vinyl chloride	2.00	2.11		ppb v/v		105	70 - 130
Xylenes, Total	6.00	6.91		ppb v/v		115	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	6.59		ug/m3		103	70 - 130
Carbon tetrachloride	13	14.9		ug/m3		118	70 - 130
Chlorodifluoromethane	7.1	7.99		ug/m3		113	60 - 140
Chloroform	9.8	10.2		ug/m3		104	70 - 130
cis-1,2-Dichloroethene	7.9	8.04		ug/m3		101	70 - 130
Dichlorodifluoromethane	9.9	12.1		ug/m3		122	60 - 140
1,1-Dichloroethane	8.1	8.26		ug/m3		102	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-15956/1002
Matrix: Air
Analysis Batch: 15956

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2-Dichloroethane			8.1	9.09		ug/m3		112	70 - 130		
1,1-Dichloroethene			7.9	7.94		ug/m3		100	70 - 130		
Ethylbenzene			8.7	9.70		ug/m3		112	70 - 130		
Methylene Chloride			7.0	6.37		ug/m3		92	70 - 130		
Methyl tert-butyl ether			7.2	7.83		ug/m3		109	60 - 140		
Naphthalene			10	11.9		ug/m3		114	60 - 140		
Tetrachloroethene			14	14.7		ug/m3		109	70 - 130		
Toluene			7.5	8.07		ug/m3		107	70 - 130		
trans-1,2-Dichloroethene			7.9	7.80		ug/m3		98	70 - 130		
1,2,4-Trichlorobenzene			15	17.1		ug/m3		115	60 - 140		
1,1,1-Trichloroethane			11	11.9		ug/m3		109	70 - 130		
1,1,2-Trichloroethane			11	11.4		ug/m3		105	70 - 130		
Trichloroethene			11	11.3		ug/m3		105	70 - 130		
1,2,3-Trimethylbenzene			9.8	10.8		ug/m3		110	70 - 130		
1,2,4-Trimethylbenzene			9.8	11.9		ug/m3		120	70 - 130		
1,3,5-Trimethylbenzene			9.8	11.6		ug/m3		118	70 - 130		
Vinyl chloride			5.1	5.39		ug/m3		105	70 - 130		
Xylenes, Total			26	30.0		ug/m3		115	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*60 - 140*

QC Association Summary

Client: Tetra Tech GEO
Project/Site: LMC-Middle River - BLDG A&C, Middle Rive

TestAmerica Job ID: 140-9854-1

Air - GC/MS VOA

Analysis Batch: 15956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-9854-1	BLDG-A EFFLUENT	Total/NA	Air	TO 15 LL	
140-9854-2	BLDG-A MID	Total/NA	Air	TO 15 LL	
140-9854-3	BLDG-A INFLUENT	Total/NA	Air	TO 15 LL	
140-9854-4	BLDG-C EFFLUENT	Total/NA	Air	TO 15 LL	
140-9854-5	BLDG-C MID	Total/NA	Air	TO 15 LL	
140-9854-6	BLDG-C INFLUENT	Total/NA	Air	TO 15 LL	
MB 140-15956/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-15956/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Client Sample ID: BLDG-A EFFLUENT
Lab Sample ID: 140-9854-1
Date Collected: 11/08/17 10:56
Matrix: Air
Date Received: 11/09/17 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	15956	11/13/17 18:27	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: BLDG-A MID
Lab Sample ID: 140-9854-2
Date Collected: 11/08/17 11:01
Matrix: Air
Date Received: 11/09/17 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	15956	11/13/17 19:14	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: BLDG-A INFLUENT
Lab Sample ID: 140-9854-3
Date Collected: 11/08/17 11:07
Matrix: Air
Date Received: 11/09/17 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	10 mL	500 mL	15956	11/13/17 20:01	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: BLDG-C EFFLUENT
Lab Sample ID: 140-9854-4
Date Collected: 11/08/17 11:23
Matrix: Air
Date Received: 11/09/17 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	15956	11/13/17 20:48	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: BLDG-C MID
Lab Sample ID: 140-9854-5
Date Collected: 11/08/17 11:30
Matrix: Air
Date Received: 11/09/17 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	15956	11/13/17 21:34	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: BLDG-C INFLUENT
Lab Sample ID: 140-9854-6
Date Collected: 11/08/17 11:36
Matrix: Air
Date Received: 11/09/17 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	15956	11/13/17 22:21	HMT	TAL KNX
	Instrument ID: MR									

Lab Chronicle

Client: Tetra Tech GEO
Project/Site: LMC-Middle River - BLDG A&C, Middle Rive

TestAmerica Job ID: 140-9854-1

Client Sample ID: Method Blank
Date Collected: N/A
Date Received: N/A

Lab Sample ID: MB 140-15956/4
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	15956	11/13/17 11:43	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 140-15956/1002
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	15956	11/13/17 09:53	HMT	TAL KNX
	Instrument ID: MR									

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech GEO
Project/Site: LMC-Middle River - BLDG A&C, Middle Rive

TestAmerica Job ID: 140-9854-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech GEO
Project/Site: LMC-Middle River - BLDG A&C, Middle Rive

TestAmerica Job ID: 140-9854-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-9854-1	BLDG-A EFFLUENT	Air	11/08/17 10:56	11/09/17 10:00
140-9854-2	BLDG-A MID	Air	11/08/17 11:01	11/09/17 10:00
140-9854-3	BLDG-A INFLUENT	Air	11/08/17 11:07	11/09/17 10:00
140-9854-4	BLDG-C EFFLUENT	Air	11/08/17 11:23	11/09/17 10:00
140-9854-5	BLDG-C MID	Air	11/08/17 11:30	11/09/17 10:00
140-9854-6	BLDG-C INFLUENT	Air	11/08/17 11:36	11/09/17 10:00

Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
BLDG-A EFFLUENT	140-9854-1	107
BLDG-A MID	140-9854-2	109
BLDG-A INFLUENT	140-9854-3	104
BLDG-C EFFLUENT	140-9854-4	108
BLDG-C MID	140-9854-5	107
BLDG-C INFLUENT	140-9854-6	107
	MB 140-15956/4	103
	LCS 140-15956/1002	105

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1

SDG No.:

Matrix: Air Level: Low Lab File ID: RCCVK13-LCS.d

Lab ID: LCS 140-15956/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.06	103	70-130	
Carbon tetrachloride	2.00	2.37	118	70-130	
Chlorodifluoromethane	2.00	2.26	113	60-140	
Chloroform	2.00	2.08	104	70-130	
cis-1,2-Dichloroethene	2.00	2.03	101	70-130	
Dichlorodifluoromethane	2.00	2.45	122	60-140	
1,1-Dichloroethane	2.00	2.04	102	70-130	
1,2-Dichloroethane	2.00	2.25	112	70-130	
1,1-Dichloroethene	2.00	2.00	100	70-130	
Ethylbenzene	2.00	2.23	112	70-130	
Methylene Chloride	2.00	1.83	92	70-130	
Methyl tert-butyl ether	2.00	2.17	109	60-140	
Naphthalene	2.00	2.27	114	60-140	
Tetrachloroethene	2.00	2.17	109	70-130	
Toluene	2.00	2.14	107	70-130	
trans-1,2-Dichloroethene	2.00	1.97	98	70-130	
1,2,4-Trichlorobenzene	2.00	2.30	115	60-140	
1,1,1-Trichloroethane	2.00	2.18	109	70-130	
1,1,2-Trichloroethane	2.00	2.09	105	70-130	
Trichloroethene	2.00	2.11	105	70-130	
1,2,3-Trimethylbenzene	2.00	2.19	110	70-130	
1,2,4-Trimethylbenzene	2.00	2.41	120	70-130	
1,3,5-Trimethylbenzene	2.00	2.35	118	70-130	
Vinyl chloride	2.00	2.11	105	70-130	
Xylenes, Total	6.00	6.91	115	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1

SDG No.:

Lab File ID: R500BK13.D Lab Sample ID: MB 140-15956/4

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MR Date Analyzed: 11/13/2017 11:43

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-15956/1002	RCCVK13-LCS.d	11/13/2017 09:53
BLDG-A EFFLUENT	140-9854-1	RK13P104.D	11/13/2017 18:27
BLDG-A MID	140-9854-2	RK13P105.D	11/13/2017 19:14
BLDG-A INFLUENT	140-9854-3	RK13P106.D	11/13/2017 20:01
BLDG-C EFFLUENT	140-9854-4	RK13P107.D	11/13/2017 20:48
BLDG-C MID	140-9854-5	RK13P108.D	11/13/2017 21:34
BLDG-C INFLUENT	140-9854-6	RK13P109.D	11/13/2017 22:21

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1

SDG No.:

Lab File ID: RBFBJ25.D BFB Injection Date: 10/25/2017

Instrument ID: MR BFB Injection Time: 11:43

Analysis Batch No.: 15542

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.6	
75	30.0 - 60.0 % of mass 95	51.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.5	(0.6) 1
174	50.0 - 120.00 % of mass 95	85.8	
175	5.0 - 9.0 % of mass 174	6.0	(7.1) 1
176	95.0 - 101.0 % of mass 174	83.1	(96.9) 1
177	5.0 - 9.0 % of mass 176	5.5	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-15542/3	RJ25IC01.D	10/25/2017	13:00
	IC 140-15542/4	RJ25IC02.D	10/25/2017	13:46
	IC 140-15542/5	RJ25IC03.D	10/25/2017	14:33
	IC 140-15542/6	RJ25IC04.D	10/25/2017	15:20
	IC 140-15542/7	RJ25IC05.D	10/25/2017	16:08
	IC 140-15542/8	RJ25IC06.D	10/25/2017	16:56
	ICIS 140-15542/9	RJ25IC07.D	10/25/2017	17:43
	IC 140-15542/10	RJ25IC08.D	10/25/2017	18:31
	IC 140-15542/11	RJ25IC09.D	10/25/2017	19:18
	IC 140-15542/12	RJ25IC10.D	10/25/2017	20:06
	ICV 140-15542/14	RJ25ICV.D	10/25/2017	21:40

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1

SDG No.:

Lab File ID: RBFBK13.D BFB Injection Date: 11/13/2017

Instrument ID: MR BFB Injection Time: 09:22

Analysis Batch No.: 15956

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.5	
75	30.0 - 60.0 % of mass 95	50.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.5	(0.5) 1
174	50.0 - 120.00 % of mass 95	87.7	
175	5.0 - 9.0 % of mass 174	6.2	(7.1) 1
176	95.0 - 101.0 % of mass 174	85.0	(96.9) 1
177	5.0 - 9.0 % of mass 176	5.6	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-15956/2	RCCVK13.D	11/13/2017	09:53
	LCS 140-15956/1002	RCCVK13-LCS.d	11/13/2017	09:53
	MB 140-15956/4	R500BK13.D	11/13/2017	11:43
BLDG-A EFFLUENT	140-9854-1	RK13P104.D	11/13/2017	18:27
BLDG-A MID	140-9854-2	RK13P105.D	11/13/2017	19:14
BLDG-A INFLUENT	140-9854-3	RK13P106.D	11/13/2017	20:01
BLDG-C EFFLUENT	140-9854-4	RK13P107.D	11/13/2017	20:48
BLDG-C MID	140-9854-5	RK13P108.D	11/13/2017	21:34
BLDG-C INFLUENT	140-9854-6	RK13P109.D	11/13/2017	22:21

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1

SDG No.:

Sample No.: ICIS 140-15542/9 Date Analyzed: 10/25/2017 17:43

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RJ25IC07.D Heated Purge: (Y/N) N

Calibration ID: 1314

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		418613	7.79	2428422	9.92	2105490	14.90
UPPER LIMIT		586058	8.12	3399791	10.25	2947686	15.23
LOWER LIMIT		251168	7.46	1457053	9.59	1263294	14.57
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-15542/14		425799	7.79	2437587	9.92	2075967	14.91

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1

SDG No.:

Sample No.: CCVIS 140-15956/2 Date Analyzed: 11/13/2017 09:53

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RCCVK13.D Heated Purge: (Y/N) N

Calibration ID: 1314

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		335847	7.77	1923368	9.90	1646620	14.89
UPPER LIMIT		470186	8.10	2692715	10.23	2305268	15.22
LOWER LIMIT		201508	7.44	1154021	9.57	987972	14.56
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-15956/1002		335847	7.77	1923368	9.90	1646620	14.89
MB 140-15956/4		332351	7.76	1922553	9.90	1632580	14.89
140-9854-1	BLDG-A EFFLUENT	328185	7.77	1913159	9.91	1606421	14.90
140-9854-2	BLDG-A MID	314558	7.78	1822979	9.91	1553048	14.90
140-9854-3	BLDG-A INFLUENT	305513	7.77	1785107	9.91	1556984	14.89
140-9854-4	BLDG-C EFFLUENT	308334	7.79	1796457	9.91	1564118	14.90
140-9854-5	BLDG-C MID	318932	7.78	1869187	9.91	1614262	14.90
140-9854-6	BLDG-C INFLUENT	321742	7.78	1887021	9.91	1618403	14.90

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9854-1

SDG No.:

Client Sample ID: BLDG-A EFFLUENT | Lab Sample ID: 140-9854-1

Matrix: Air | Lab File ID: RK13P104.D

Analysis Method: TO 15 LL | Date Collected: 11/08/2017 10:56

Sample wt/vol: 100(mL) | Date Analyzed: 11/13/2017 18:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15956 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	6.9		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.22	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	5.9		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.60		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	2.0		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.92	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	14		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.8		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9854-1

SDG No.:

Client Sample ID: BLDG-A EFFLUENT | Lab Sample ID: 140-9854-1

Matrix: Air | Lab File ID: RK13P104.D

Analysis Method: TO 15 LL | Date Collected: 11/08/2017 10:56

Sample wt/vol: 100(mL) | Date Analyzed: 11/13/2017 18:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15956 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	22		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	0.78	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	23		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	ND		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	2.4		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	8.1		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.2	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	75		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	9.6		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P104.D				
Lims ID:	140-9854-A-1				
Client ID:	BLDG-A EFFLUENT				
Sample Type:	Client				
Inject. Date:	13-Nov-2017 18:27:30	ALS Bottle#:	4	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006602-011				
Misc. Info.:	140-9854-a-1				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	14-Nov-2017 11:45:23	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK025				
First Level Reviewer: tajh		Date:	14-Nov-2017 11:04:03		

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
*	1 Chlorobromomethane (IS)	128	7.773	7.767	0.006	82	328185	4.00	
*	2 1,4-Difluorobenzene	114	9.908	9.903	0.005	95	1913159	4.00	
*	3 Chlorobenzene-d5 (IS)	117	14.896	14.891	0.005	88	1606421	4.00	
$	4 4-Bromofluorobenzene (Surr	95	16.600	16.600	0.000	88	1256179	4.27	
	6 Chlorodifluoromethane	67	3.529	3.507	0.022	46	1812	0.0440	
	26 1,1-Dichloroethene	96	5.282	5.271	0.011	96	53536	0.4094	
	30 Methylene Chloride	84	5.557	5.546	0.011	90	24676	0.1847	
	36 1,1-Dichloroethane	63	6.608	6.603	0.005	100	28700	0.1206	
	40 cis-1,2-Dichloroethene	96	7.487	7.482	0.005	95	161265	1.17	
	44 1,1,1-Trichloroethane	97	8.765	8.754	0.011	95	887675	2.75	
	48 Benzene	78	9.337	9.326	0.011	96	527413	1.37	
	55 Trichloroethene	130	10.658	10.652	0.006	97	66022	0.3570	
	64 Toluene	91	12.836	12.831	0.005	93	31495	0.0700	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

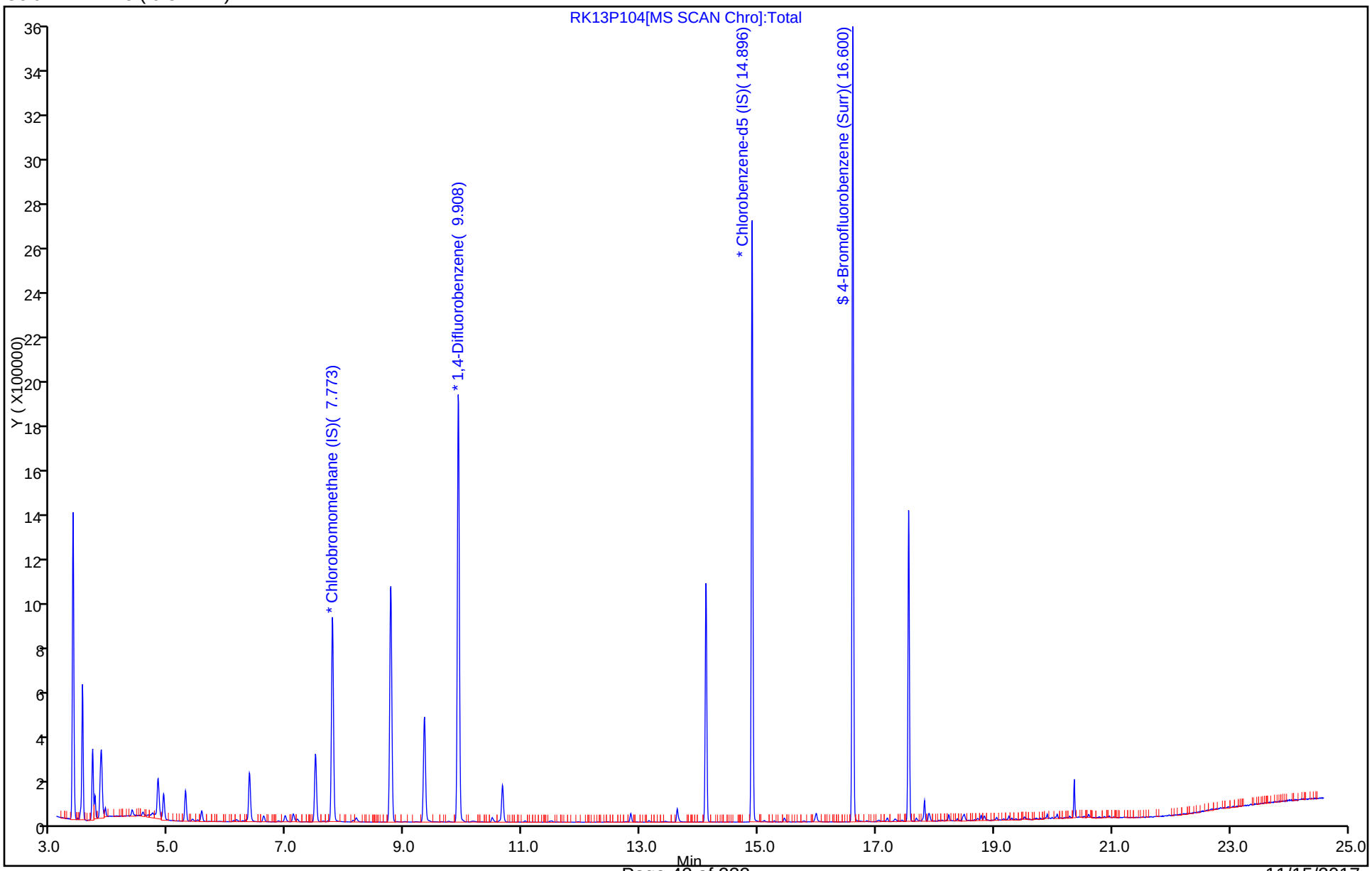
Report Date: 14-Nov-2017 11:45:52 Chrom Revision: 2.2 13-Nov-2017 17:19:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P104.D

Injection Date:	13-Nov-2017 18:27:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-9854-A-1	Lab Sample ID:	140-9854-1	Worklist Smp#:	11
Client ID:	BLDG-A EFFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

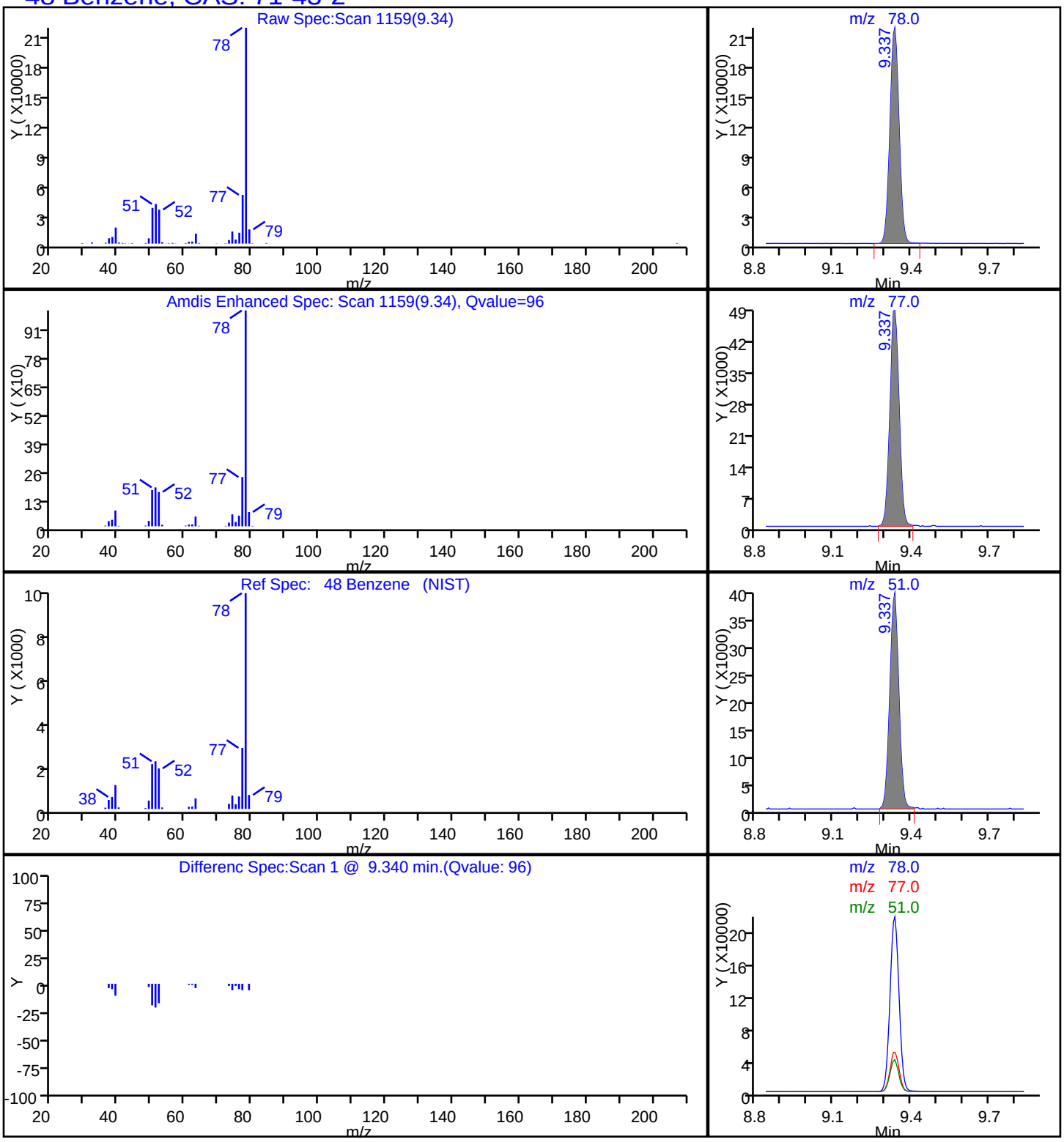
Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P104.D				
Lims ID:	140-9854-A-1				
Client ID:	BLDG-A EFFLUENT				
Sample Type:	Client				
Inject. Date:	13-Nov-2017 18:27:30	ALS Bottle#:	4	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006602-011				
Misc. Info.:	140-9854-a-1				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	14-Nov-2017 11:45:23	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK025				
First Level Reviewer: tajh		Date:	14-Nov-2017 11:04:03		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.27	106.69

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P104.D		
Injection Date:	13-Nov-2017 18:27:30	Instrument ID:	MR
Lims ID:	140-9854-A-1	Lab Sample ID:	140-9854-1
Client ID:	BLDG-A EFFLUENT		
Operator ID:		ALS Bottle#:	4 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

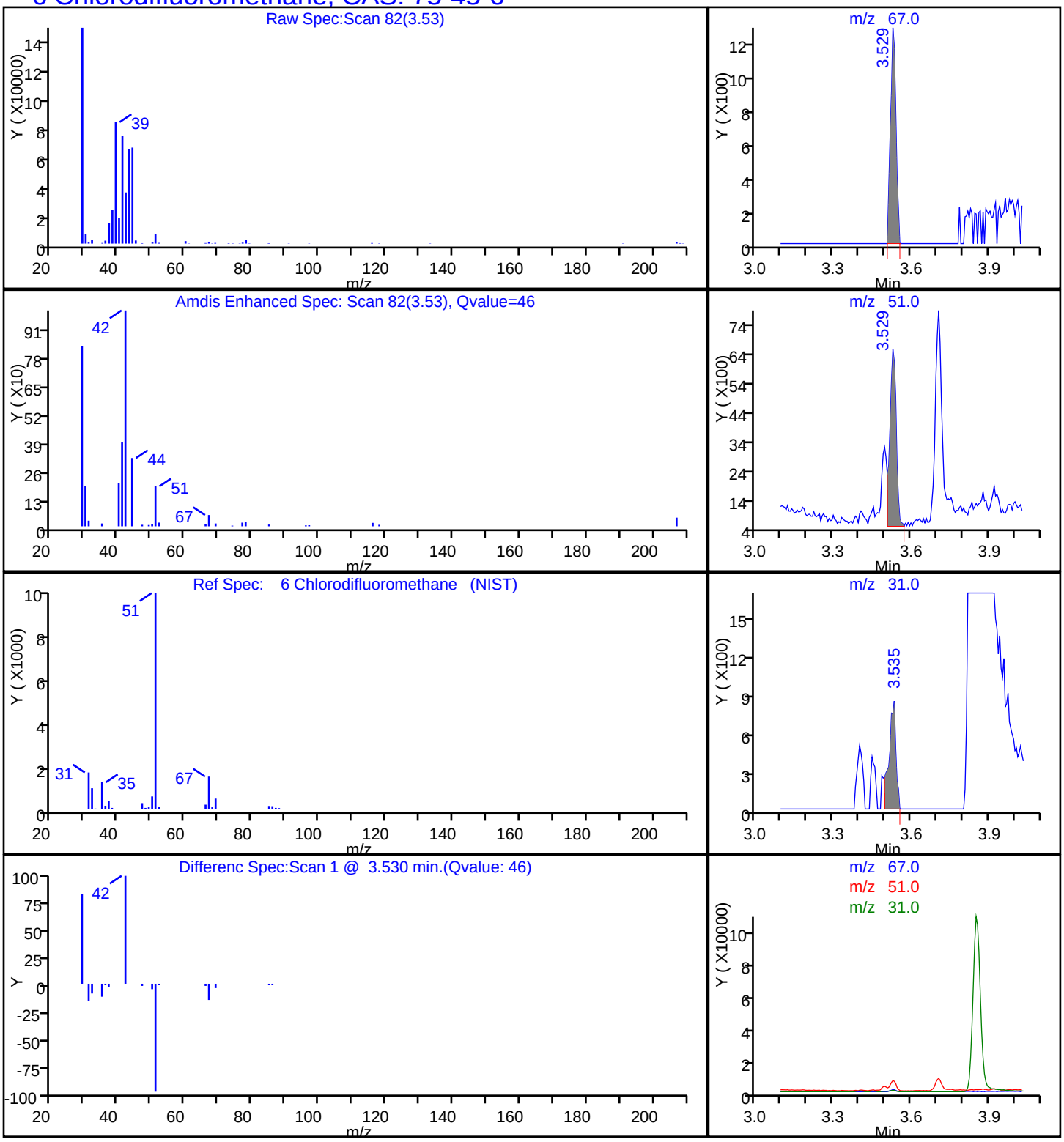
48 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P104.D				
Injection Date:	13-Nov-2017 18:27:30	Instrument ID:	MR		
Lims ID:	140-9854-A-1	Lab Sample ID:	140-9854-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

6 Chlorodifluoromethane, CAS: 75-45-6



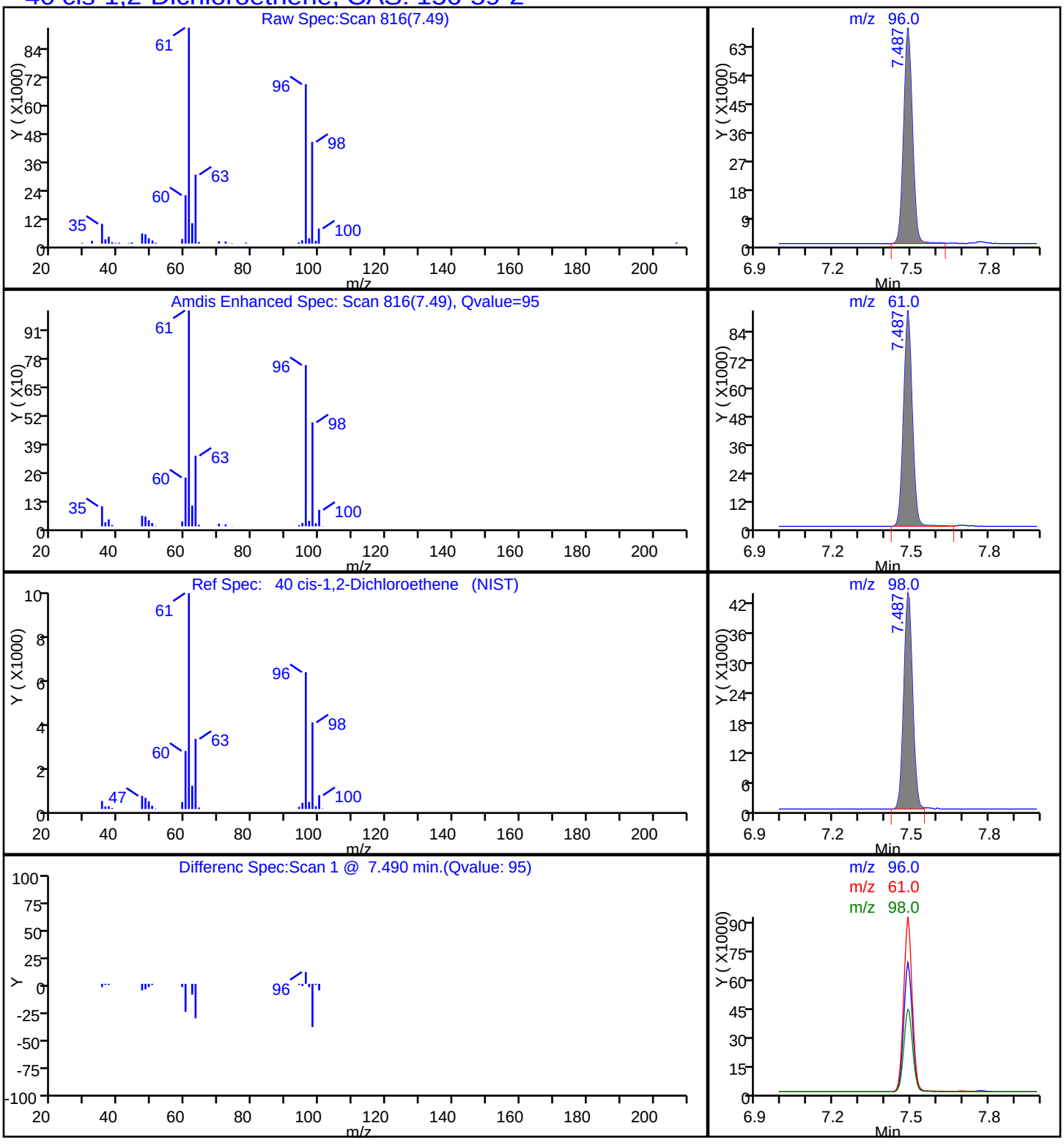
Report Date: 14-Nov-2017 11:45:52 Chrom Revision: 2.2 13-Nov-2017 17:19:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P104.D

Injection Date:	13-Nov-2017 18:27:30	Instrument ID:	MR
Lims ID:	140-9854-A-1	Lab Sample ID:	140-9854-1
Client ID:	BLDG-A EFFLUENT		
Operator ID:		ALS Bottle#:	4 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

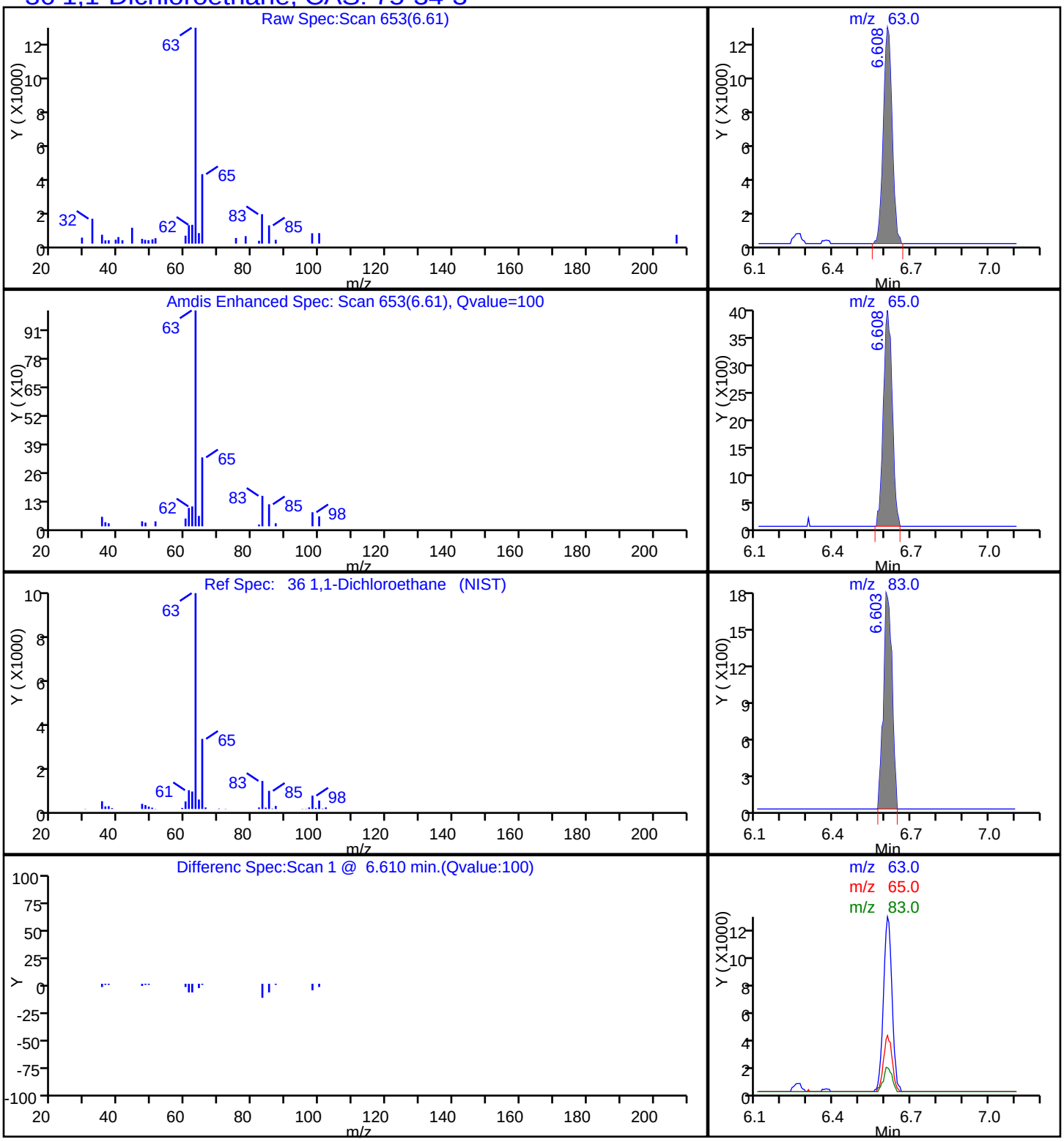
40 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P104.D				
Injection Date:	13-Nov-2017 18:27:30	Instrument ID:	MR		
Lims ID:	140-9854-A-1	Lab Sample ID:	140-9854-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

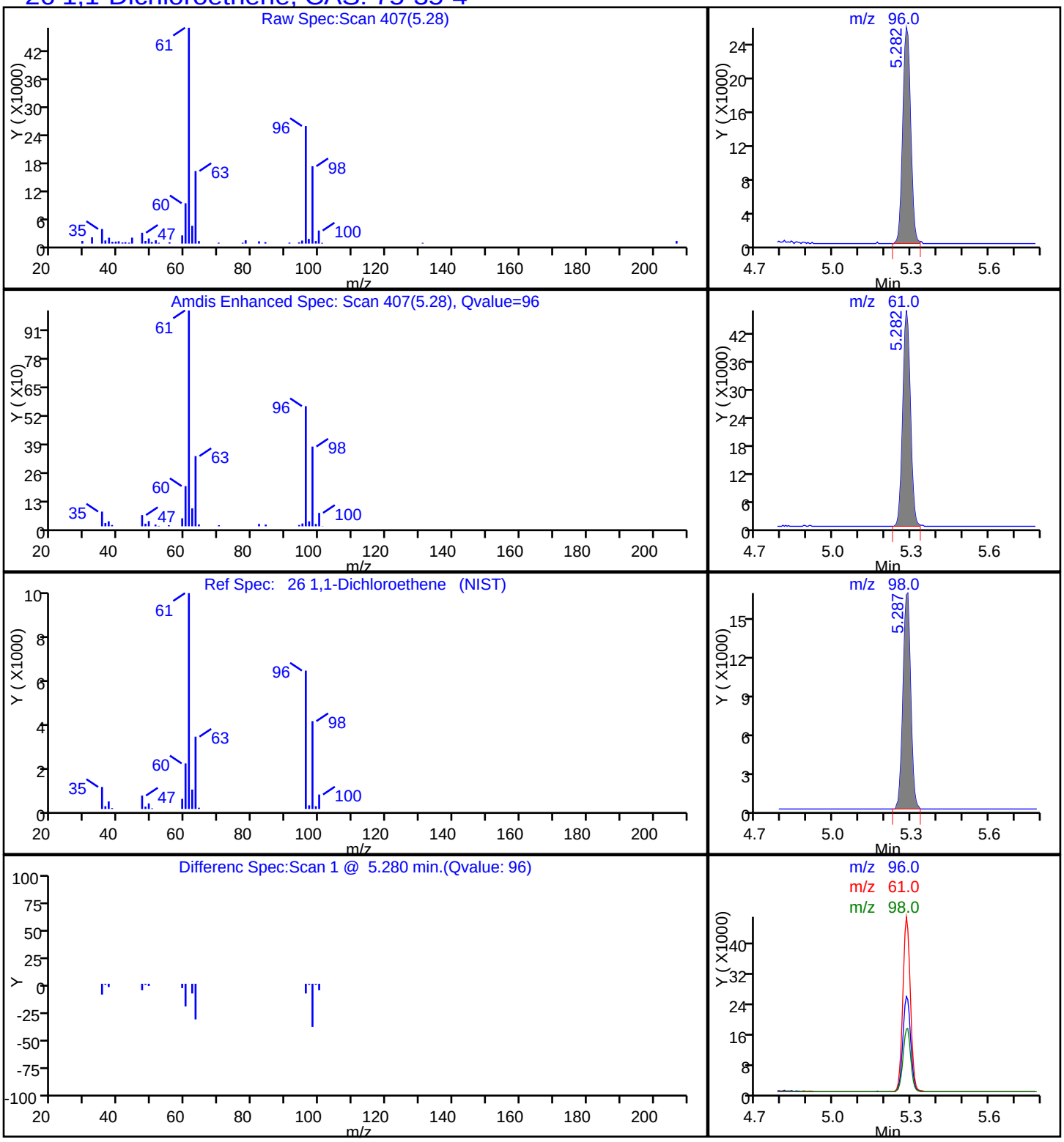
36 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P104.D		
Injection Date:	13-Nov-2017 18:27:30	Instrument ID:	MR
Lims ID:	140-9854-A-1	Lab Sample ID:	140-9854-1
Client ID:	BLDG-A EFFLUENT		
Operator ID:		ALS Bottle#:	4 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

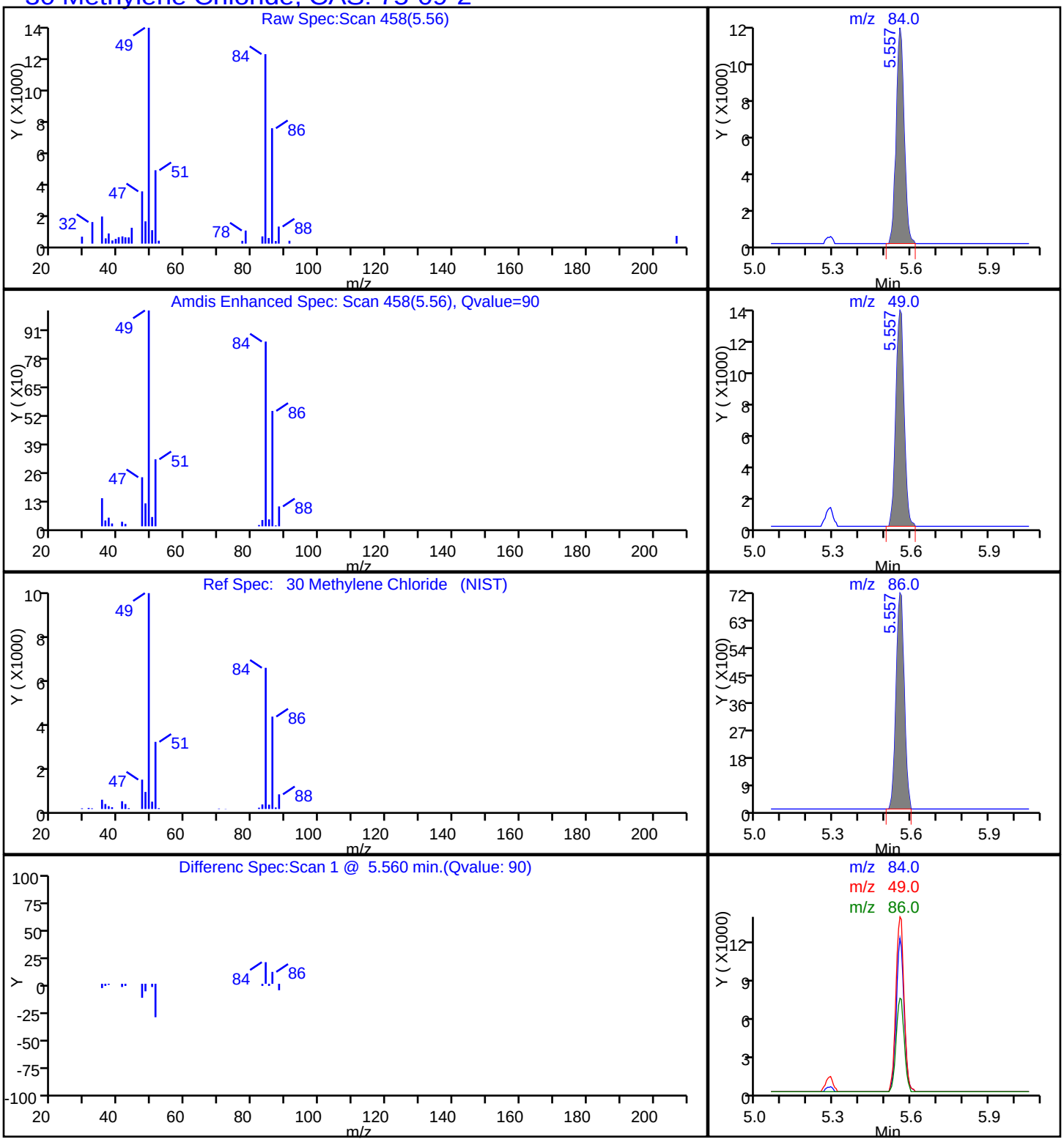
26 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P104.D				
Injection Date:	13-Nov-2017 18:27:30	Instrument ID:	MR		
Lims ID:	140-9854-A-1	Lab Sample ID:	140-9854-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

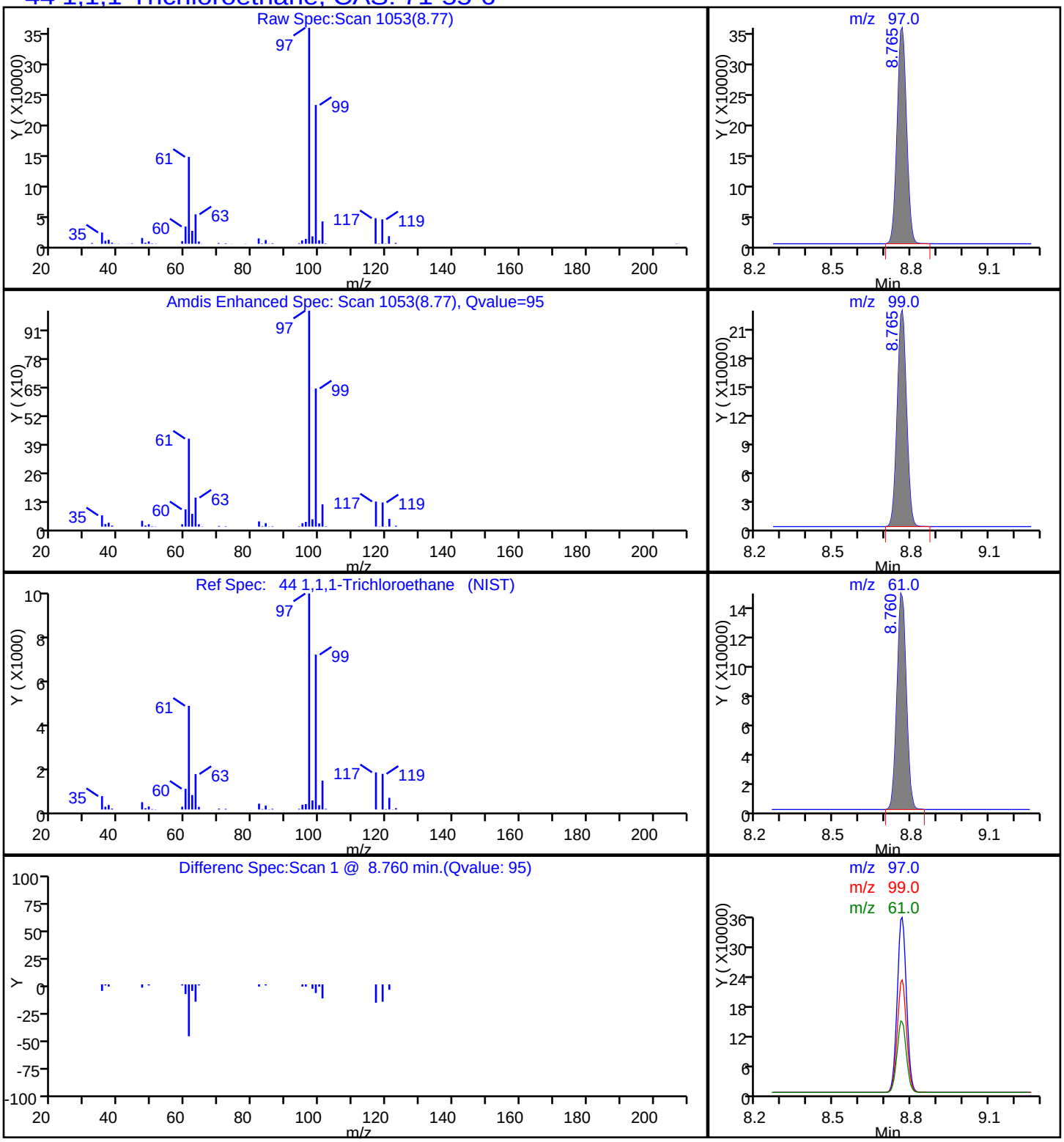
30 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P104.D				
Injection Date:	13-Nov-2017 18:27:30	Instrument ID:	MR		
Lims ID:	140-9854-A-1	Lab Sample ID:	140-9854-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

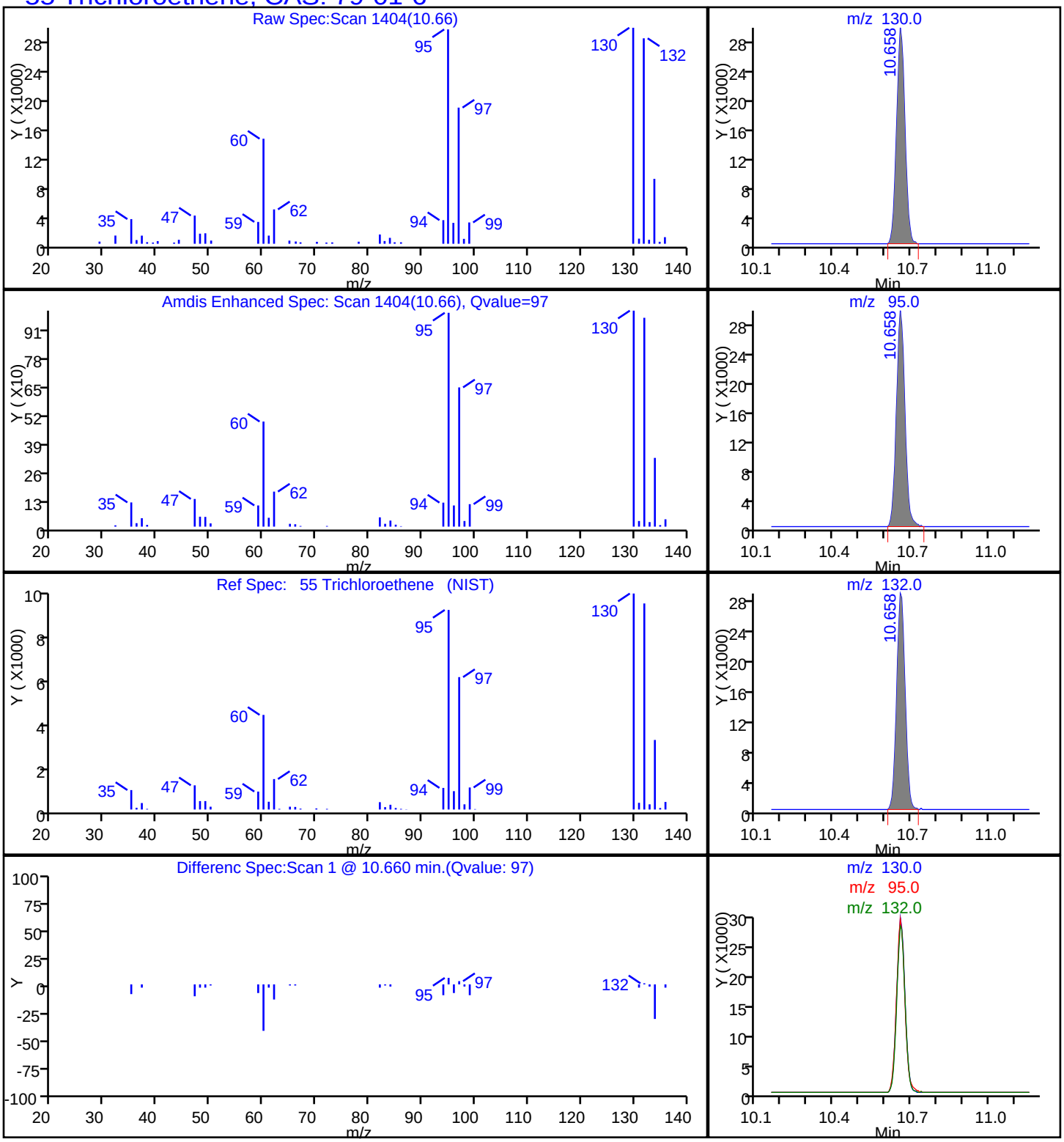
44 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P104.D		
Injection Date:	13-Nov-2017 18:27:30	Instrument ID:	MR
Lims ID:	140-9854-A-1	Lab Sample ID:	140-9854-1
Client ID:	BLDG-A EFFLUENT		
Operator ID:		ALS Bottle#:	4 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

55 Trichloroethene, CAS: 79-01-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9854-1

SDG No.:

Client Sample ID: BLDG-A MID | Lab Sample ID: 140-9854-2

Matrix: Air | Lab File ID: RK13P105.D

Analysis Method: TO 15 LL | Date Collected: 11/08/2017 11:01

Sample wt/vol: 100(mL) | Date Analyzed: 11/13/2017 19:14

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15956 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.38	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.44		0.40	0.075
67-66-3	Chloroform	119.38	0.54		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	18		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.64		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	4.4		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	15		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.94	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.32	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	57		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	109		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9854-1

SDG No.:

Client Sample ID: BLDG-A MID | Lab Sample ID: 140-9854-2

Matrix: Air | Lab File ID: RK13P105.D

Analysis Method: TO 15 LL | Date Collected: 11/08/2017 11:01

Sample wt/vol: 100(mL) | Date Analyzed: 11/13/2017 19:14

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15956 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.2	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.6		1.4	0.27
67-66-3	Chloroform	119.38	2.6		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	70		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	18		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	59		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	1.3	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	310		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	109		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P105.D				
Lims ID:	140-9854-A-2				
Client ID:	BLDG-A MID				
Sample Type:	Client				
Inject. Date:	13-Nov-2017 19:14:30	ALS Bottle#:	5	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006602-012				
Misc. Info.:	140-9854-a-2				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	14-Nov-2017 11:45:23	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK025				
First Level Reviewer: tajh		Date:	14-Nov-2017 11:04:26		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.778	7.767	0.011	81	314558	4.00	
* 2 1,4-Difluorobenzene	114	9.908	9.903	0.005	95	1822979	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.896	14.891	0.005	88	1553048	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.600	16.600	0.000	88	1238618	4.35	
6 Chlorodifluoromethane	67	3.524	3.507	0.017	93	3490	0.0883	
8 Dichlorodifluoromethane	85	3.572	3.556	0.016	99	39555	0.1283	
26 1,1-Dichloroethene	96	5.276	5.271	0.005	97	374088	2.98	
30 Methylene Chloride	84	5.551	5.546	0.005	89	23990	0.1873	
33 trans-1,2-Dichloroethene	96	6.252	6.247	0.005	97	8147	0.0632	
36 1,1-Dichloroethane	63	6.608	6.603	0.005	100	200765	0.8799	
40 cis-1,2-Dichloroethene	96	7.487	7.482	0.005	95	466488	3.54	
42 Chloroform	83	7.805	7.800	0.005	94	31788	0.1070	
44 1,1,1-Trichloroethane	97	8.765	8.754	0.011	95	3556680	11.5	
48 Benzene	78	9.342	9.326	0.016	97	27423	0.0750	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

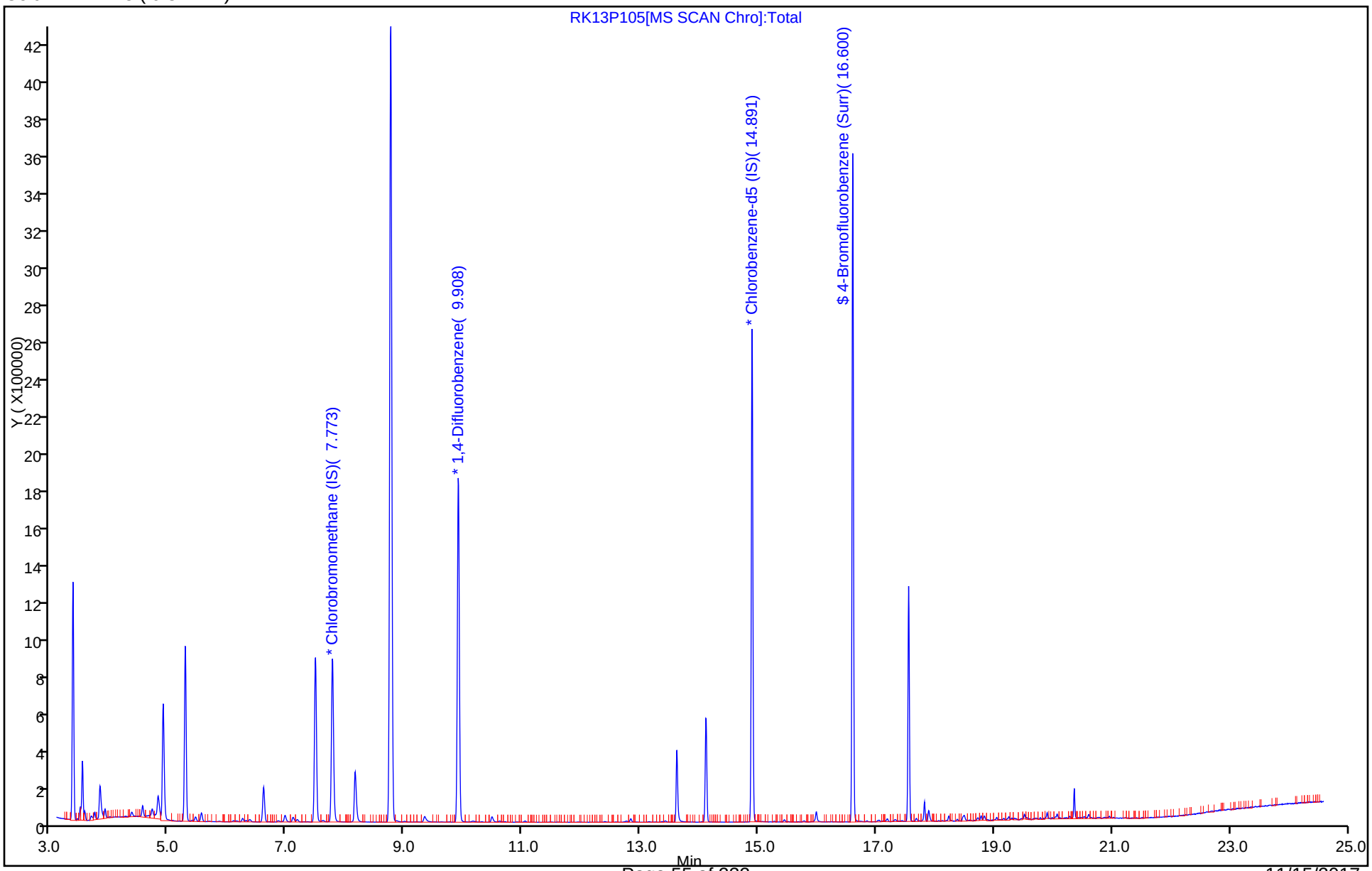
Report Date: 14-Nov-2017 11:45:55 Chrom Revision: 2.2 13-Nov-2017 17:19:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P105.D

Injection Date:	13-Nov-2017 19:14:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-9854-A-2	Lab Sample ID:	140-9854-2	Worklist Smp#:	12
Client ID:	BLDG-A MID				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

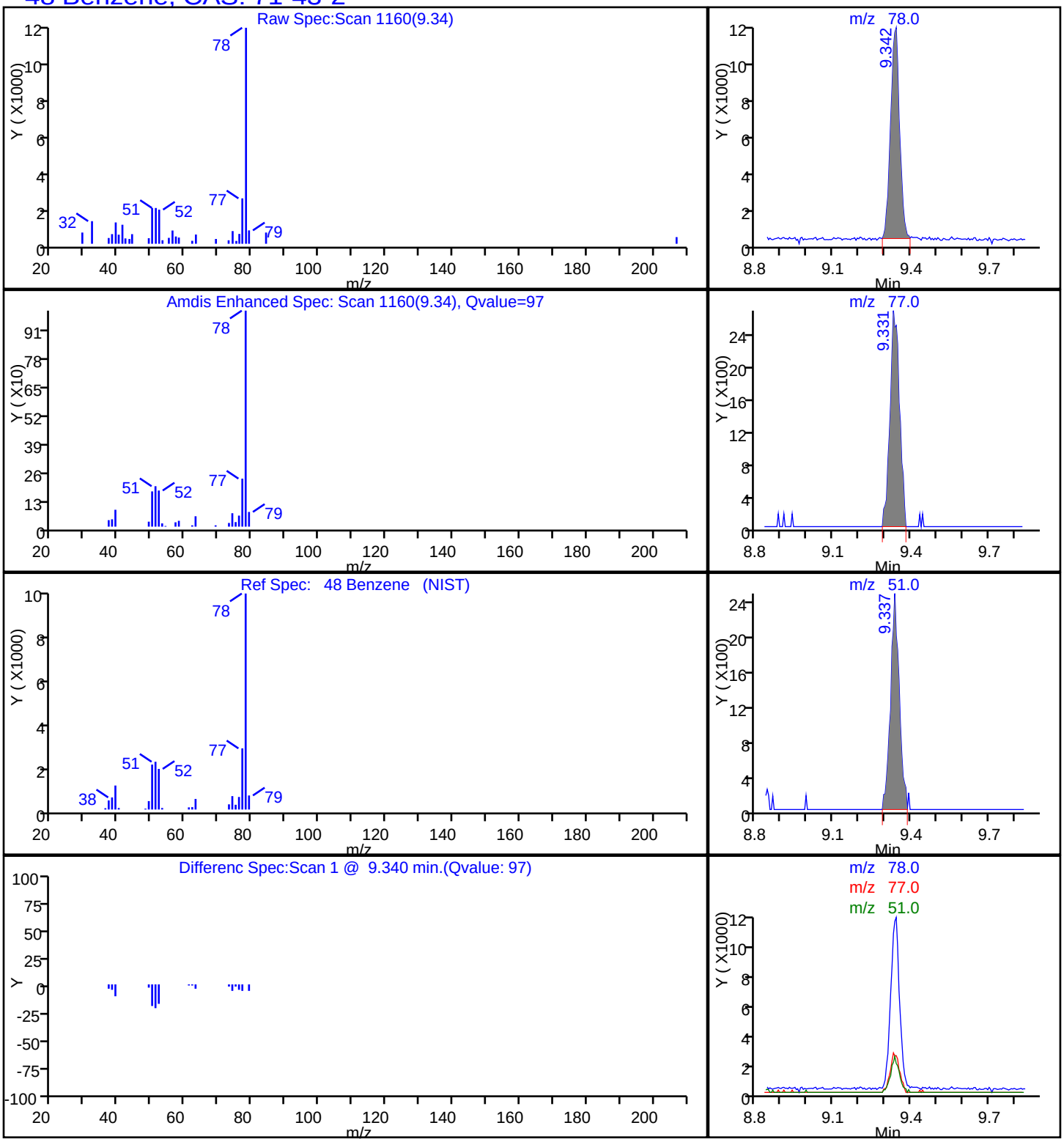
Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P105.D				
Lims ID:	140-9854-A-2				
Client ID:	BLDG-A MID				
Sample Type:	Client				
Inject. Date:	13-Nov-2017 19:14:30	ALS Bottle#:	5	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006602-012				
Misc. Info.:	140-9854-a-2				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	14-Nov-2017 11:45:23	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK025				
First Level Reviewer: tajh		Date:	14-Nov-2017 11:04:26		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.35	108.81

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P105.D		
Injection Date:	13-Nov-2017 19:14:30	Instrument ID:	MR
Lims ID:	140-9854-A-2	Lab Sample ID:	140-9854-2
Client ID:	BLDG-A MID		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

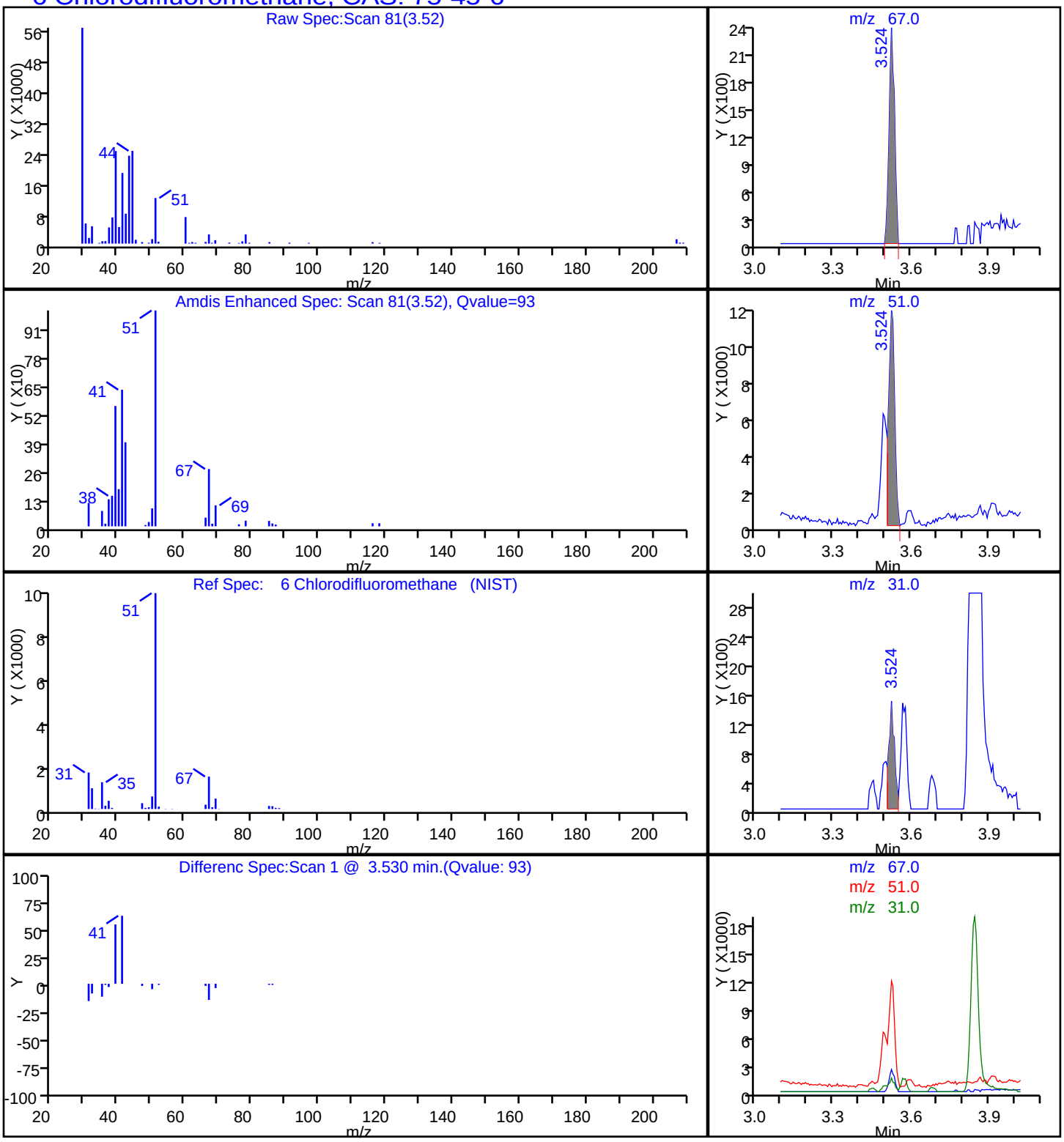
48 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P105.D				
Injection Date:	13-Nov-2017 19:14:30	Instrument ID:	MR		
Lims ID:	140-9854-A-2	Lab Sample ID:	140-9854-2		
Client ID:	BLDG-A MID				
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

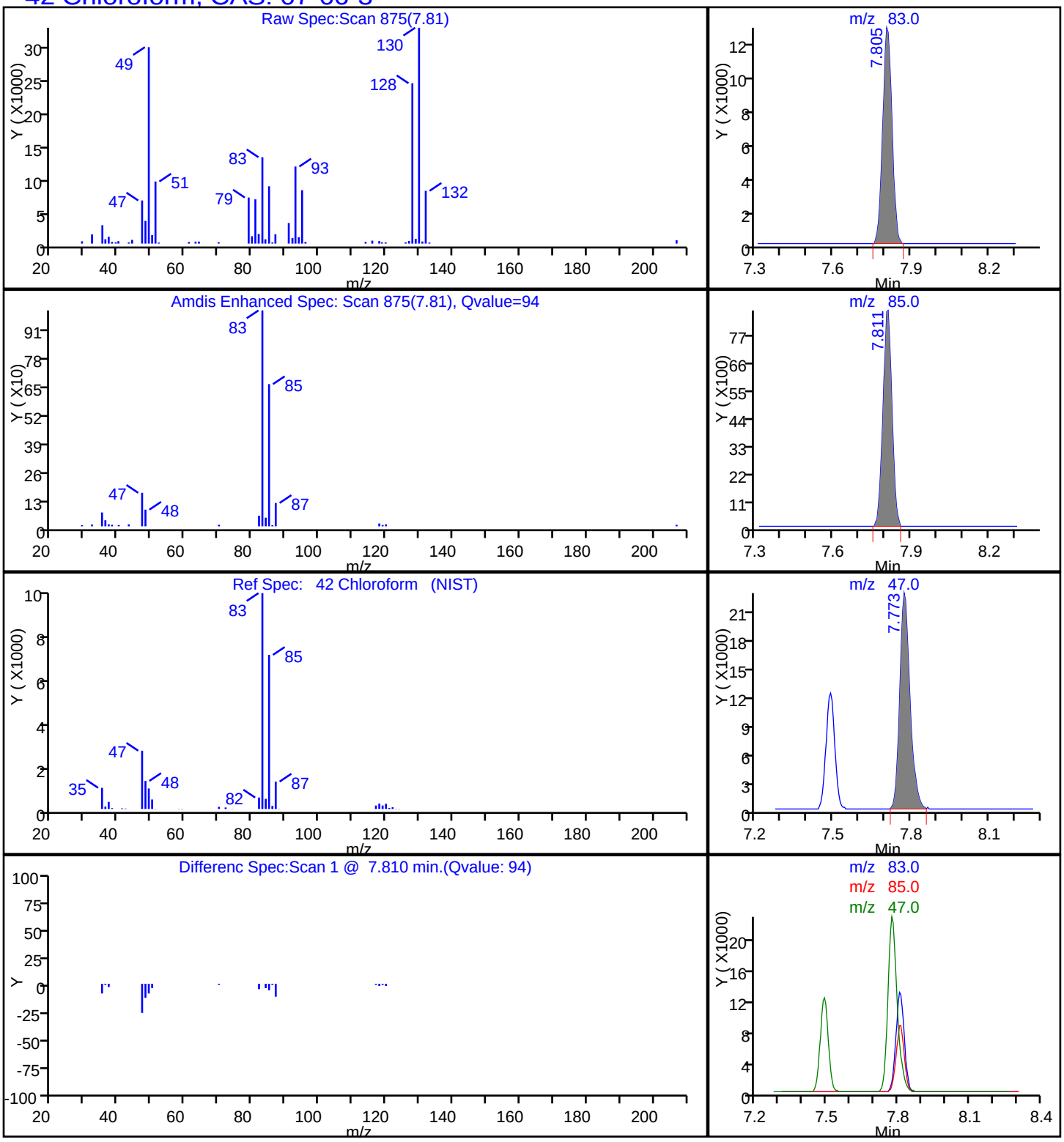
6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P105.D		
Injection Date:	13-Nov-2017 19:14:30	Instrument ID:	MR
Lims ID:	140-9854-A-2	Lab Sample ID:	140-9854-2
Client ID:	BLDG-A MID		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

42 Chloroform, CAS: 67-66-3



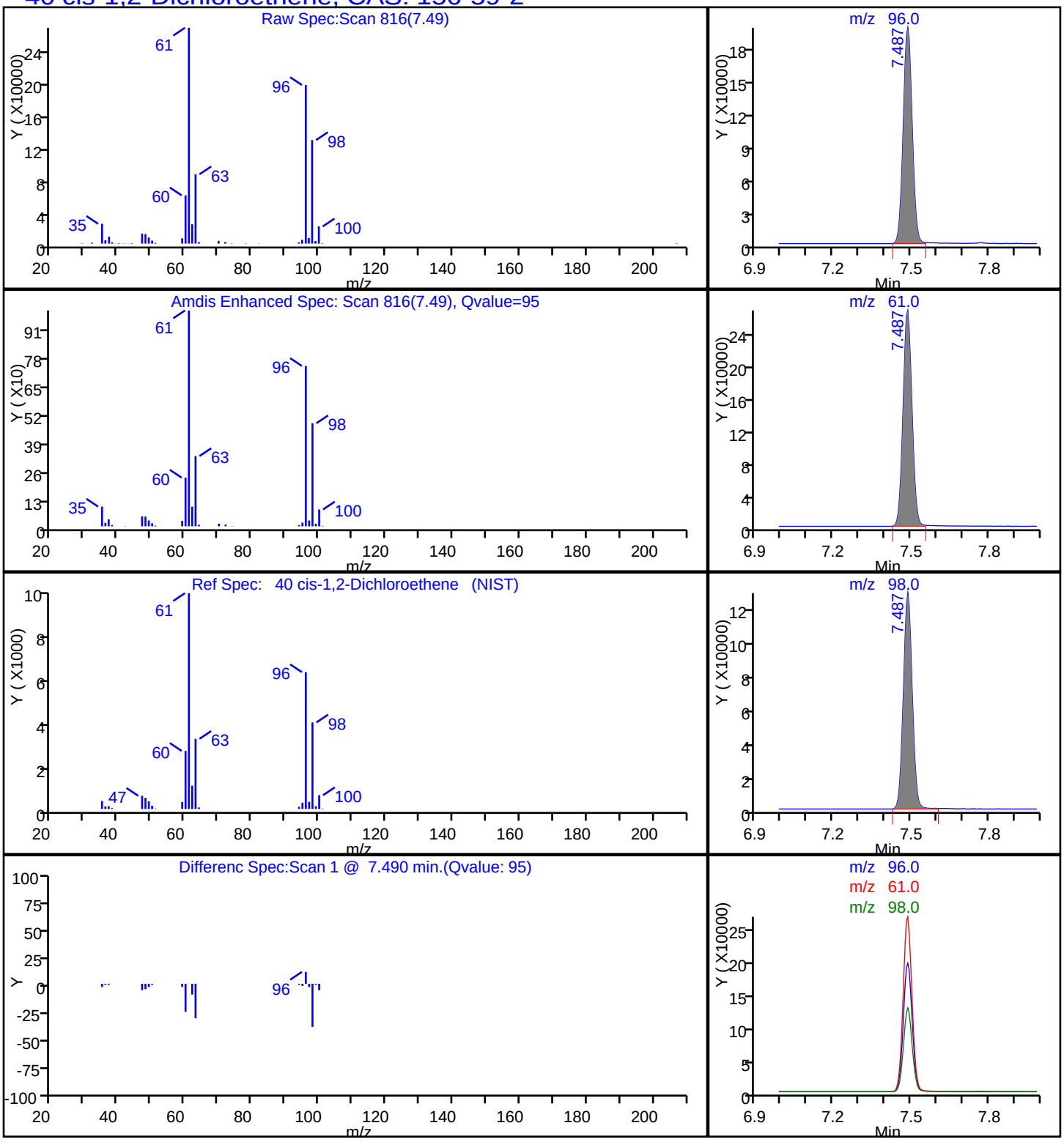
Report Date: 14-Nov-2017 11:45:56 Chrom Revision: 2.2 13-Nov-2017 17:19:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P105.D

Injection Date:	13-Nov-2017 19:14:30	Instrument ID:	MR
Lims ID:	140-9854-A-2	Lab Sample ID:	140-9854-2
Client ID:	BLDG-A MID		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

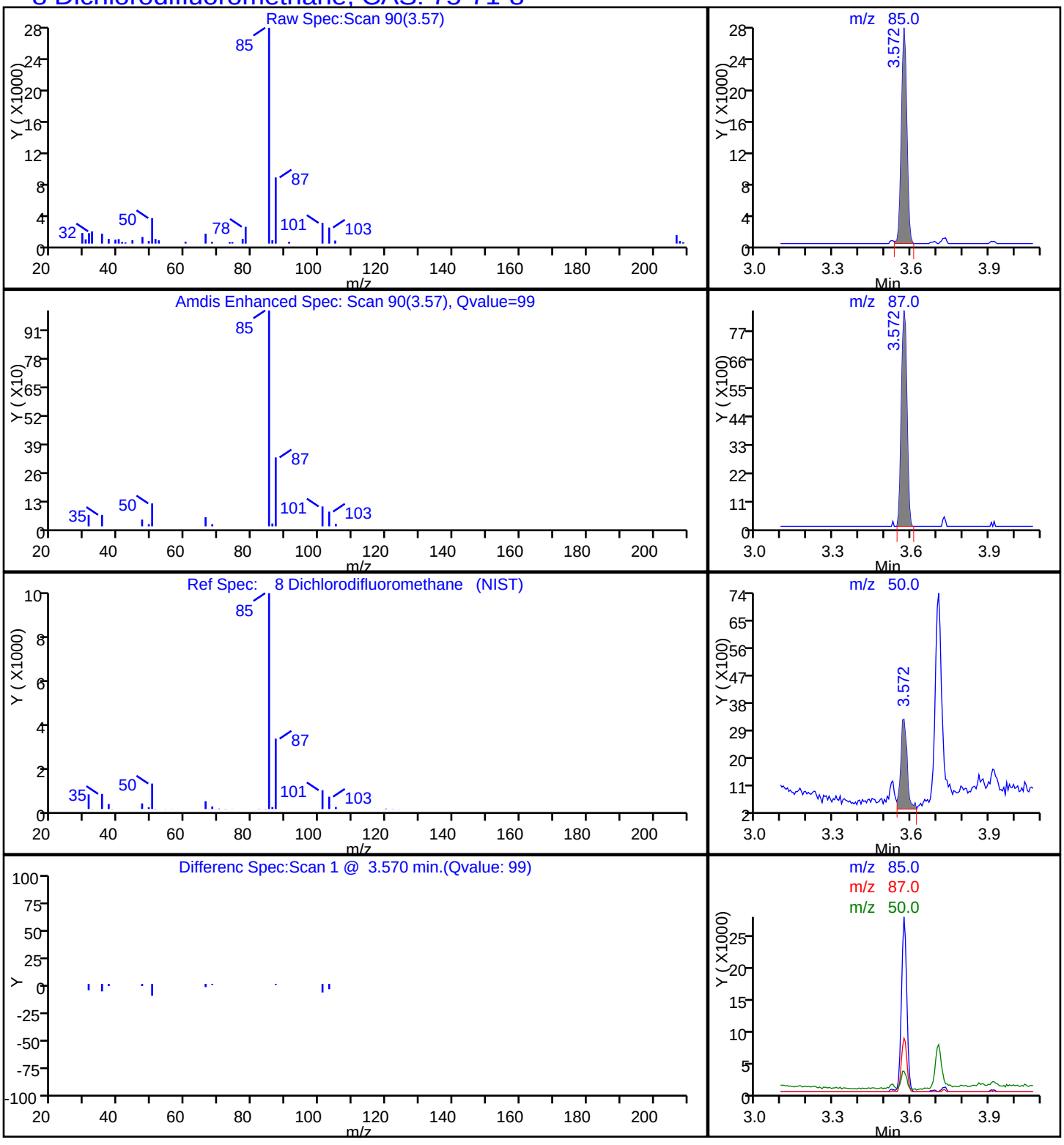
40 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P105.D				
Injection Date:	13-Nov-2017 19:14:30	Instrument ID:	MR		
Lims ID:	140-9854-A-2	Lab Sample ID:	140-9854-2		
Client ID:	BLDG-A MID				
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

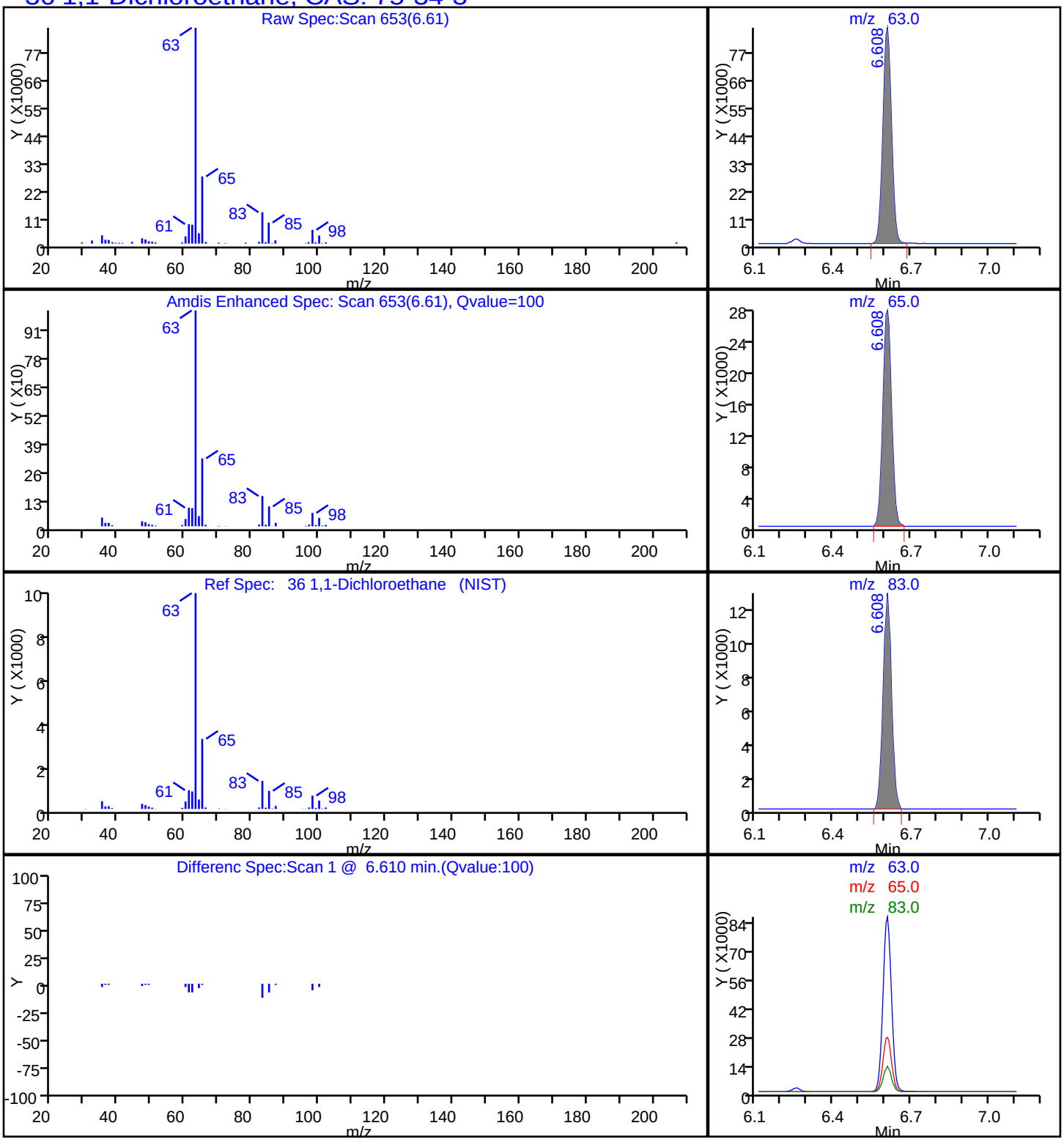
8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P105.D		
Injection Date:	13-Nov-2017 19:14:30	Instrument ID:	MR
Lims ID:	140-9854-A-2	Lab Sample ID:	140-9854-2
Client ID:	BLDG-A MID		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

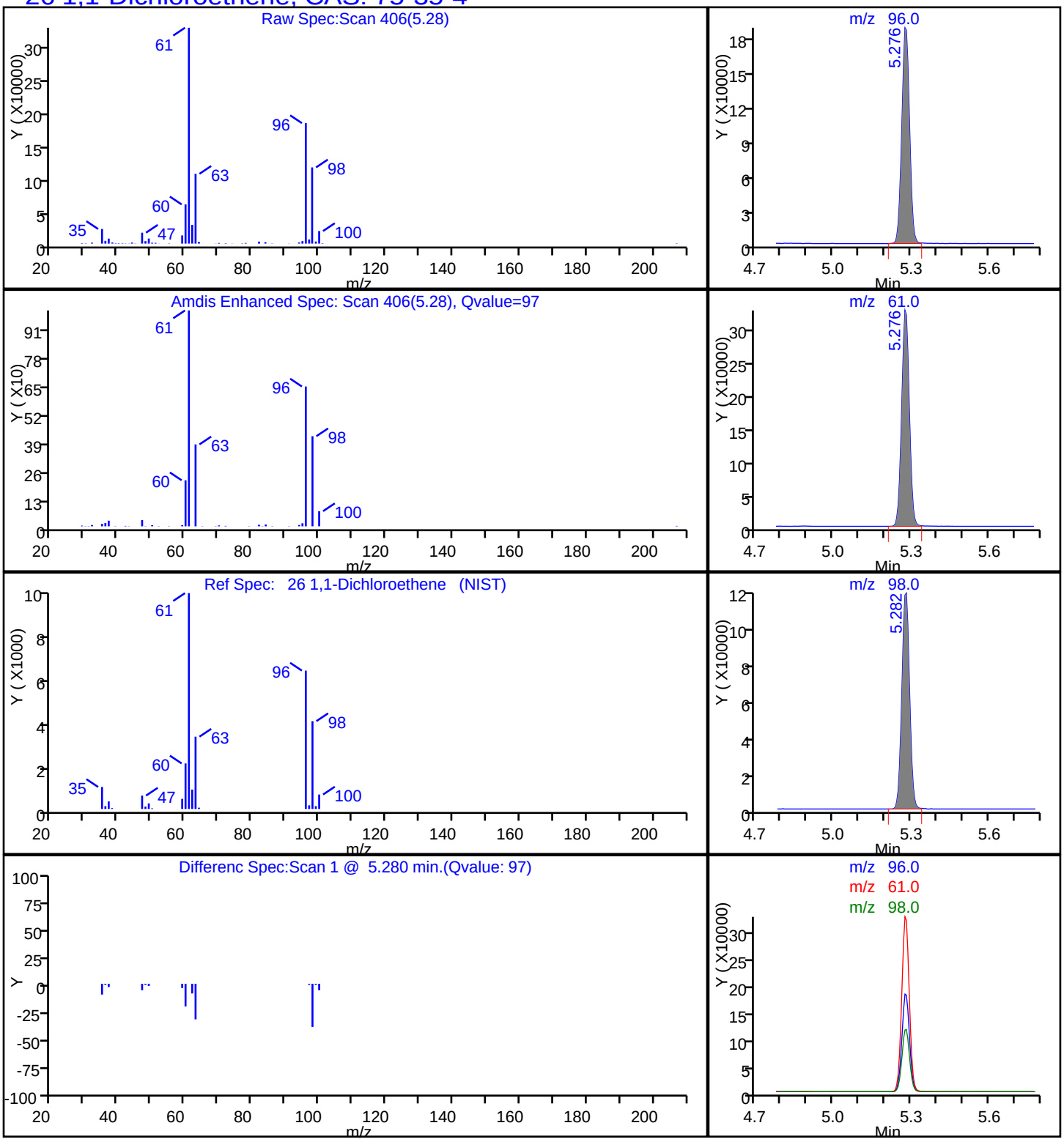
36 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P105.D				
Injection Date:	13-Nov-2017 19:14:30	Instrument ID:	MR		
Lims ID:	140-9854-A-2	Lab Sample ID:	140-9854-2		
Client ID:	BLDG-A MID				
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

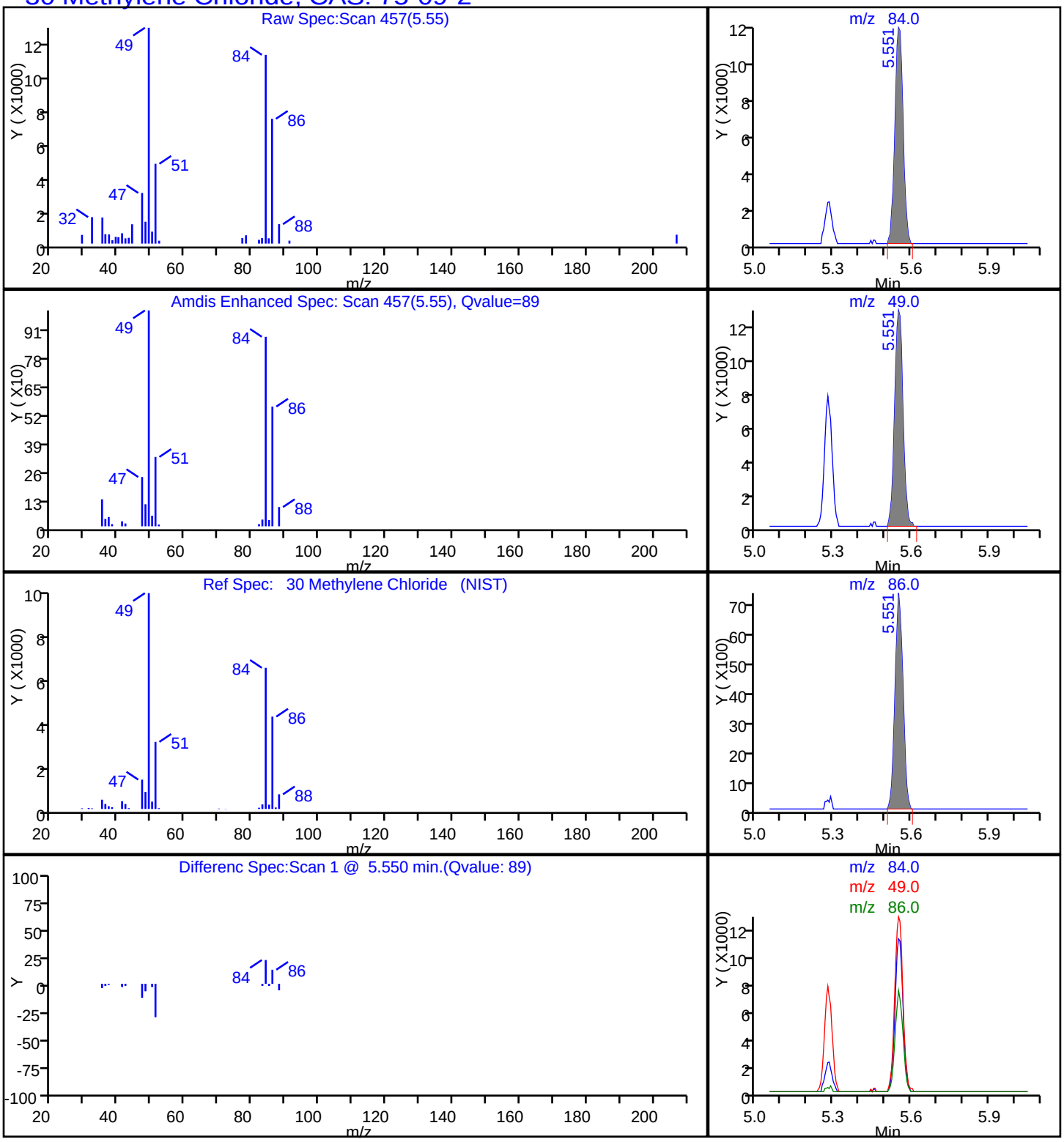
26 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P105.D				
Injection Date:	13-Nov-2017 19:14:30	Instrument ID:	MR		
Lims ID:	140-9854-A-2	Lab Sample ID:	140-9854-2		
Client ID:	BLDG-A MID				
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

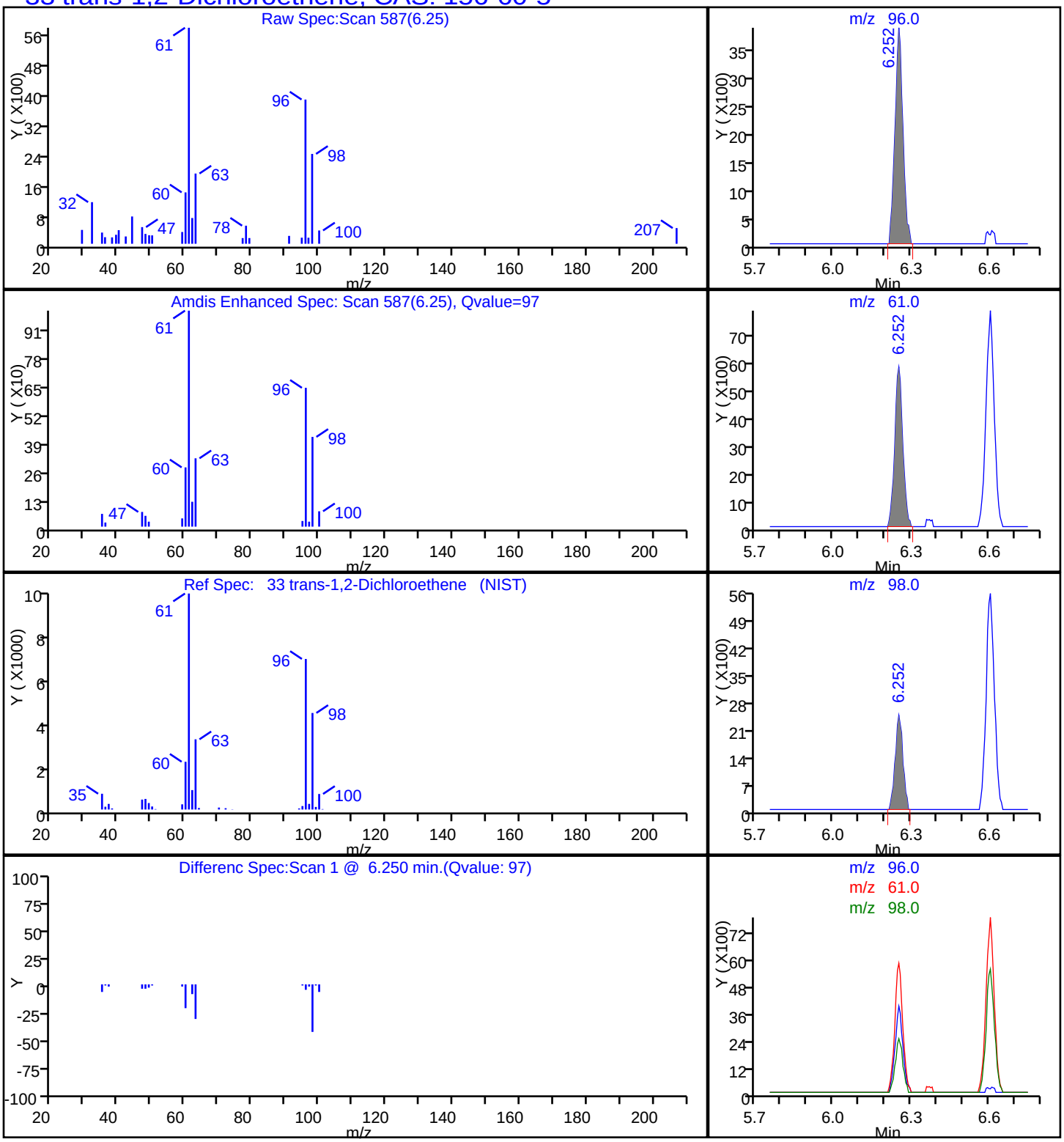
30 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P105.D				
Injection Date:	13-Nov-2017 19:14:30	Instrument ID:	MR		
Lims ID:	140-9854-A-2	Lab Sample ID:	140-9854-2		
Client ID:	BLDG-A MID				
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

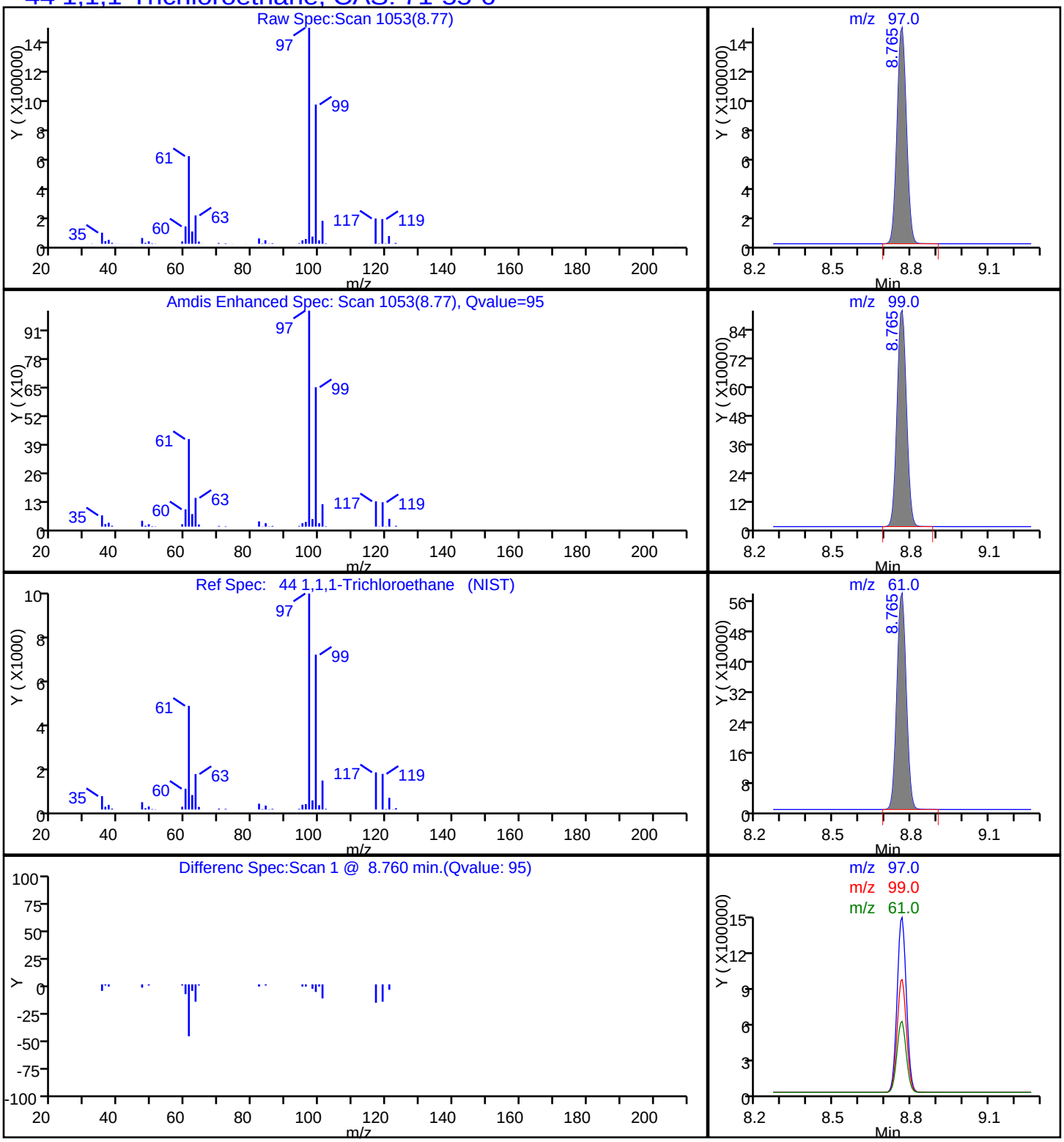
33 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P105.D				
Injection Date:	13-Nov-2017 19:14:30	Instrument ID:	MR		
Lims ID:	140-9854-A-2	Lab Sample ID:	140-9854-2		
Client ID:	BLDG-A MID				
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

44 1,1,1-Trichloroethane, CAS: 71-55-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9854-1

SDG No.:

Client Sample ID: BLDG-A INFLUENT | Lab Sample ID: 140-9854-3

Matrix: Air | Lab File ID: RK13P106.D

Analysis Method: TO 15 LL | Date Collected: 11/08/2017 11:07

Sample wt/vol: 10(mL) | Date Analyzed: 11/13/2017 20:01

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15956 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.3	J	4.0	1.2
56-23-5	Carbon tetrachloride	153.81	ND		4.0	0.75
75-45-6	Chlorodifluoromethane	86.47	ND		4.0	0.75
67-66-3	Chloroform	119.38	ND		4.0	0.75
156-59-2	cis-1,2-Dichloroethene	96.94	21		4.0	1.2
75-71-8	Dichlorodifluoromethane	120.91	ND		4.0	1.4
75-34-3	1,1-Dichloroethane	98.96	4.2		4.0	0.50
107-06-2	1,2-Dichloroethane	98.96	ND		4.0	0.95
75-35-4	1,1-Dichloroethene	96.94	22		4.0	0.70
100-41-4	Ethylbenzene	106.17	ND		4.0	1.4
75-09-2	Methylene Chloride	84.93	ND		10	6.5
1634-04-4	Methyl tert-butyl ether	88.15	ND		20	3.4
91-20-3	Naphthalene	128.17	ND		2.0	2.0
127-18-4	Tetrachloroethene	165.83	ND		4.0	0.80
108-88-3	Toluene	92.14	ND		6.0	6.0
156-60-5	trans-1,2-Dichloroethene	96.94	ND		4.0	1.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		4.0	2.0
71-55-6	1,1,1-Trichloroethane	133.41	100		4.0	0.60
79-00-5	1,1,2-Trichloroethane	133.41	ND		4.0	1.1
79-01-6	Trichloroethene	131.39	200		2.0	0.70
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		4.0	1.7
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		4.0	1.3
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		4.0	1.3
75-01-4	Vinyl chloride	62.50	ND		2.0	1.5
1330-20-7	Xylenes, Total	106.17	ND		8.0	1.2

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9854-1

SDG No.:

Client Sample ID: BLDG-A INFLUENT | Lab Sample ID: 140-9854-3

Matrix: Air | Lab File ID: RK13P106.D

Analysis Method: TO 15 LL | Date Collected: 11/08/2017 11:07

Sample wt/vol: 10(mL) | Date Analyzed: 11/13/2017 20:01

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15956 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	4.0	J	13	3.7
56-23-5	Carbon tetrachloride	153.81	ND		25	4.7
75-45-6	Chlorodifluoromethane	86.47	ND		14	2.7
67-66-3	Chloroform	119.38	ND		20	3.7
156-59-2	cis-1,2-Dichloroethene	96.94	83		16	4.8
75-71-8	Dichlorodifluoromethane	120.91	ND		20	6.7
75-34-3	1,1-Dichloroethane	98.96	17		16	2.0
107-06-2	1,2-Dichloroethane	98.96	ND		16	3.8
75-35-4	1,1-Dichloroethene	96.94	88		16	2.8
100-41-4	Ethylbenzene	106.17	ND		17	5.9
75-09-2	Methylene Chloride	84.93	ND		35	23
1634-04-4	Methyl tert-butyl ether	88.15	ND		72	12
91-20-3	Naphthalene	128.17	ND		10	10
127-18-4	Tetrachloroethene	165.83	ND		27	5.4
108-88-3	Toluene	92.14	ND		23	23
156-60-5	trans-1,2-Dichloroethene	96.94	ND		16	4.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		30	14
71-55-6	1,1,1-Trichloroethane	133.41	550		22	3.3
79-00-5	1,1,2-Trichloroethane	133.41	ND		22	5.7
79-01-6	Trichloroethene	131.39	1100		11	3.8
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		20	8.4
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		20	6.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		20	6.4
75-01-4	Vinyl chloride	62.50	ND		5.1	3.7
1330-20-7	Xylenes, Total	106.17	ND		35	5.2

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P106.D
Lims ID: 140-9854-A-3
Client ID: BLDG-A INFLUENT
Sample Type: Client
Inject. Date: 13-Nov-2017 20:01:30 ALS Bottle#: 6 Worklist Smp#: 13
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006602-013
Misc. Info.: 140-9854-a-3
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Nov-2017 11:45:23 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh Date: 14-Nov-2017 11:07:01

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.773	7.767	0.006	81	305513	4.00	
* 2 1,4-Difluorobenzene	114	9.908	9.903	0.005	95	1785107	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.891	14.891	0.000	89	1556984	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.600	16.600	0.000	88	1189833	4.17	
26 1,1-Dichloroethene	96	5.282	5.271	0.011	96	53892	0.4428	
36 1,1-Dichloroethane	63	6.608	6.603	0.005	100	18640	0.0841	
40 cis-1,2-Dichloroethene	96	7.487	7.482	0.005	95	53533	0.4181	
44 1,1,1-Trichloroethane	97	8.765	8.754	0.011	95	606534	2.02	
48 Benzene	78	9.337	9.326	0.011	98	8999	0.0251	
55 Trichloroethene	130	10.658	10.652	0.006	97	683586	3.96	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

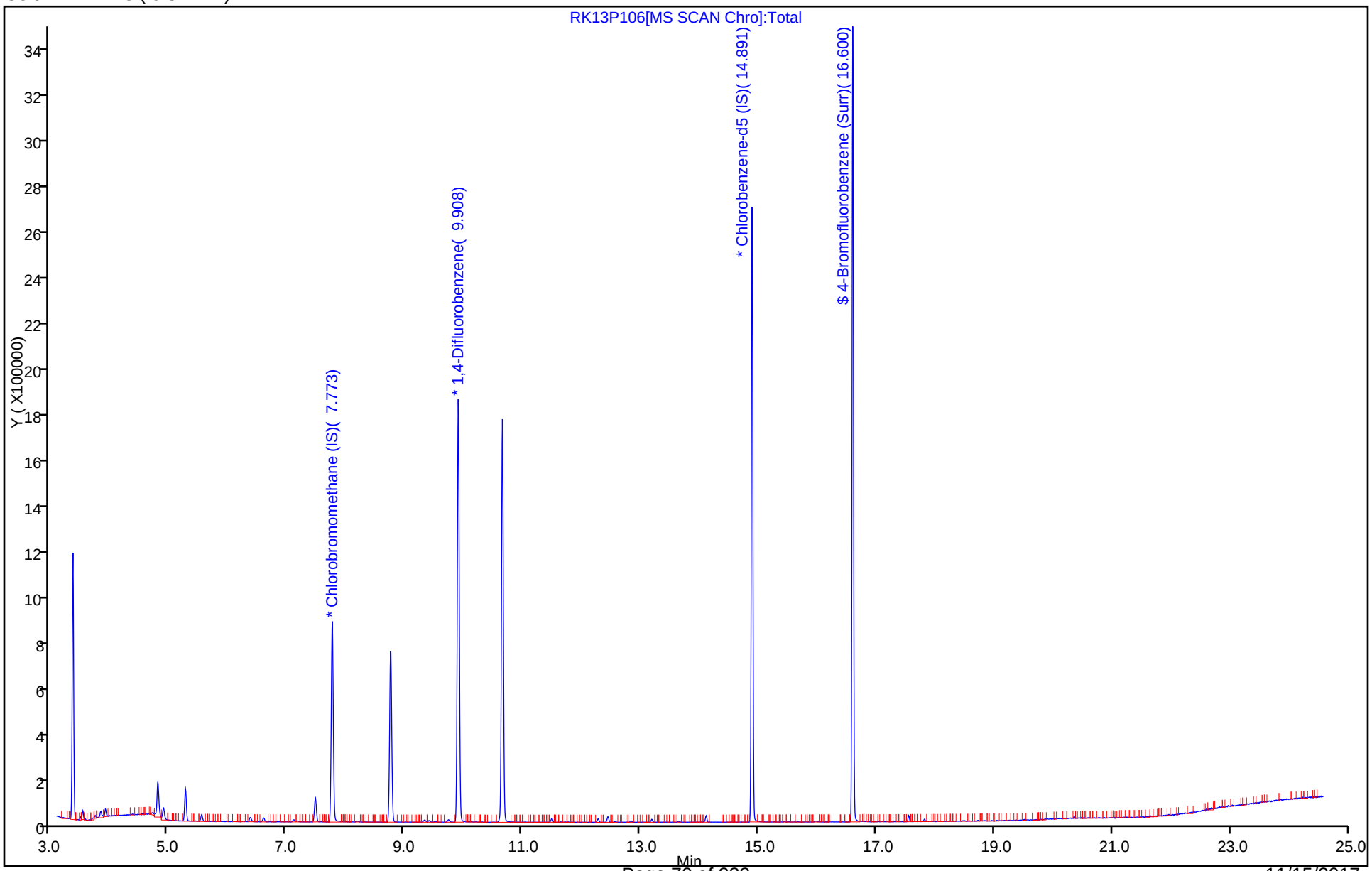
Report Date: 14-Nov-2017 11:45:58 Chrom Revision: 2.2 13-Nov-2017 17:19:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P106.D

Injection Date:	13-Nov-2017 20:01:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-9854-A-3	Lab Sample ID:	140-9854-3	Worklist Smp#:	13
Client ID:	BLDG-A INFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P106.D				
Lims ID:	140-9854-A-3				
Client ID:	BLDG-A INFLUENT				
Sample Type:	Client				
Inject. Date:	13-Nov-2017 20:01:30	ALS Bottle#:	6	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006602-013				
Misc. Info.:	140-9854-a-3				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	14-Nov-2017 11:45:23	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK025				

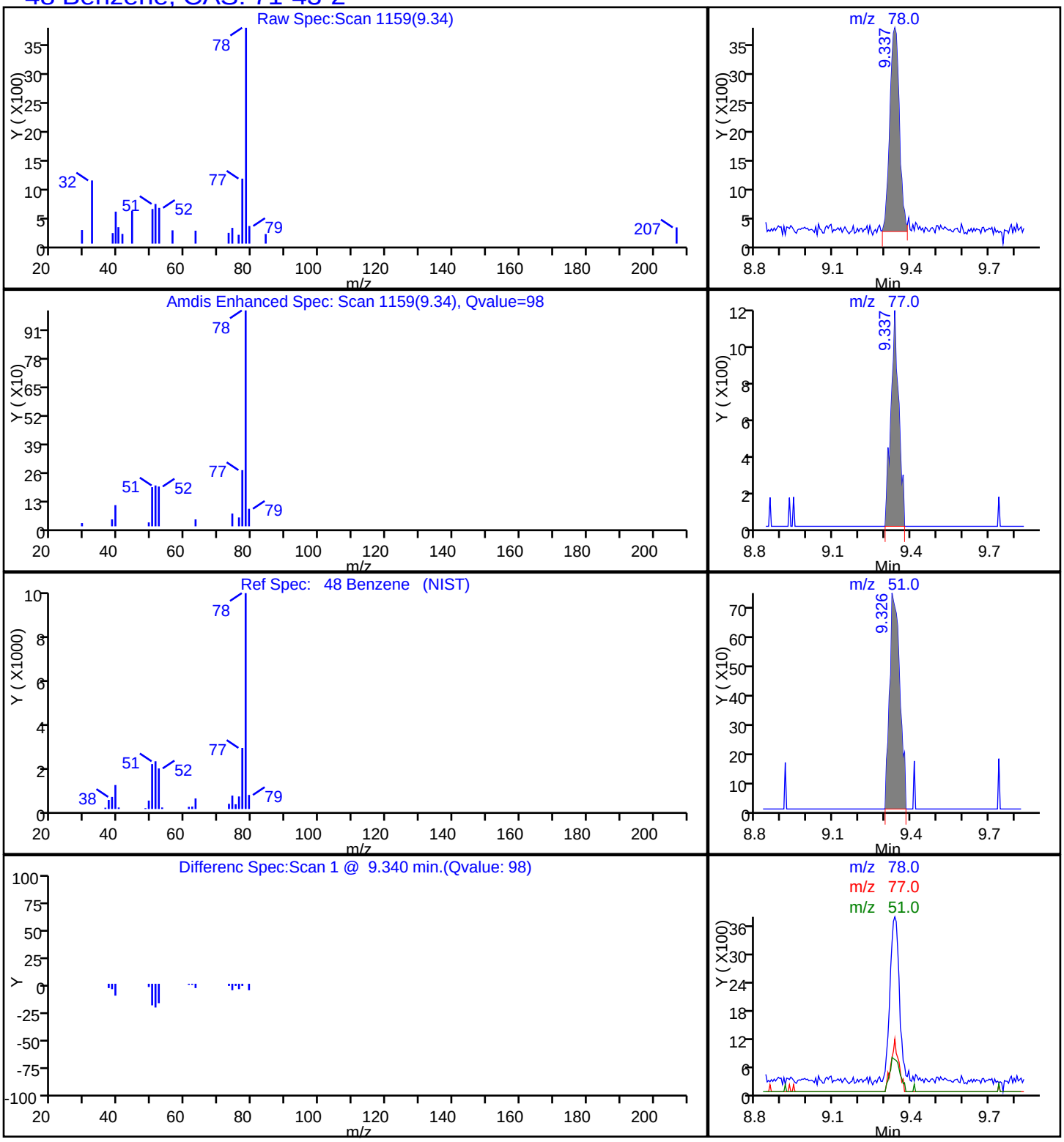
First Level Reviewer: tajh Date: 14-Nov-2017 11:07:01

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.17	104.26

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P106.D		
Injection Date:	13-Nov-2017 20:01:30	Instrument ID:	MR
Lims ID:	140-9854-A-3	Lab Sample ID:	140-9854-3
Client ID:	BLDG-A INFLUENT		
Operator ID:		ALS Bottle#:	6 Worklist Smp#: 13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

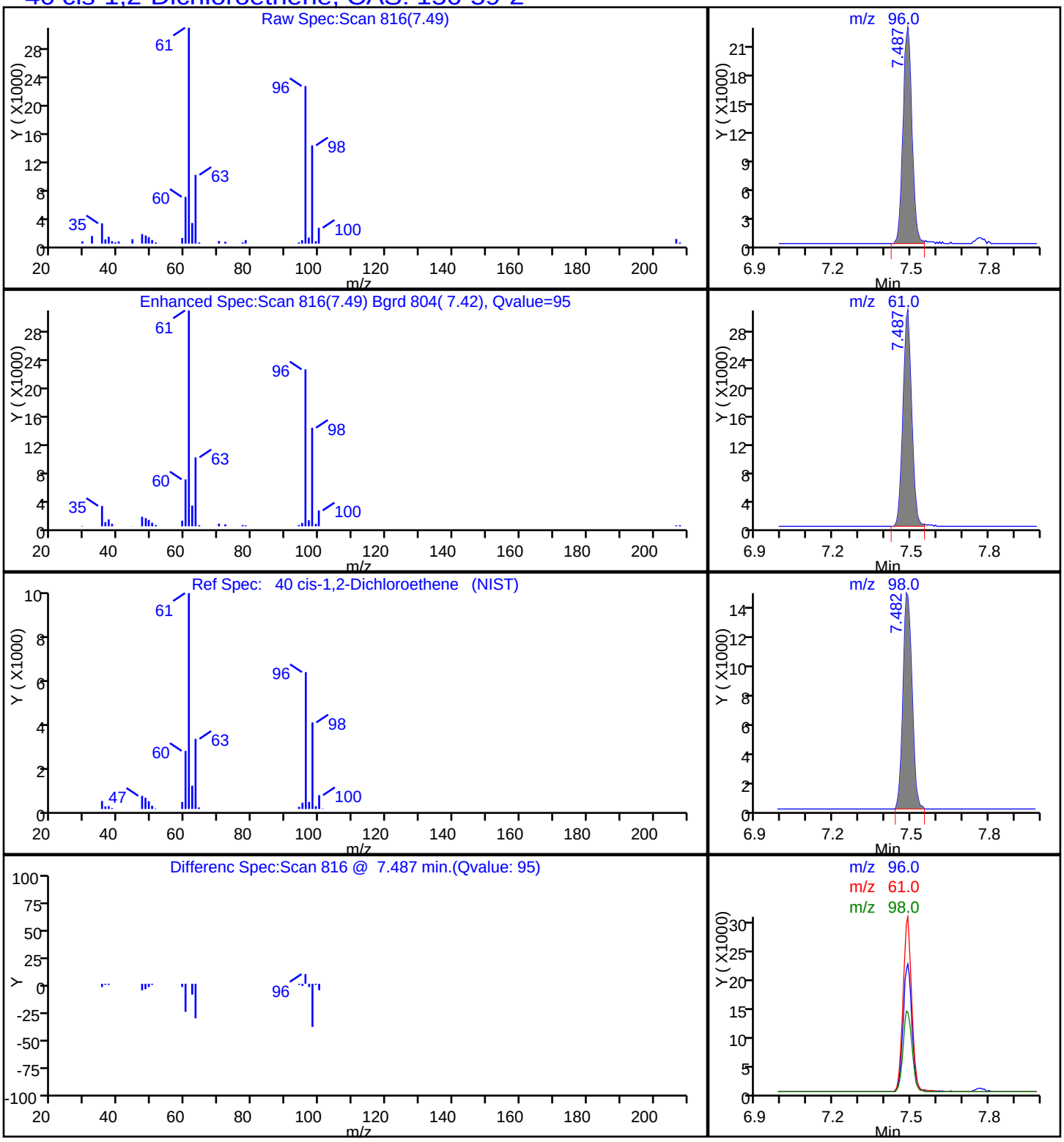
48 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P106.D				
Injection Date:	13-Nov-2017 20:01:30	Instrument ID:	MR		
Lims ID:	140-9854-A-3	Lab Sample ID:	140-9854-3		
Client ID:	BLDG-A INFLUENT				
Operator ID:		ALS Bottle#:	6	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

40 cis-1,2-Dichloroethene, CAS: 156-59-2



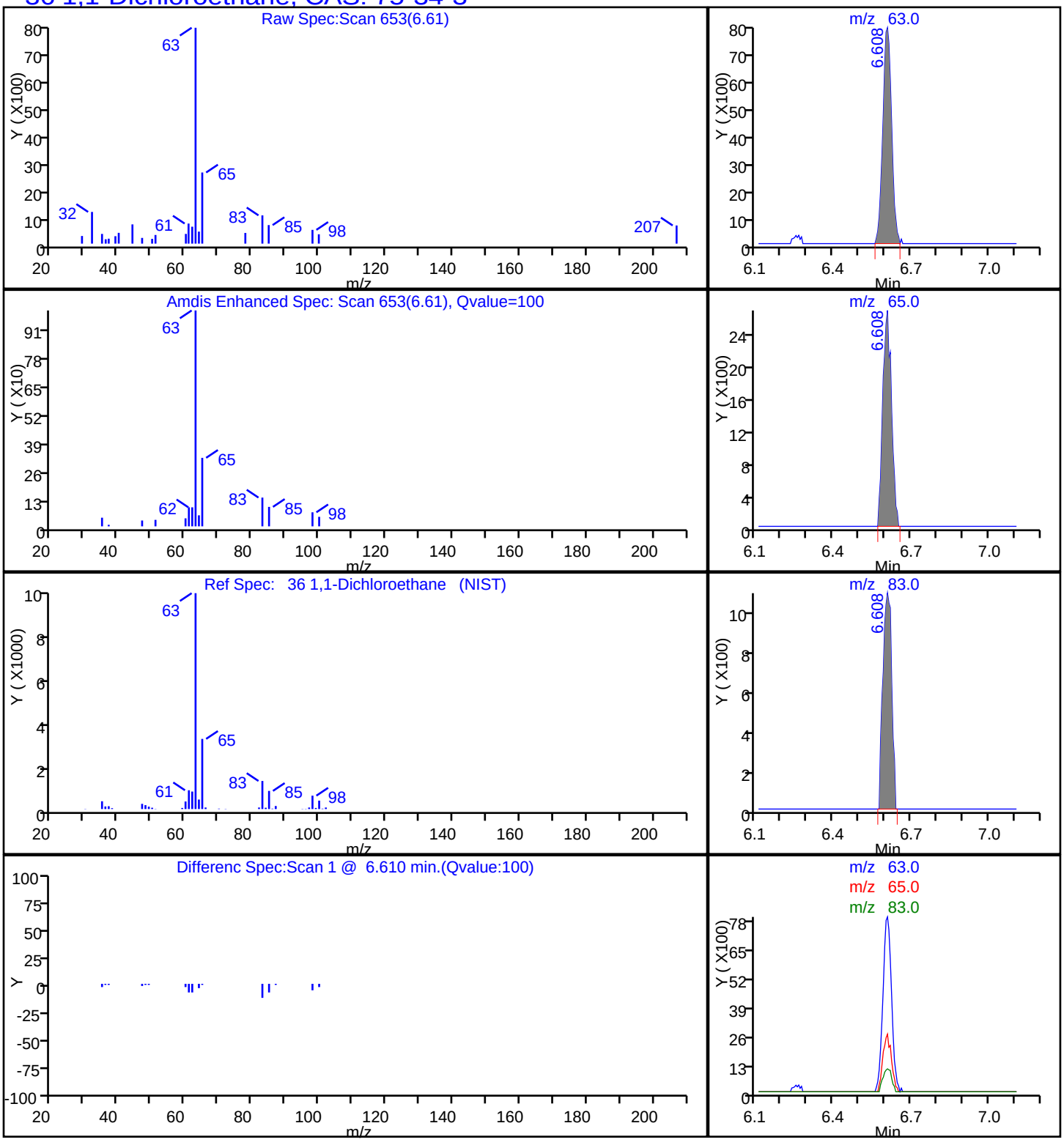
Report Date: 14-Nov-2017 11:45:59 Chrom Revision: 2.2 13-Nov-2017 17:19:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P106.D

Injection Date:	13-Nov-2017 20:01:30	Instrument ID:	MR		
Lims ID:	140-9854-A-3	Lab Sample ID:	140-9854-3		
Client ID:	BLDG-A INFLUENT				
Operator ID:		ALS Bottle#:	6	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

36 1,1-Dichloroethane, CAS: 75-34-3

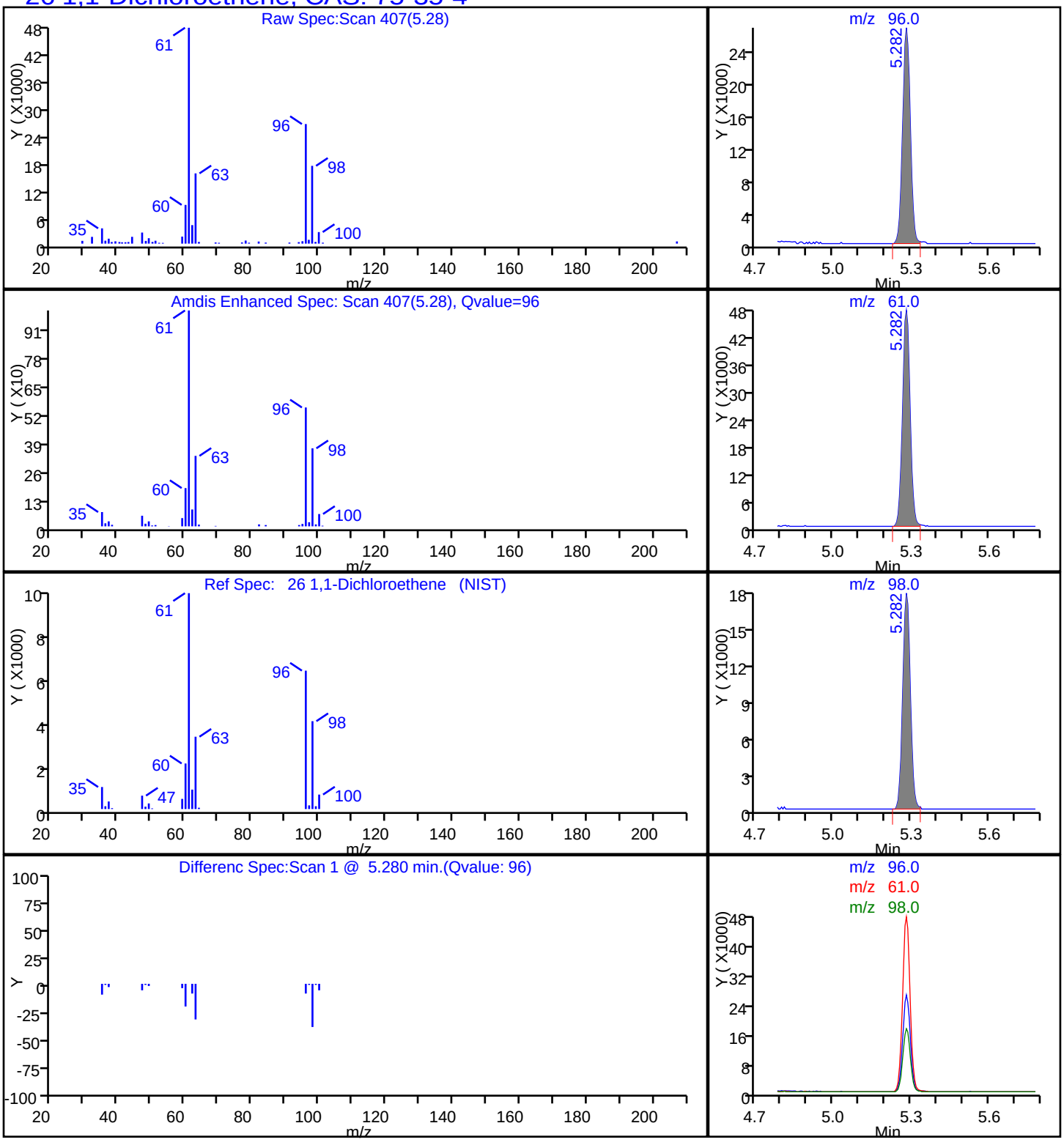


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P106.D

Injection Date:	13-Nov-2017 20:01:30	Instrument ID:	MR
Lims ID:	140-9854-A-3	Lab Sample ID:	140-9854-3
Client ID:	BLDG-A INFLUENT		
Operator ID:		ALS Bottle#:	6 Worklist Smp#: 13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

26 1,1-Dichloroethene, CAS: 75-35-4

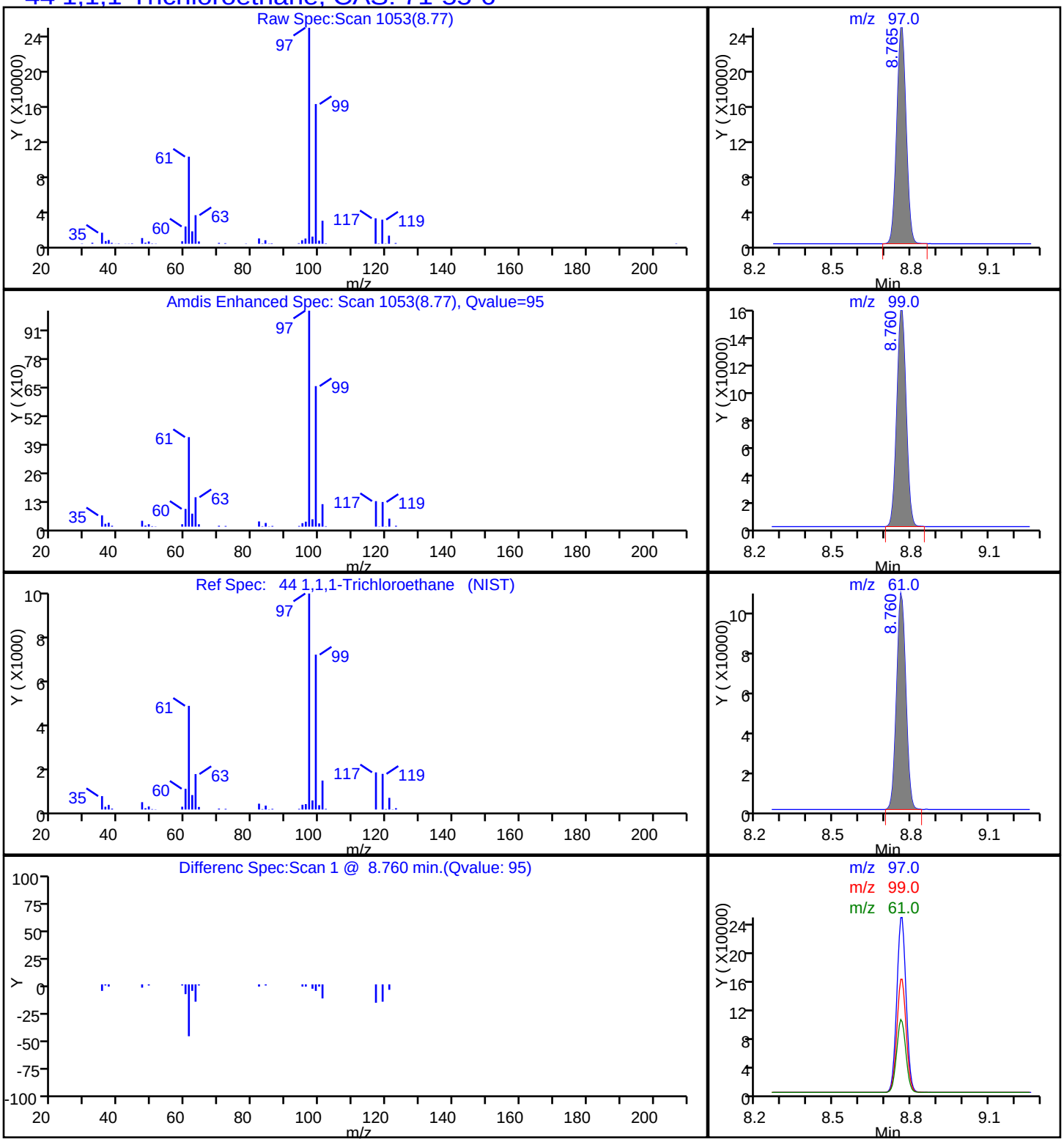


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P106.D

Injection Date:	13-Nov-2017 20:01:30	Instrument ID:	MR		
Lims ID:	140-9854-A-3	Lab Sample ID:	140-9854-3		
Client ID:	BLDG-A INFLUENT				
Operator ID:		ALS Bottle#:	6	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

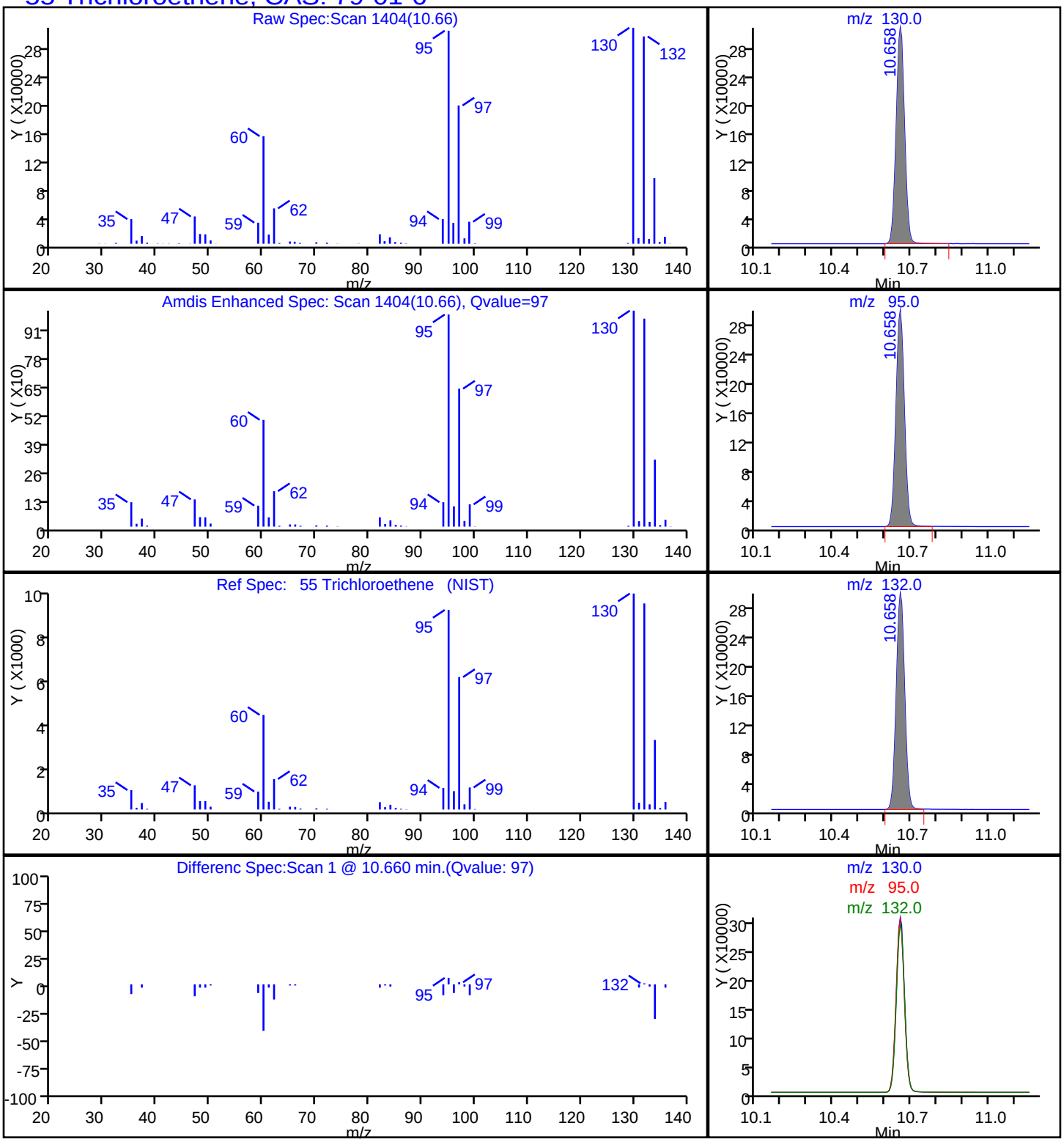
44 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P106.D				
Injection Date:	13-Nov-2017 20:01:30	Instrument ID:	MR		
Lims ID:	140-9854-A-3	Lab Sample ID:	140-9854-3		
Client ID:	BLDG-A INFLUENT				
Operator ID:		ALS Bottle#:	6	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

55 Trichloroethene, CAS: 79-01-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9854-1

SDG No.:

Client Sample ID: BLDG-C EFFLUENT | Lab Sample ID: 140-9854-4

Matrix: Air | Lab File ID: RK13P107.D

Analysis Method: TO 15 LL | Date Collected: 11/08/2017 11:23

Sample wt/vol: 100(mL) | Date Analyzed: 11/13/2017 20:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15956 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.0		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	ND		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.91	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.69		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.16	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.2		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.61		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.27	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	108		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1

SDG No.:

Client Sample ID: BLDG-C EFFLUENT Lab Sample ID: 140-9854-4

Matrix: Air Lab File ID: RK13P107.D

Analysis Method: TO 15 LL Date Collected: 11/08/2017 11:23

Sample wt/vol: 100(mL) Date Analyzed: 11/13/2017 20:48

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 15956 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	6.5		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	ND		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	ND		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.1	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.6		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.89	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	6.4		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	3.0		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.3	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	108		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P107.D				
Lims ID:	140-9854-A-4				
Client ID:	BLDG-C EFFLUENT				
Sample Type:	Client				
Inject. Date:	13-Nov-2017 20:48:30	ALS Bottle#:	7	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006602-014				
Misc. Info.:	140-9854-a-4				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	14-Nov-2017 11:45:23	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK025				
First Level Reviewer: tajh		Date:	14-Nov-2017 11:32:06		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.789	7.767	0.022	82	308334	4.00	
* 2 1,4-Difluorobenzene	114	9.914	9.903	0.011	95	1796457	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.896	14.891	0.005	88	1564118	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.600	16.600	0.000	91	1233344	4.30	
30 Methylene Chloride	84	5.578	5.546	0.032	90	22769	0.1814	
44 1,1,1-Trichloroethane	97	8.776	8.754	0.022	97	9941	0.0328	
48 Benzene	78	9.342	9.326	0.016	97	146634	0.4070	
55 Trichloroethene	130	10.663	10.652	0.011	97	41424	0.2386	
64 Toluene	91	12.836	12.831	0.005	94	60636	0.1385	
84 1,3,5-Trimethylbenzene	120	17.431	17.425	0.005	92	14891	0.0540	
88 1,2,4-Trimethylbenzene	105	17.910	17.910	0.000	99	70687	0.1229	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

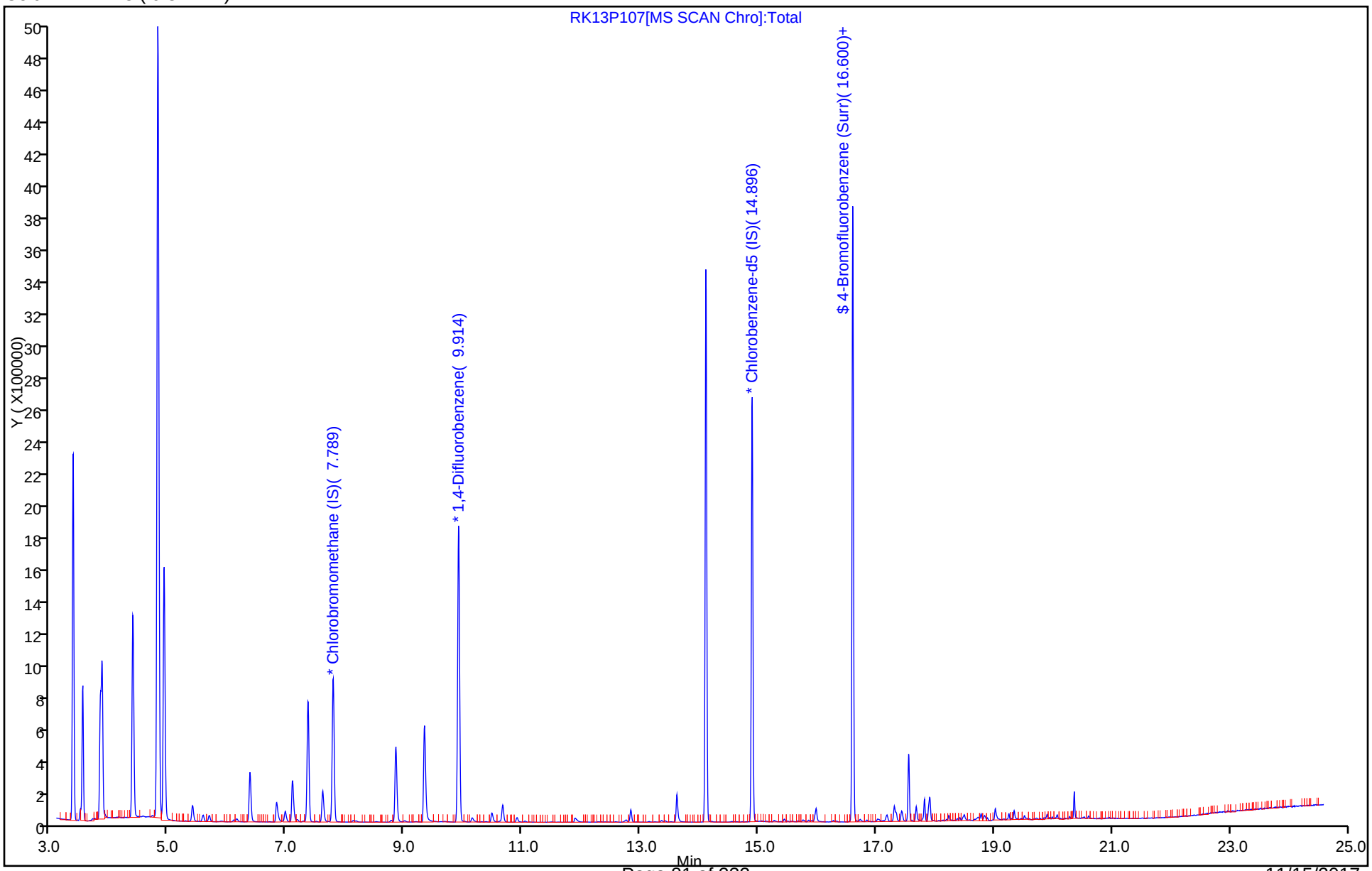
Report Date: 14-Nov-2017 11:46:02 Chrom Revision: 2.2 13-Nov-2017 17:19:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P107.D

Injection Date:	13-Nov-2017 20:48:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-9854-A-4	Lab Sample ID:	140-9854-4	Worklist Smp#:	14
Client ID:	BLDG-C EFFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

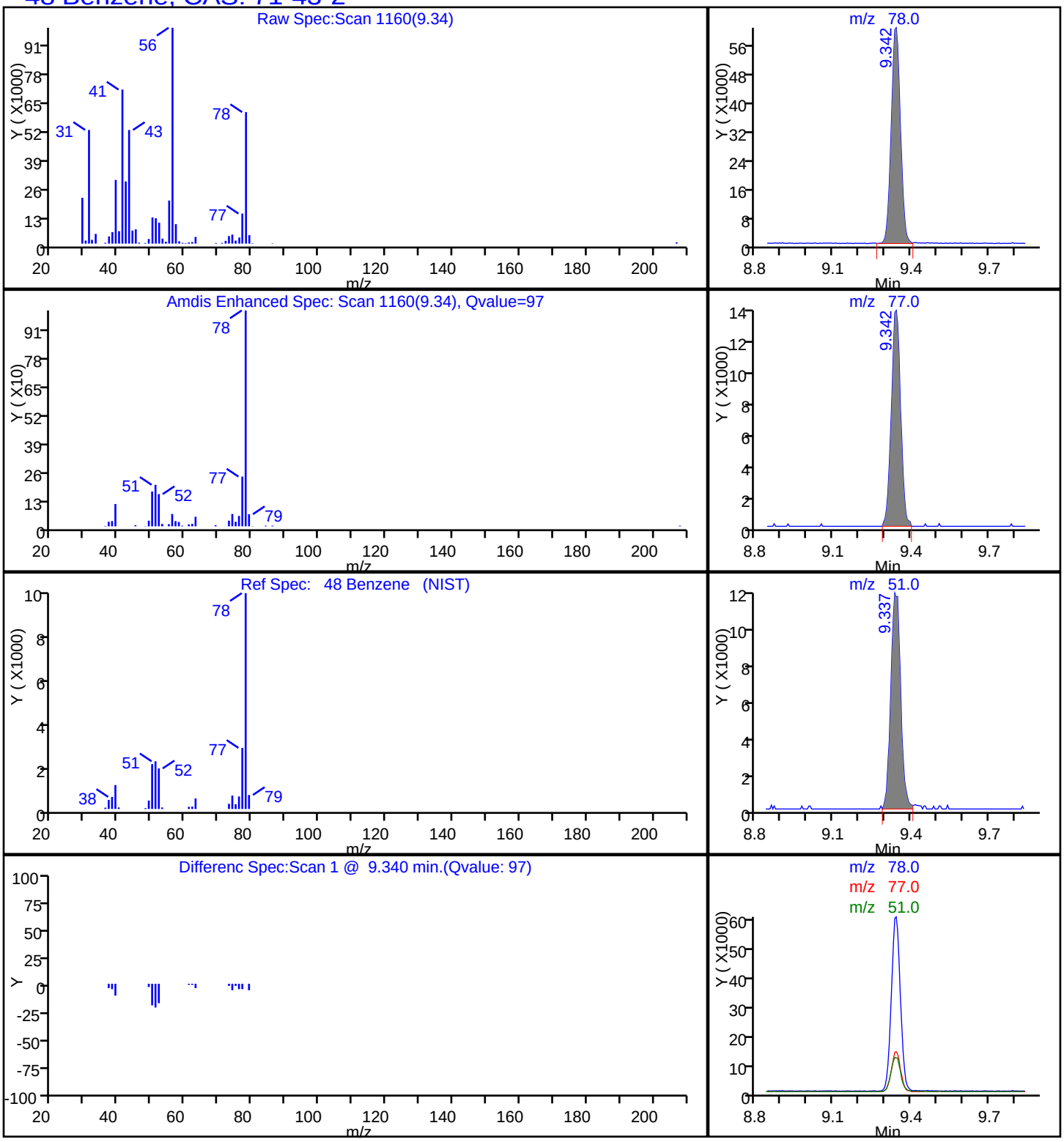
Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P107.D				
Lims ID:	140-9854-A-4				
Client ID:	BLDG-C EFFLUENT				
Sample Type:	Client				
Inject. Date:	13-Nov-2017 20:48:30	ALS Bottle#:	7	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006602-014				
Misc. Info.:	140-9854-a-4				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	14-Nov-2017 11:45:23	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK025				
First Level Reviewer: tajh		Date:	14-Nov-2017 11:32:06		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.30	107.58

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P107.D		
Injection Date:	13-Nov-2017 20:48:30	Instrument ID:	MR
Lims ID:	140-9854-A-4	Lab Sample ID:	140-9854-4
Client ID:	BLDG-C EFFLUENT		
Operator ID:		ALS Bottle#:	7 Worklist Smp#: 14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

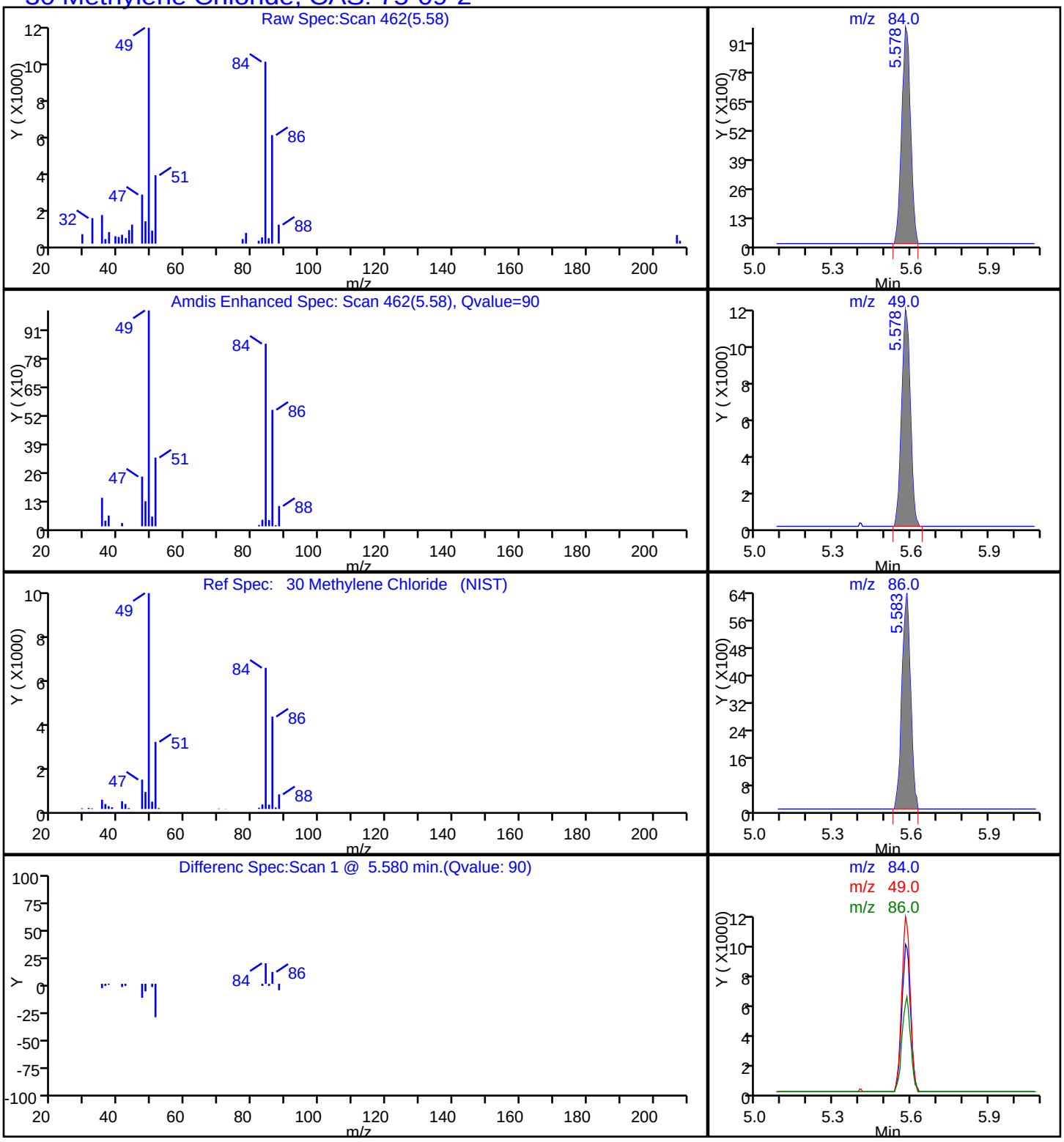
48 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P107.D				
Injection Date:	13-Nov-2017 20:48:30	Instrument ID:	MR		
Lims ID:	140-9854-A-4	Lab Sample ID:	140-9854-4		
Client ID:	BLDG-C EFFLUENT				
Operator ID:		ALS Bottle#:	7	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

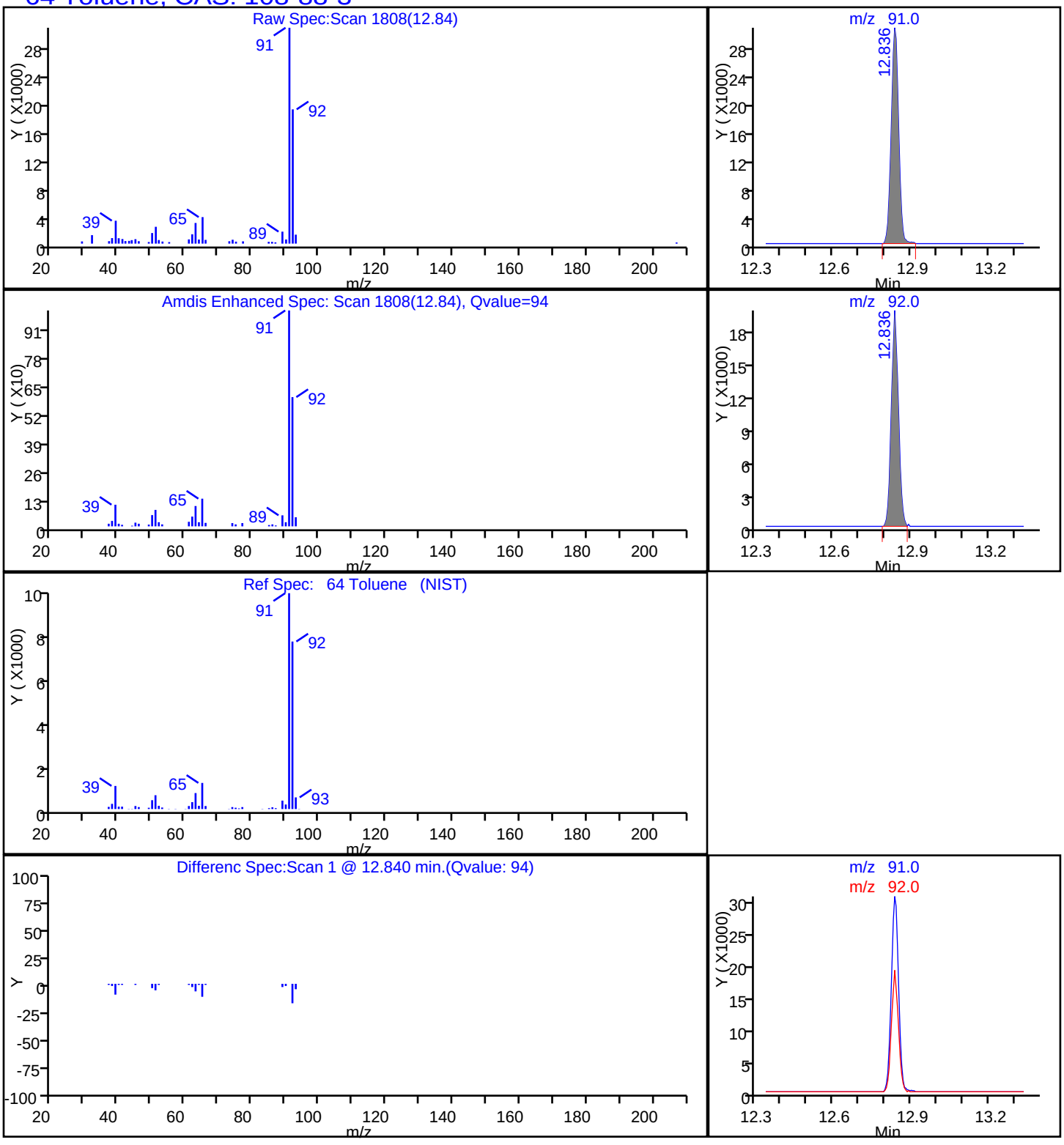
30 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P107.D		
Injection Date:	13-Nov-2017 20:48:30	Instrument ID:	MR
Lims ID:	140-9854-A-4	Lab Sample ID:	140-9854-4
Client ID:	BLDG-C EFFLUENT		
Operator ID:		ALS Bottle#:	7 Worklist Smp#: 14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

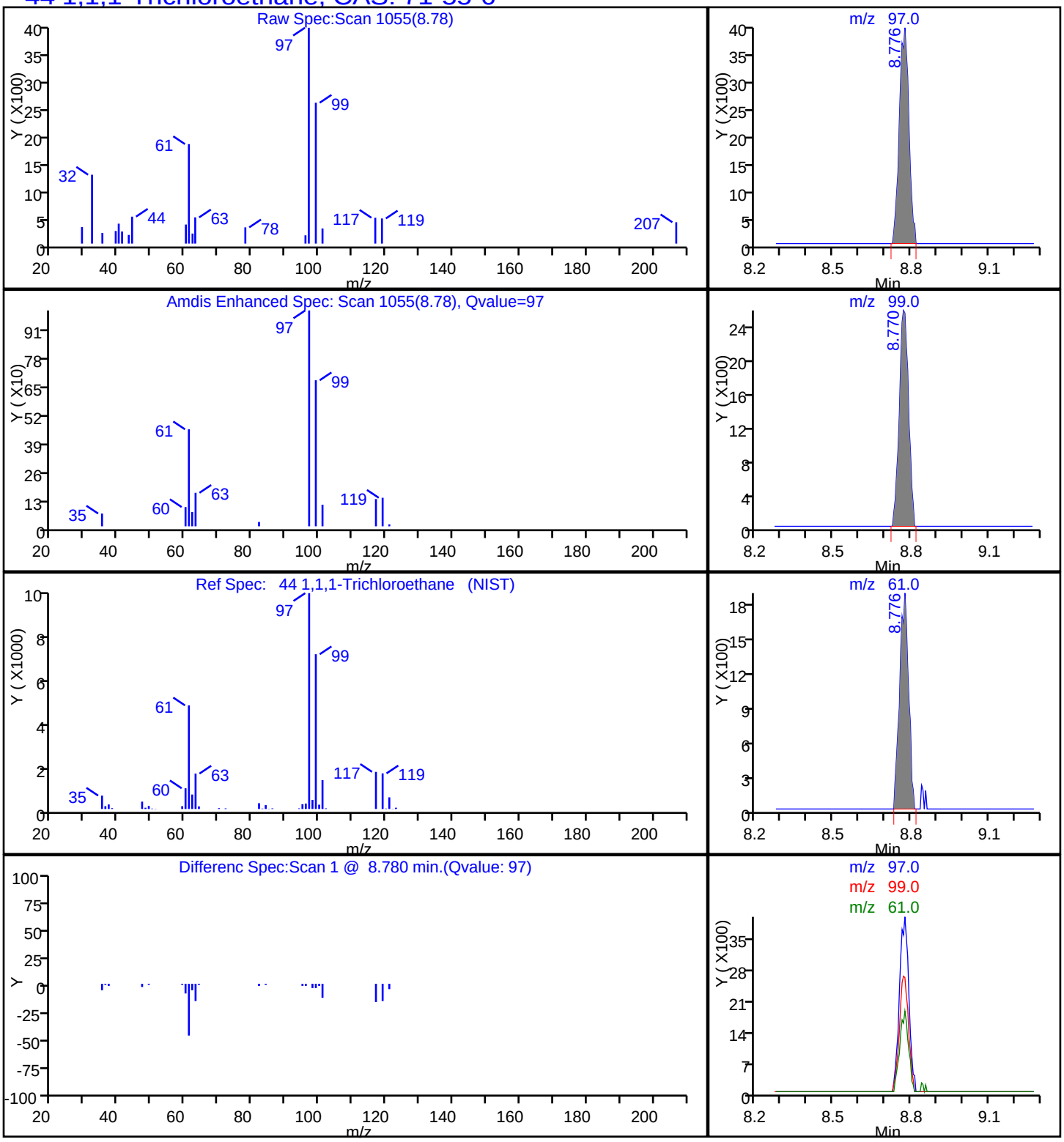
64 Toluene, CAS: 108-88-3



TestAmerica Knoxville

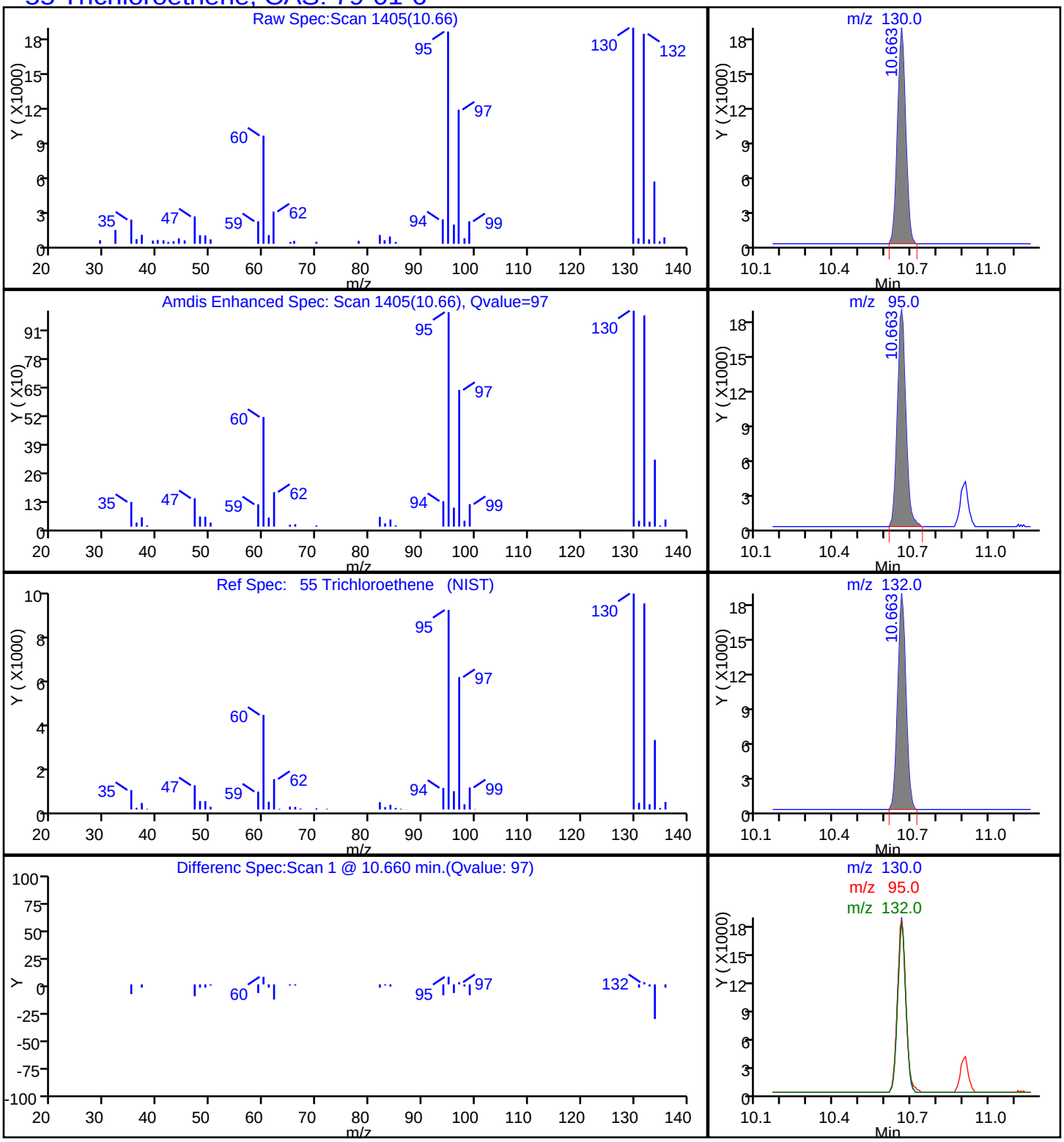
Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P107.D				
Injection Date:	13-Nov-2017 20:48:30	Instrument ID:	MR		
Lims ID:	140-9854-A-4	Lab Sample ID:	140-9854-4		
Client ID:	BLDG-C EFFLUENT				
Operator ID:		ALS Bottle#:	7	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

44 1,1,1-Trichloroethane, CAS: 71-55-6



Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P107.D
Injection Date: 13-Nov-2017 20:48:30 Instrument ID: MR
Lims ID: 140-9854-A-4 Lab Sample ID: 140-9854-4
Client ID: BLDG-C EFFLUENT
Operator ID: ALS Bottle#: 7 Worklist Smp#: 14
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

55 Trichloroethene, CAS: 79-01-6



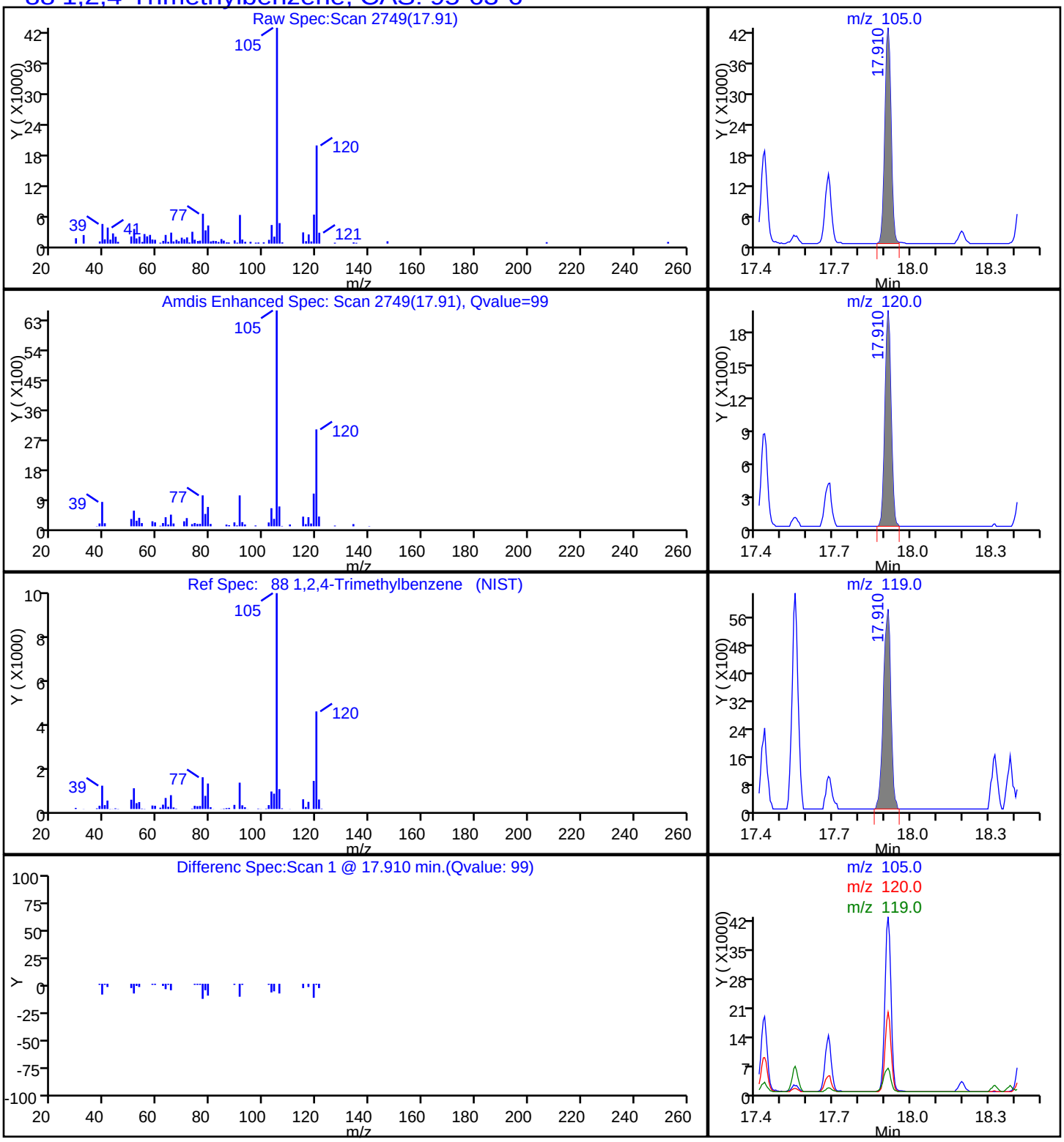
Report Date: 14-Nov-2017 11:46:03 Chrom Revision: 2.2 13-Nov-2017 17:19:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P107.D

Injection Date:	13-Nov-2017 20:48:30	Instrument ID:	MR		
Lims ID:	140-9854-A-4	Lab Sample ID:	140-9854-4		
Client ID:	BLDG-C EFFLUENT				
Operator ID:		ALS Bottle#:	7	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

88 1,2,4-Trimethylbenzene, CAS: 95-63-6



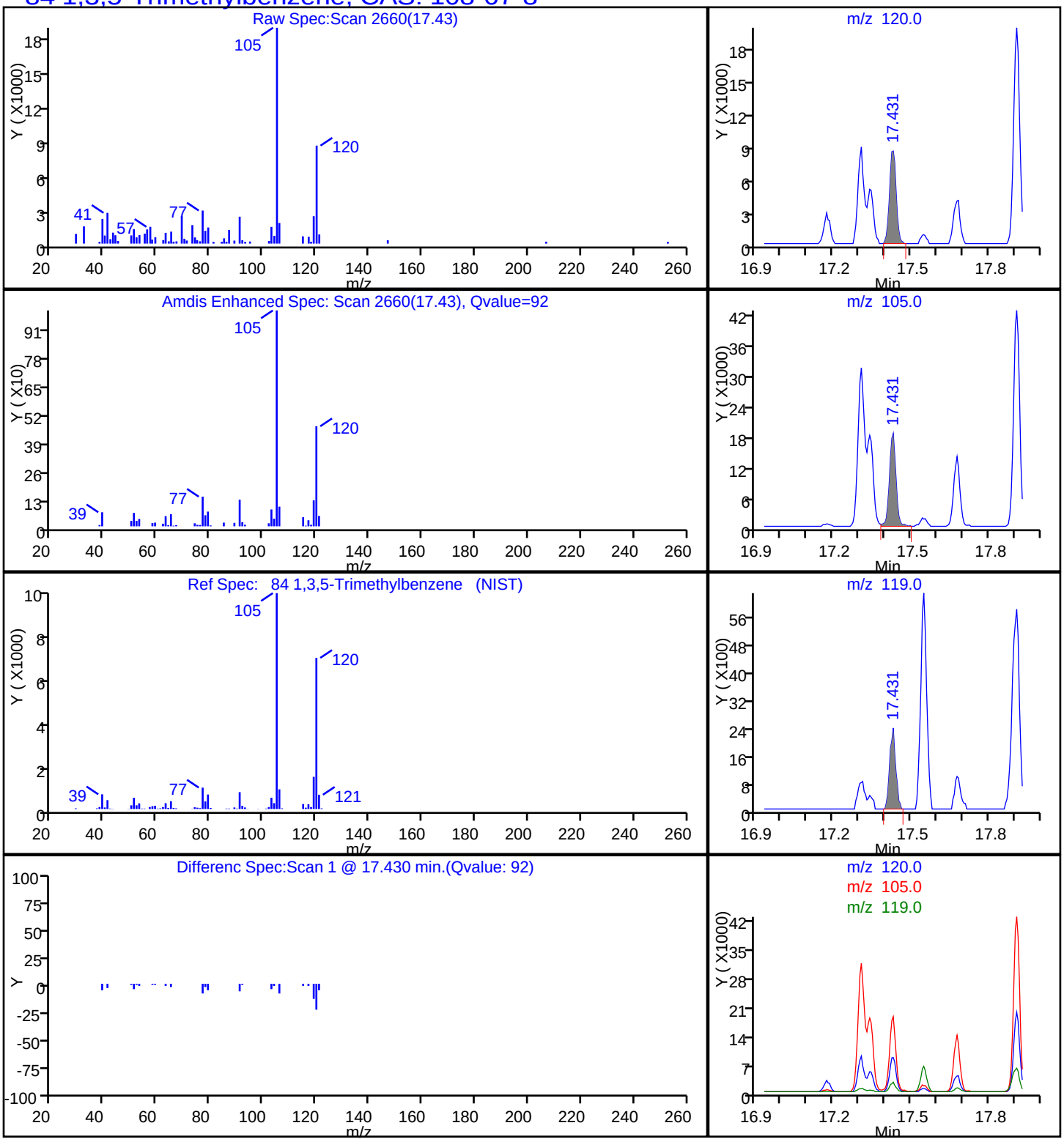
Report Date: 14-Nov-2017 11:46:03 Chrom Revision: 2.2 13-Nov-2017 17:19:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P107.D

Injection Date:	13-Nov-2017 20:48:30	Instrument ID:	MR		
Lims ID:	140-9854-A-4	Lab Sample ID:	140-9854-4		
Client ID:	BLDG-C EFFLUENT				
Operator ID:		ALS Bottle#:	7	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

84 1,3,5-Trimethylbenzene, CAS: 108-67-8



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1

SDG No.:

Client Sample ID: BLDG-C MID Lab Sample ID: 140-9854-5

Matrix: Air Lab File ID: RK13P108.D

Analysis Method: TO 15 LL Date Collected: 11/08/2017 11:30

Sample wt/vol: 100(mL) Date Analyzed: 11/13/2017 21:34

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 15956 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	5.2		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.0		0.40	0.075
67-66-3	Chloroform	119.38	0.17	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.44		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.40		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.96	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.63		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.73		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9854-1

SDG No.:

Client Sample ID: BLDG-C MID | Lab Sample ID: 140-9854-5

Matrix: Air | Lab File ID: RK13P108.D

Analysis Method: TO 15 LL | Date Collected: 11/08/2017 11:30

Sample wt/vol: 100(mL) | Date Analyzed: 11/13/2017 21:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15956 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	17		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.5		1.4	0.27
67-66-3	Chloroform	119.38	0.84	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	1.7		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	3.4		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	3.9		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P108.D				
Lims ID:	140-9854-A-5				
Client ID:	BLDG-C MID				
Sample Type:	Client				
Inject. Date:	13-Nov-2017 21:34:30	ALS Bottle#:	8	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006602-015				
Misc. Info.:	140-9854-a-5				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	14-Nov-2017 11:45:23	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK025				
First Level Reviewer: tajh		Date:	14-Nov-2017 11:32:56		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.778	7.767	0.011	81	318932	4.00	
* 2 1,4-Difluorobenzene	114	9.913	9.903	0.010	95	1869187	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.896	14.891	0.005	88	1614262	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.600	16.600	0.000	88	1260489	4.26	
6 Chlorodifluoromethane	67	3.523	3.507	0.016	96	7983	0.1993	
8 Dichlorodifluoromethane	85	3.572	3.556	0.016	100	24978	0.0799	
30 Methylene Chloride	84	5.567	5.546	0.021	92	24947	0.1921	
40 cis-1,2-Dichloroethene	96	7.498	7.482	0.016	95	11745	0.0879	
42 Chloroform	83	7.805	7.800	0.005	89	10408	0.0346	
44 1,1,1-Trichloroethane	97	8.765	8.754	0.011	95	39248	0.1251	
48 Benzene	78	9.336	9.326	0.010	97	392131	1.05	
55 Trichloroethene	130	10.658	10.652	0.006	97	26325	0.1457	
64 Toluene	91	12.836	12.831	0.005	94	38546	0.0853	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

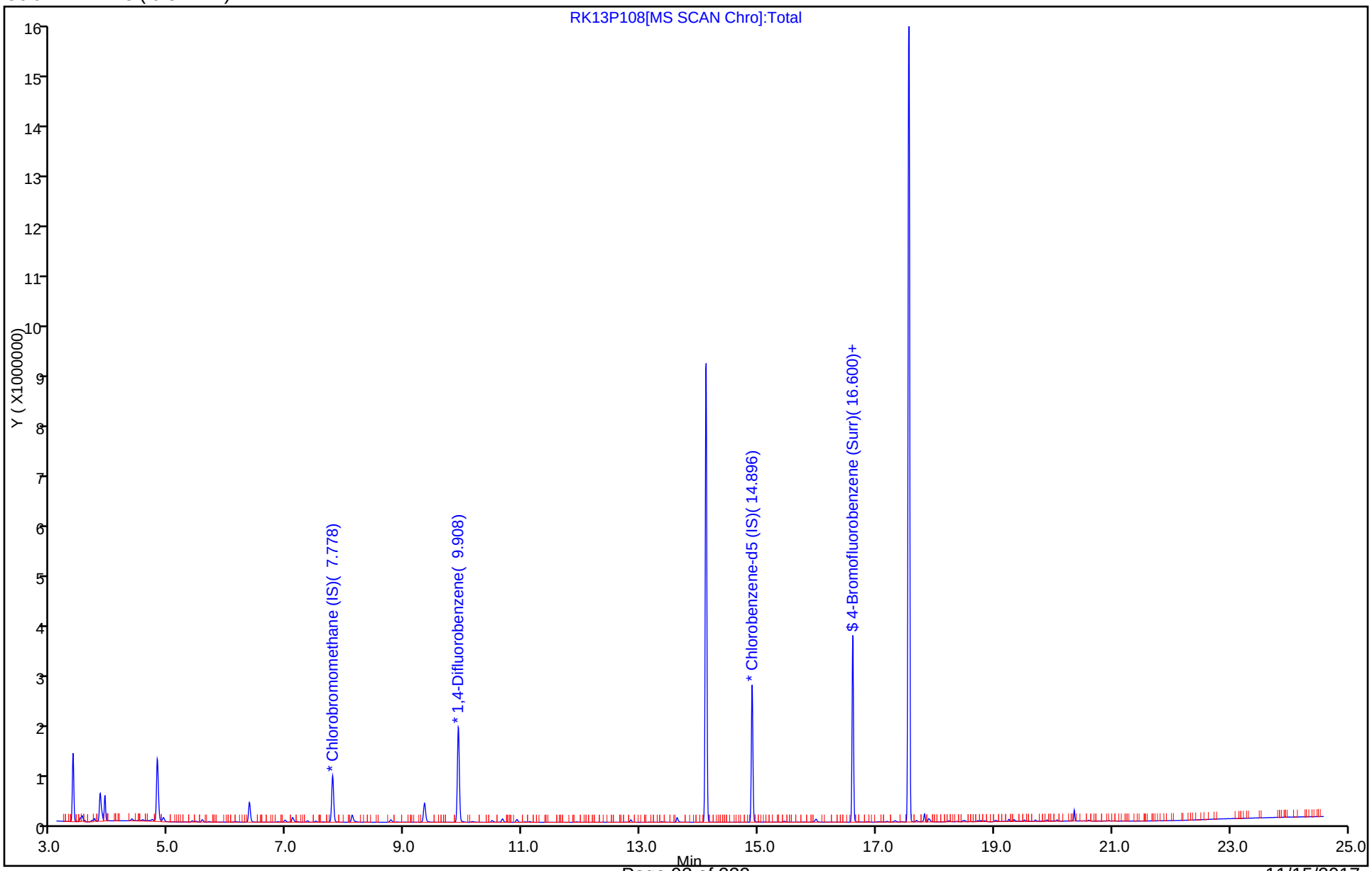
Report Date: 14-Nov-2017 11:46:06 Chrom Revision: 2.2 13-Nov-2017 17:19:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P108.D

Injection Date:	13-Nov-2017 21:34:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-9854-A-5	Lab Sample ID:	140-9854-5	Worklist Smp#:	15
Client ID:	BLDG-C MID				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

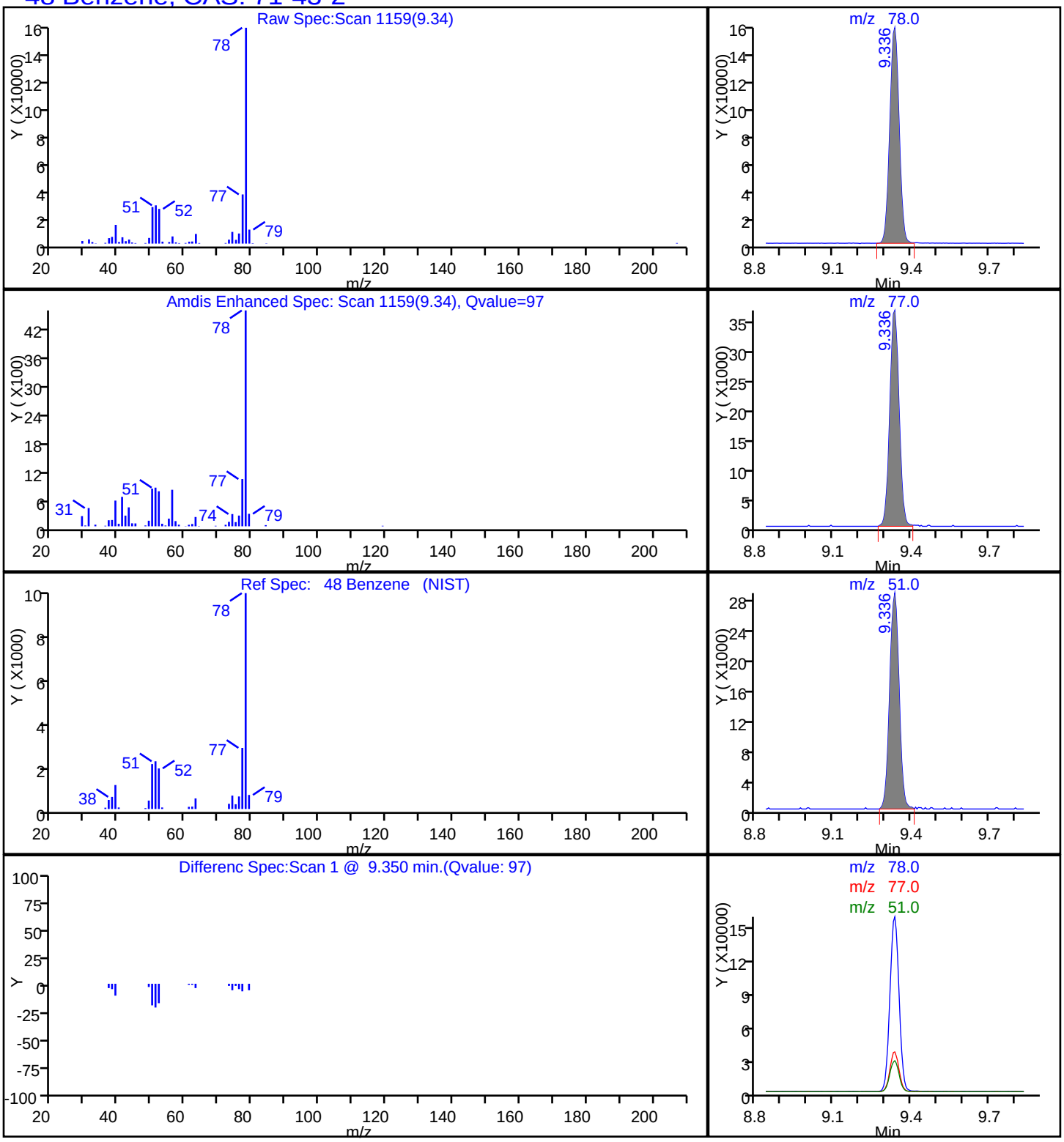
Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P108.D				
Lims ID:	140-9854-A-5				
Client ID:	BLDG-C MID				
Sample Type:	Client				
Inject. Date:	13-Nov-2017 21:34:30	ALS Bottle#:	8	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006602-015				
Misc. Info.:	140-9854-a-5				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	14-Nov-2017 11:45:23	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK025				
First Level Reviewer: tajh		Date:	14-Nov-2017 11:32:56		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.26	106.53

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P108.D		
Injection Date:	13-Nov-2017 21:34:30	Instrument ID:	MR
Lims ID:	140-9854-A-5	Lab Sample ID:	140-9854-5
Client ID:	BLDG-C MID		
Operator ID:		ALS Bottle#:	8 Worklist Smp#: 15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

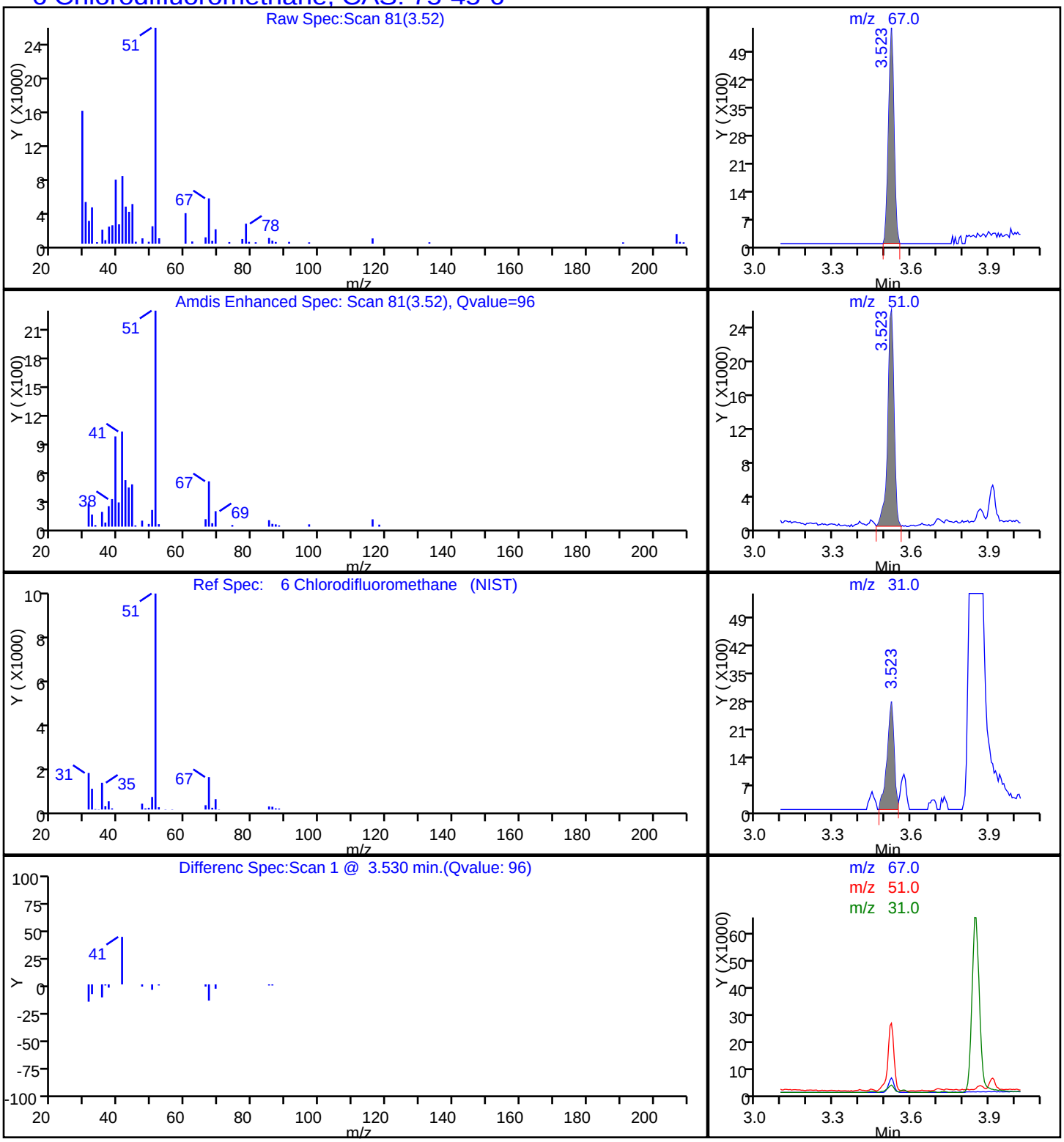
48 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P108.D				
Injection Date:	13-Nov-2017 21:34:30	Instrument ID:	MR		
Lims ID:	140-9854-A-5	Lab Sample ID:	140-9854-5		
Client ID:	BLDG-C MID				
Operator ID:		ALS Bottle#:	8	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

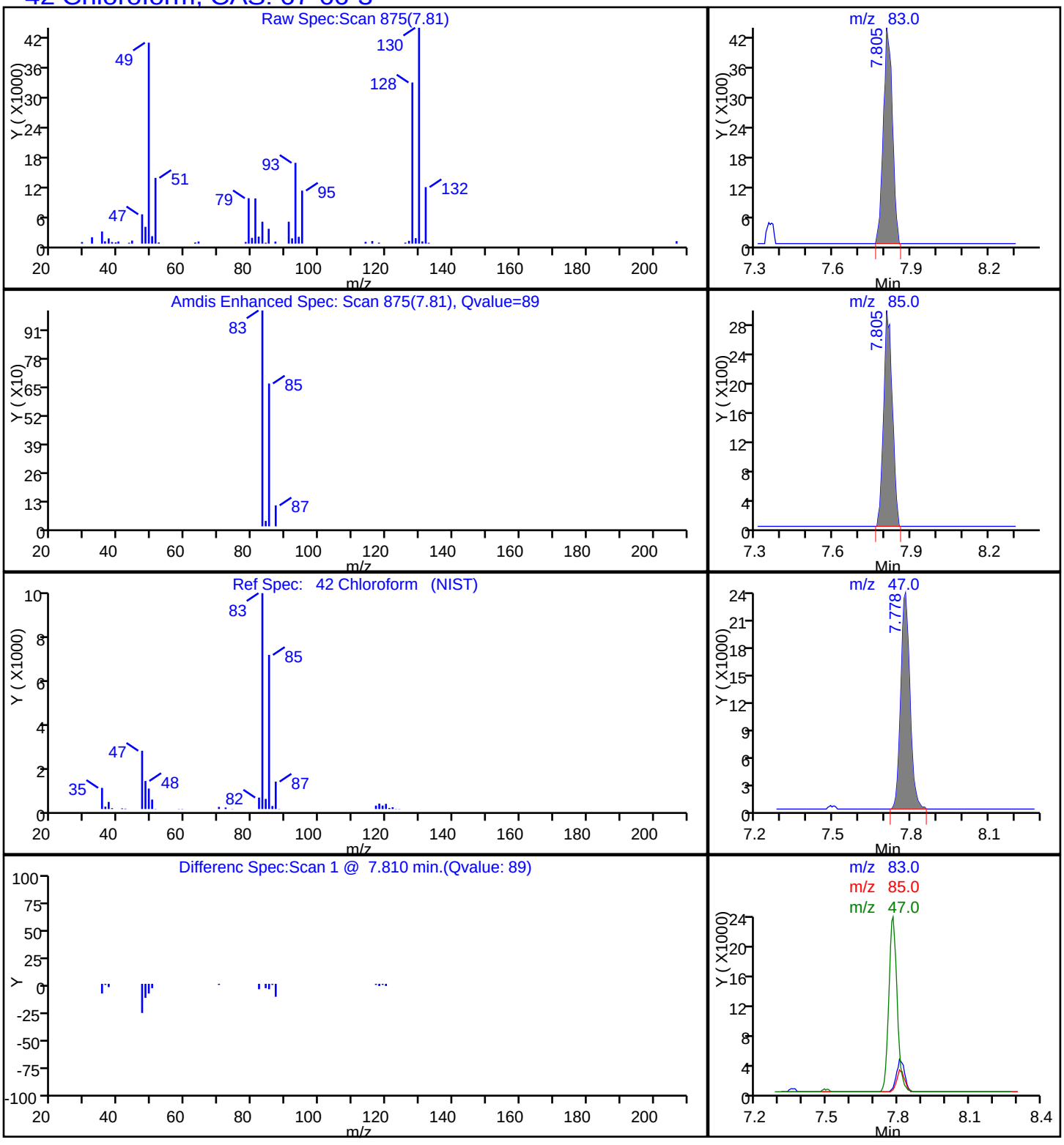
6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P108.D		
Injection Date:	13-Nov-2017 21:34:30	Instrument ID:	MR
Lims ID:	140-9854-A-5	Lab Sample ID:	140-9854-5
Client ID:	BLDG-C MID		
Operator ID:		ALS Bottle#:	8 Worklist Smp#: 15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

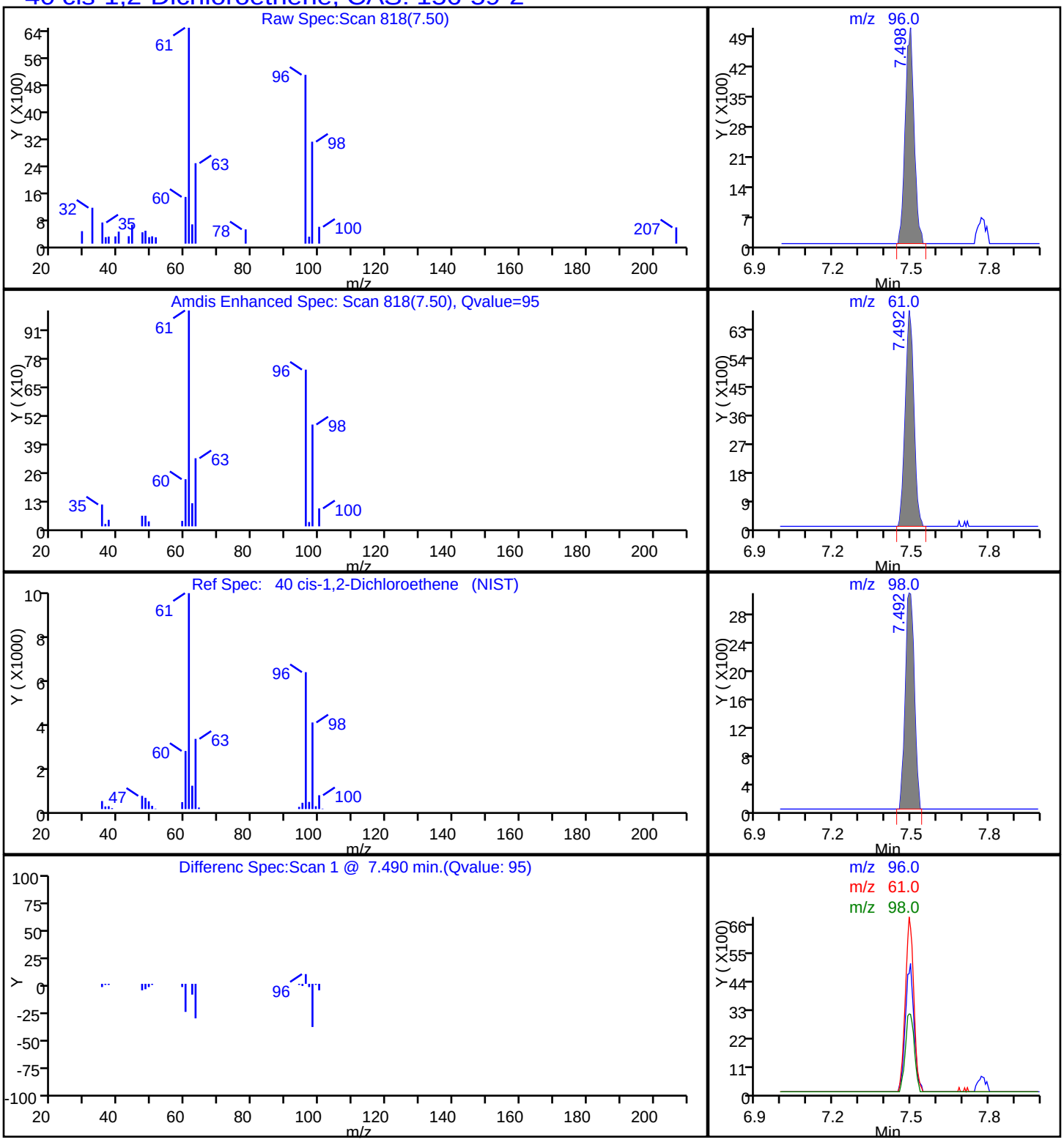
42 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P108.D				
Injection Date:	13-Nov-2017 21:34:30	Instrument ID:	MR		
Lims ID:	140-9854-A-5	Lab Sample ID:	140-9854-5		
Client ID:	BLDG-C MID				
Operator ID:		ALS Bottle#:	8	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

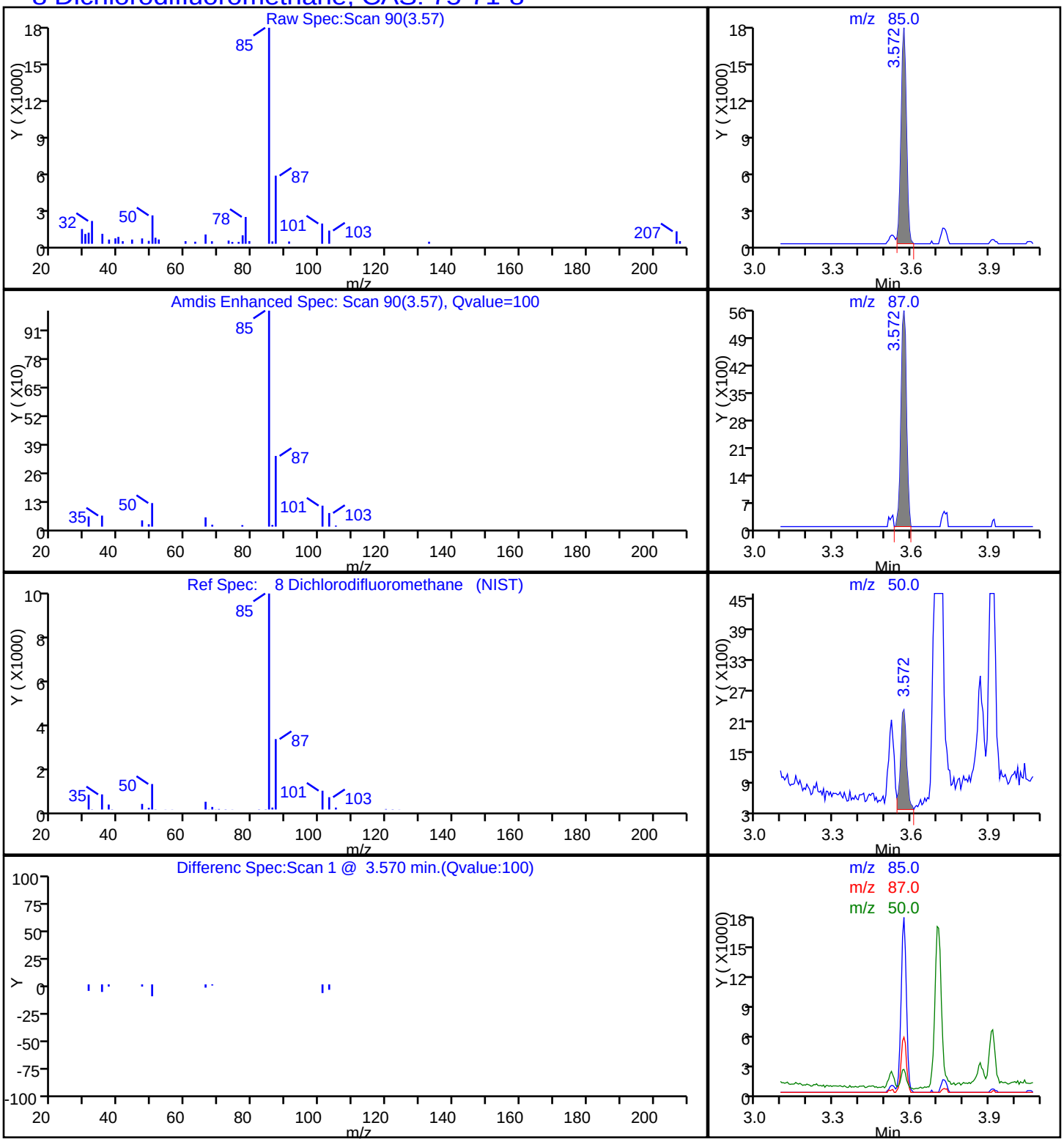
40 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P108.D				
Injection Date:	13-Nov-2017 21:34:30	Instrument ID:	MR		
Lims ID:	140-9854-A-5	Lab Sample ID:	140-9854-5		
Client ID:	BLDG-C MID				
Operator ID:		ALS Bottle#:	8	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

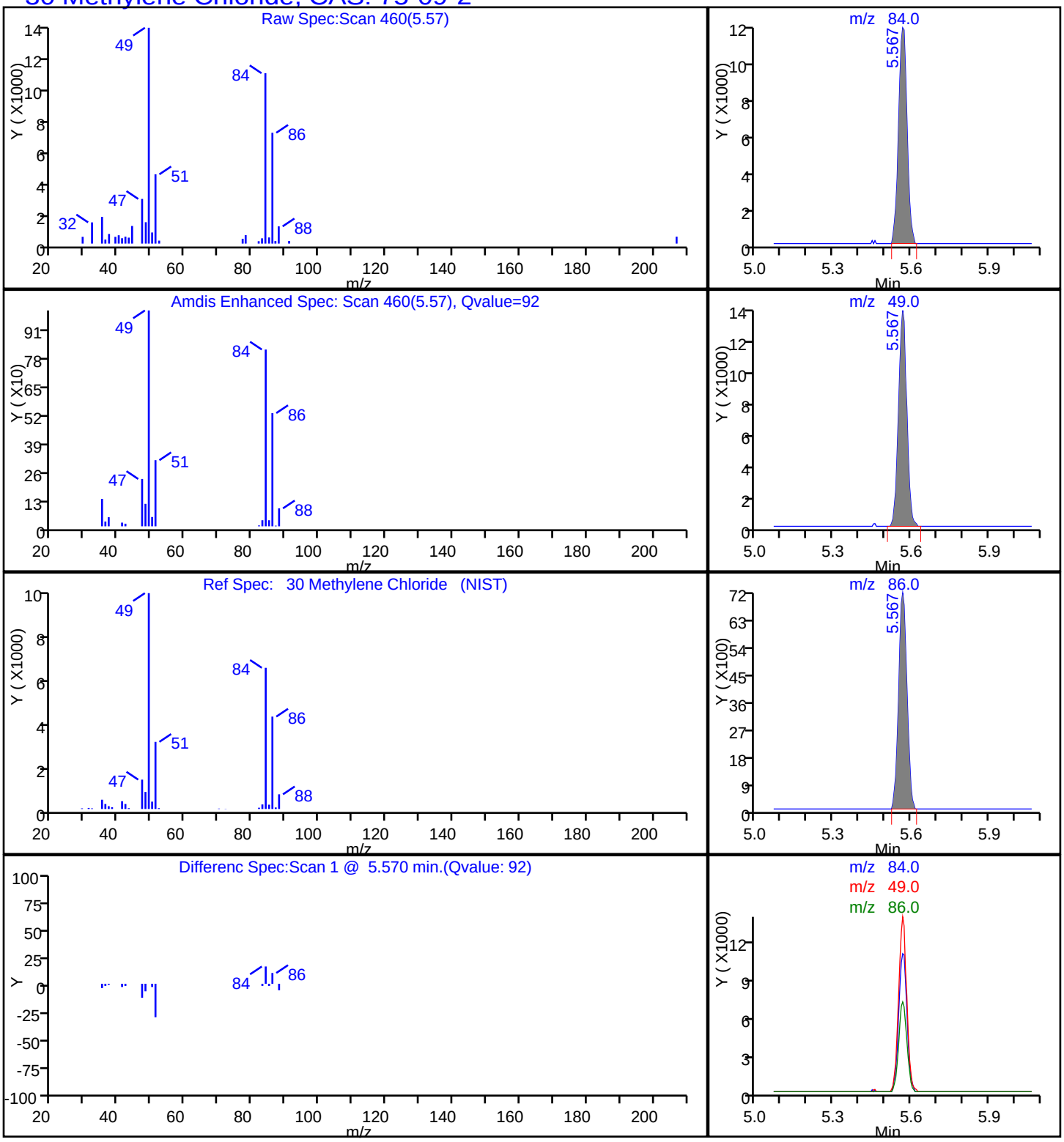
8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P108.D				
Injection Date:	13-Nov-2017 21:34:30	Instrument ID:	MR		
Lims ID:	140-9854-A-5	Lab Sample ID:	140-9854-5		
Client ID:	BLDG-C MID				
Operator ID:		ALS Bottle#:	8	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

30 Methylene Chloride, CAS: 75-09-2



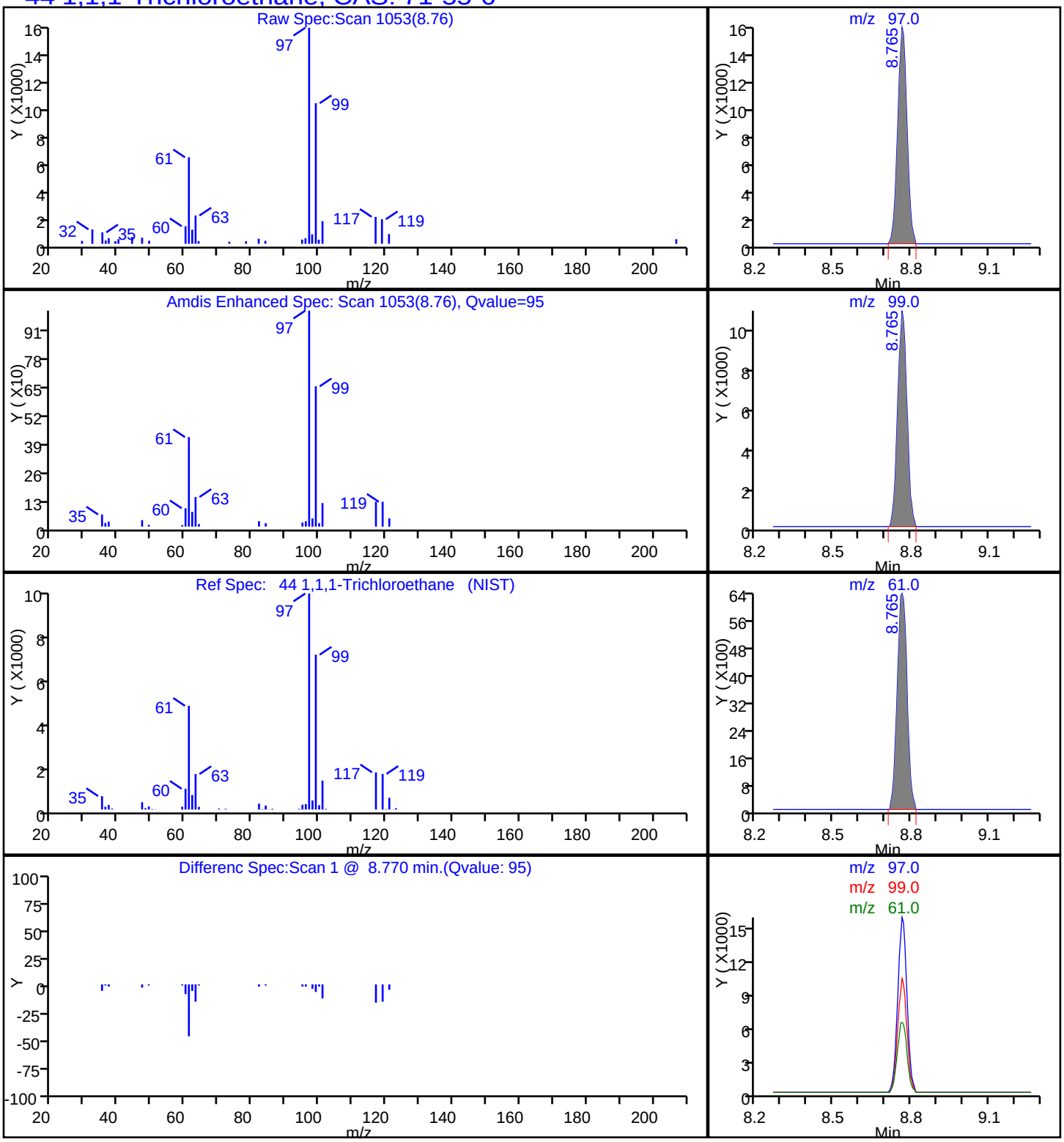
Report Date: 14-Nov-2017 11:46:06 Chrom Revision: 2.2 13-Nov-2017 17:19:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P108.D

Injection Date:	13-Nov-2017 21:34:30	Instrument ID:	MR		
Lims ID:	140-9854-A-5	Lab Sample ID:	140-9854-5		
Client ID:	BLDG-C MID				
Operator ID:		ALS Bottle#:	8	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

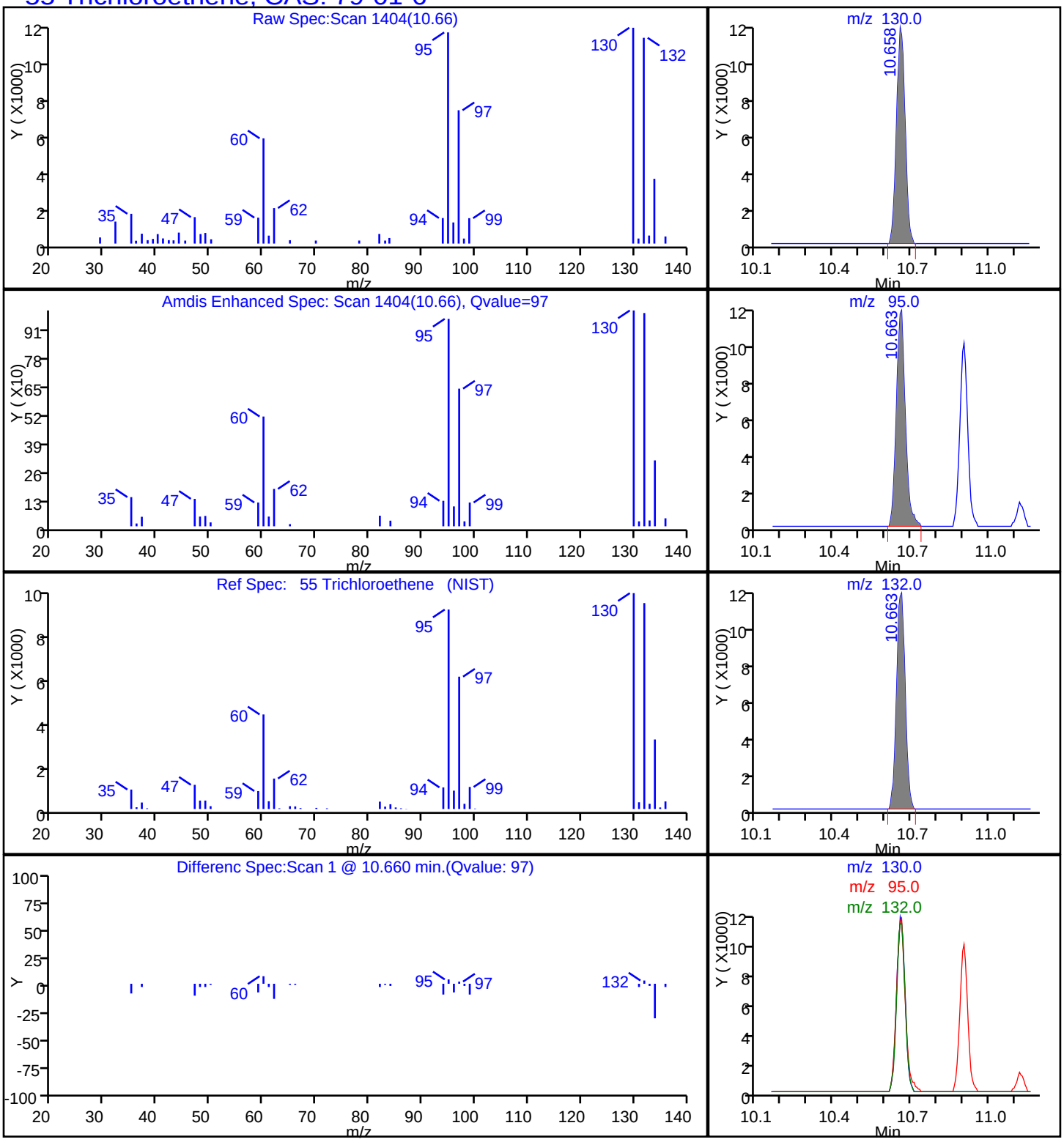
44 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P108.D				
Injection Date:	13-Nov-2017 21:34:30	Instrument ID:	MR		
Lims ID:	140-9854-A-5	Lab Sample ID:	140-9854-5		
Client ID:	BLDG-C MID				
Operator ID:		ALS Bottle#:	8	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

55 Trichloroethene, CAS: 79-01-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9854-1

SDG No.:

Client Sample ID: BLDG-C INFLUENT | Lab Sample ID: 140-9854-6

Matrix: Air | Lab File ID: RK13P109.D

Analysis Method: TO 15 LL | Date Collected: 11/08/2017 11:36

Sample wt/vol: 100(mL) | Date Analyzed: 11/13/2017 22:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15956 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.5		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.088	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.2		0.40	0.075
67-66-3	Chloroform	119.38	0.20	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.81		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.44		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.21	J	0.40	0.080
108-88-3	Toluene	92.14	0.75		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.12	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	8.0		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.44		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.18	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.57	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9854-1

SDG No.:

Client Sample ID: BLDG-C INFLUENT | Lab Sample ID: 140-9854-6

Matrix: Air | Lab File ID: RK13P109.D

Analysis Method: TO 15 LL | Date Collected: 11/08/2017 11:36

Sample wt/vol: 100(mL) | Date Analyzed: 11/13/2017 22:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15956 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	4.8		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.55	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.1		1.4	0.27
67-66-3	Chloroform	119.38	1.0	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	3.2		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.0		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.4	J	2.7	0.54
108-88-3	Toluene	92.14	2.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.66	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	43		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	2.2		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.86	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.5	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P109.D
Lims ID: 140-9854-A-6
Client ID: BLDG-C INFLUENT
Sample Type: Client
Inject. Date: 13-Nov-2017 22:21:30 ALS Bottle#: 9 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006602-016
Misc. Info.: 140-9854-a-6
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Nov-2017 11:45:23 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh Date: 14-Nov-2017 11:33:28

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.784	7.767	0.017	82	321742	4.00	
* 2 1,4-Difluorobenzene	114	9.914	9.903	0.011	95	1887021	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.896	14.891	0.005	88	1618403	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.600	16.600	0.000	92	1268441	4.28	
6 Chlorodifluoromethane	67	3.524	3.507	0.017	95	9318	0.2306	
8 Dichlorodifluoromethane	85	3.572	3.556	0.016	99	27925	0.0885	
30 Methylene Chloride	84	5.573	5.546	0.027	91	37556	0.2867	
40 cis-1,2-Dichloroethene	96	7.498	7.482	0.016	95	21815	0.1618	
42 Chloroform	83	7.810	7.800	0.010	93	12410	0.0408	
44 1,1,1-Trichloroethane	97	8.770	8.754	0.016	94	7702	0.0243	
48 Benzene	78	9.337	9.326	0.011	86	113587	0.3002	
51 Carbon tetrachloride	117	9.369	9.363	0.006	97	5690	0.0176	
55 Trichloroethene	130	10.663	10.652	0.011	97	292293	1.60	
64 Toluene	91	12.836	12.831	0.005	94	68181	0.1505	
70 Tetrachloroethene	129	14.044	14.039	0.005	95	7342	0.0414	
73 m-Xylene & p-Xylene	91	15.441	15.441	0.000	0	35707	0.0785	
77 o-Xylene	91	15.980	15.975	0.006	55	17948	0.0369	
84 1,3,5-Trimethylbenzene	120	17.430	17.425	0.005	92	9985	0.0350	
88 1,2,4-Trimethylbenzene	105	17.910	17.910	0.000	98	52193	0.0877	
S 111 Xylenes, Total	100				0		0.1154	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

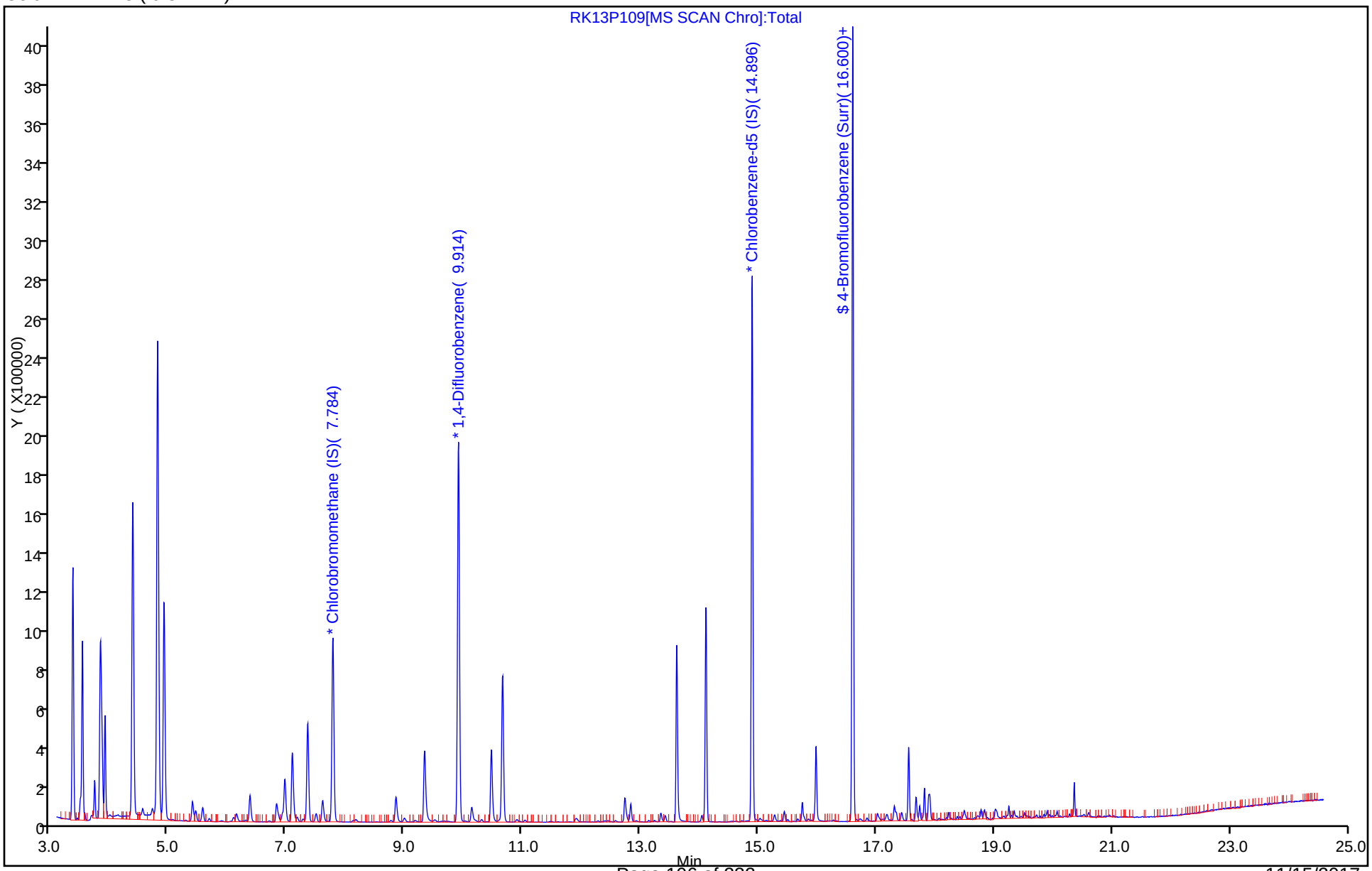
Report Date: 14-Nov-2017 11:46:09 Chrom Revision: 2.2 13-Nov-2017 17:19:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P109.D

Injection Date:	13-Nov-2017 22:21:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-9854-A-6	Lab Sample ID:	140-9854-6	Worklist Smp#:	16
Client ID:	BLDG-C INFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

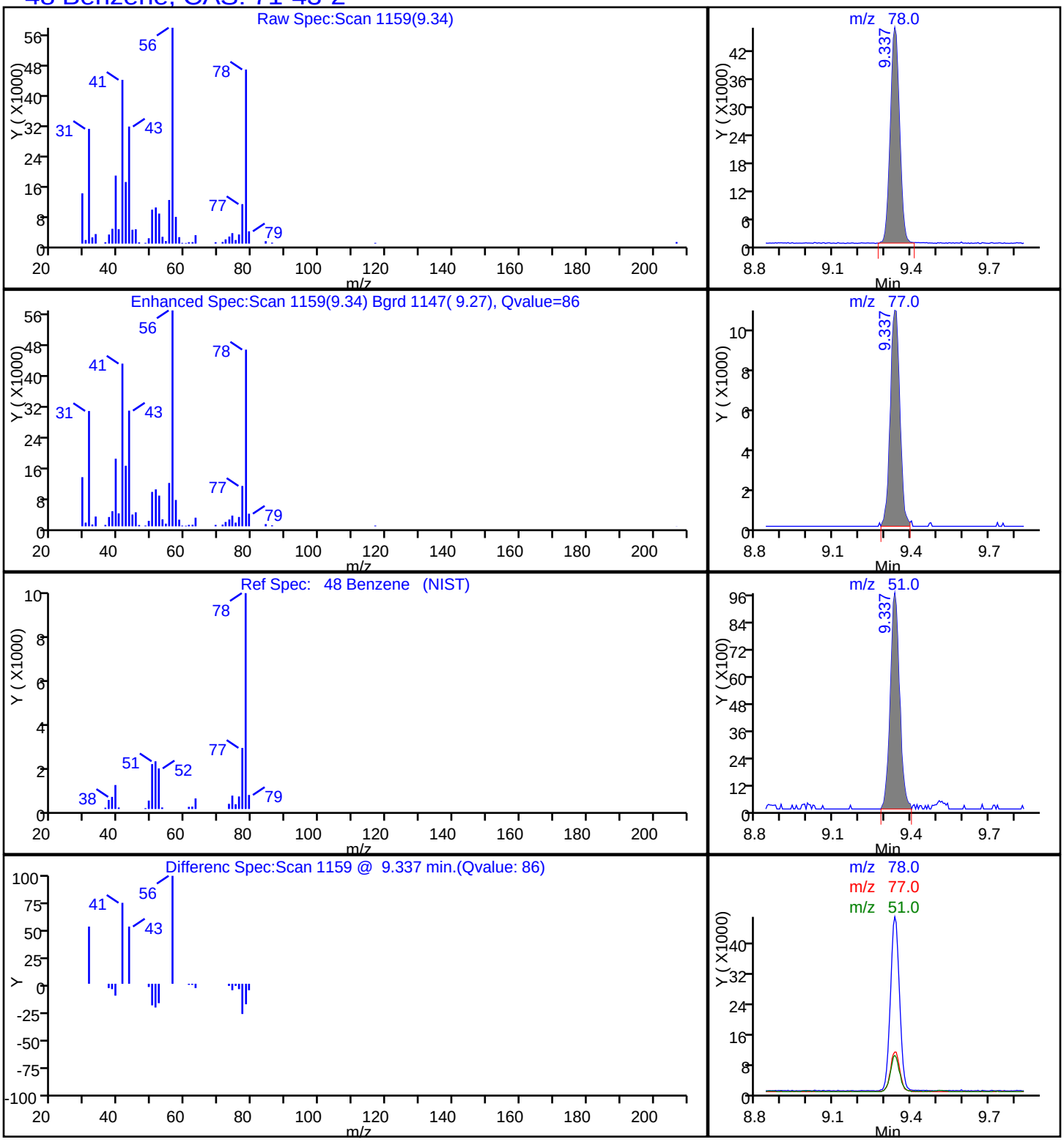
Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P109.D				
Lims ID:	140-9854-A-6				
Client ID:	BLDG-C INFLUENT				
Sample Type:	Client				
Inject. Date:	13-Nov-2017 22:21:30	ALS Bottle#:	9	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006602-016				
Misc. Info.:	140-9854-a-6				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	14-Nov-2017 11:45:23	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK025				
First Level Reviewer: tajh		Date:	14-Nov-2017 11:33:28		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.28	106.93

TestAmerica Knoxville

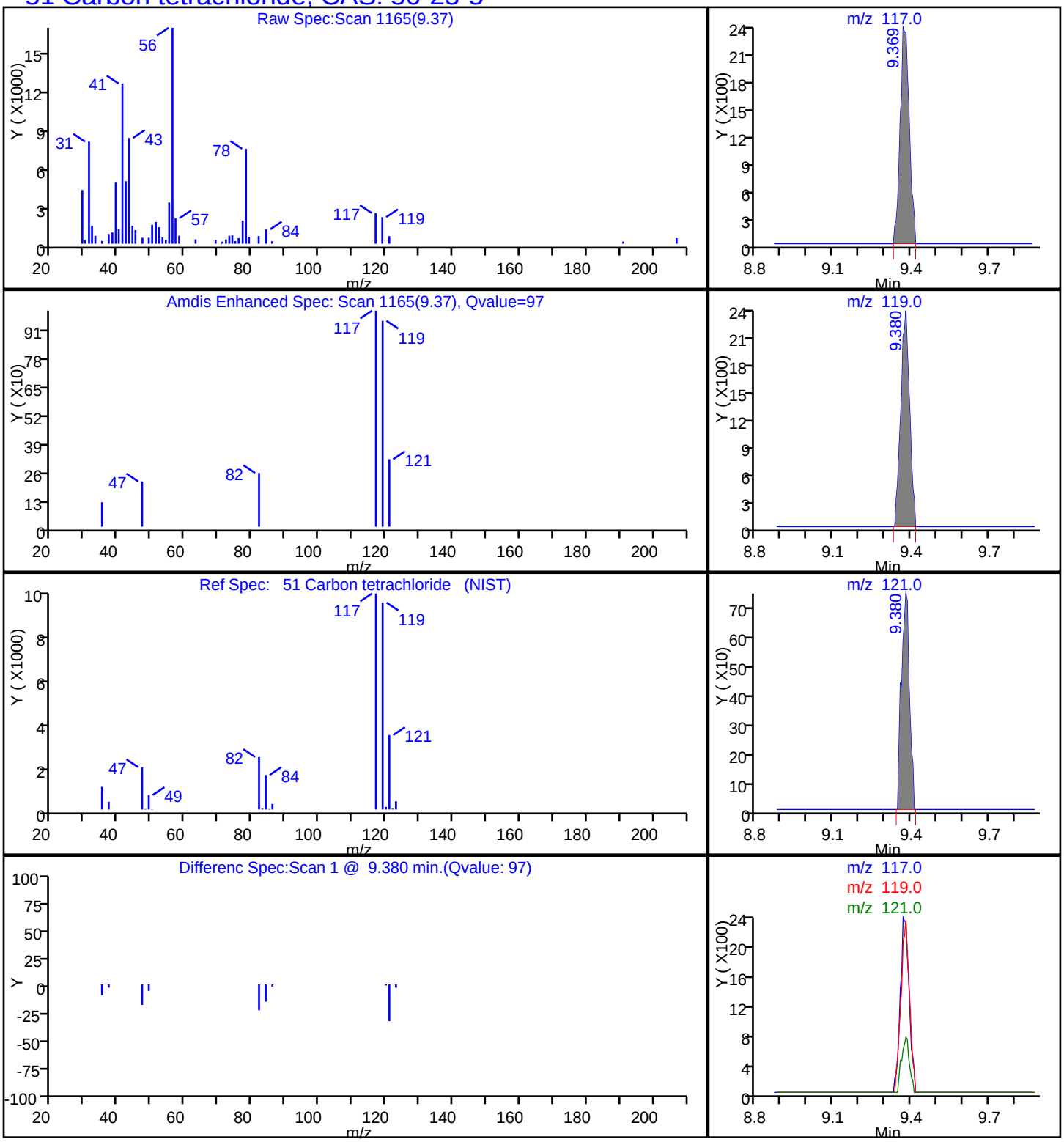
Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P109.D				
Injection Date:	13-Nov-2017 22:21:30	Instrument ID:	MR		
Lims ID:	140-9854-A-6	Lab Sample ID:	140-9854-6		
Client ID:	BLDG-C INFLUENT				
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

48 Benzene, CAS: 71-43-2



Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P109.D
Injection Date: 13-Nov-2017 22:21:30 Instrument ID: MR
Lims ID: 140-9854-A-6 Lab Sample ID: 140-9854-6
Client ID: BLDG-C INFLUENT
Operator ID: ALS Bottle#: 9 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

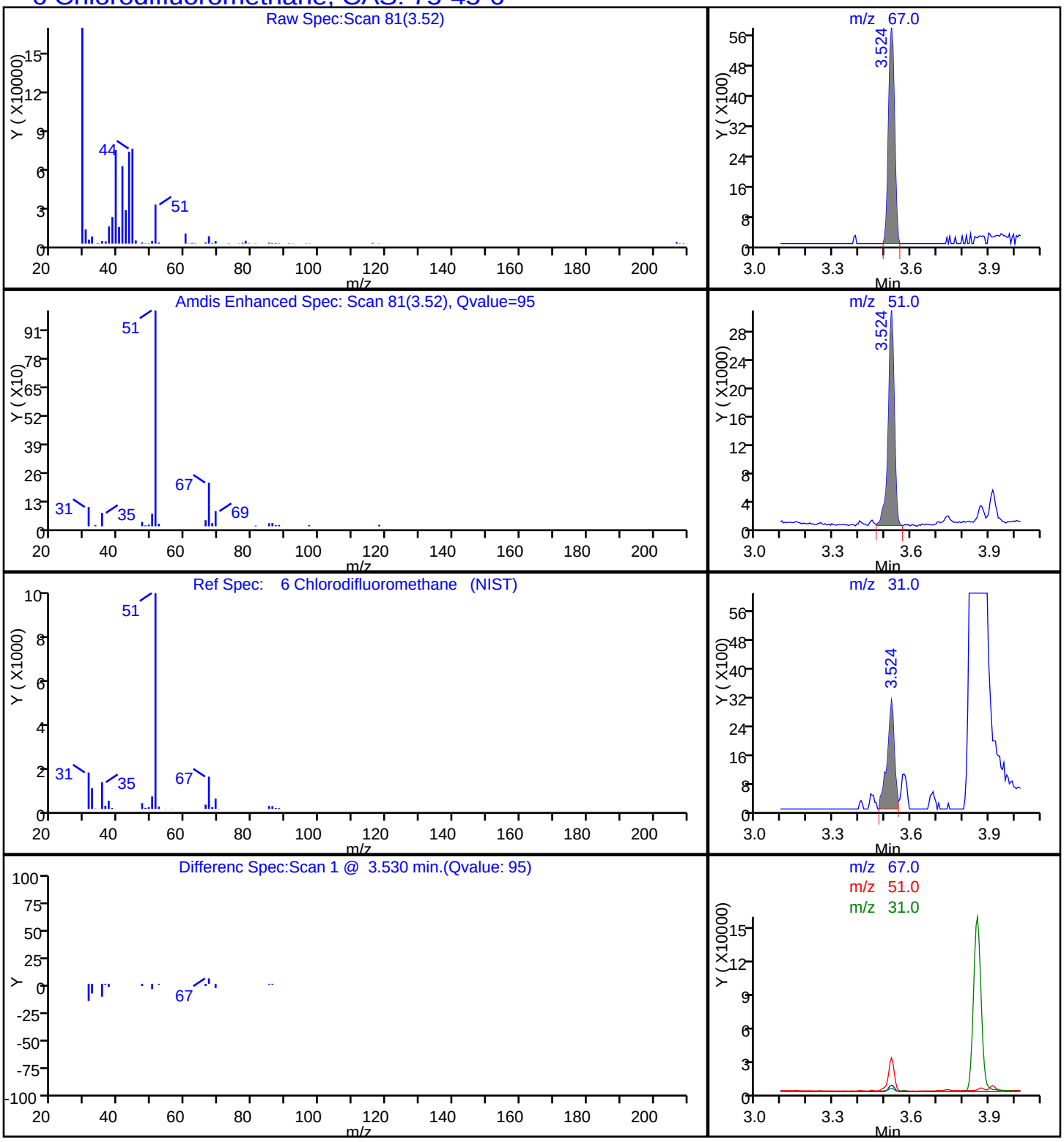
51 Carbon tetrachloride, CAS: 56-23-5



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P109.D				
Injection Date:	13-Nov-2017 22:21:30	Instrument ID:	MR		
Lims ID:	140-9854-A-6	Lab Sample ID:	140-9854-6		
Client ID:	BLDG-C INFLUENT				
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P109.D		
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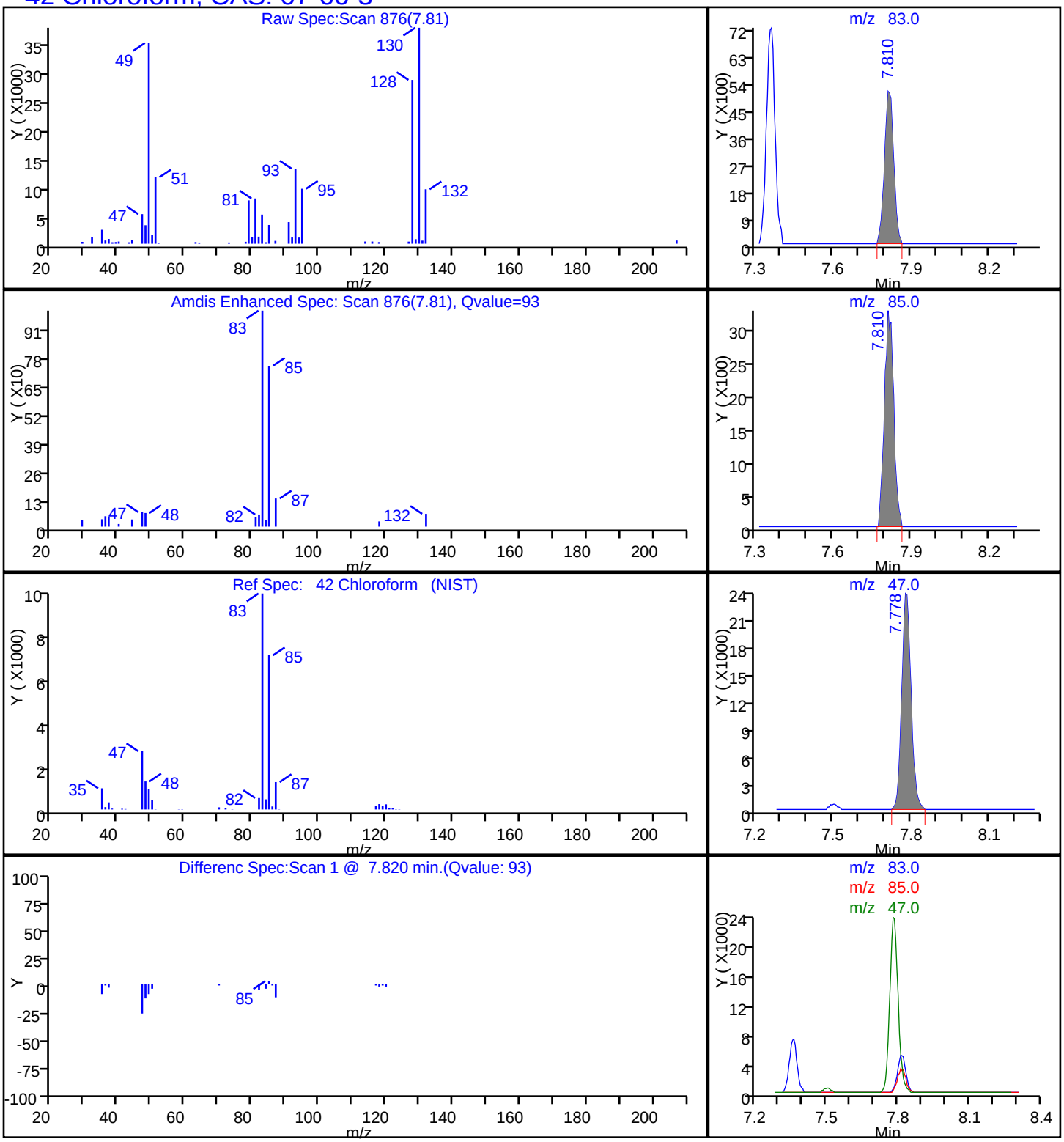
Lims ID:	140-9854-A-6	Lab Sample ID:	140-9854-6
Client ID:	BLDG-C INFLUENT		
Operator ID:		ALS Bottle#:	9 Worklist Smp#: 16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

42 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P109.D		
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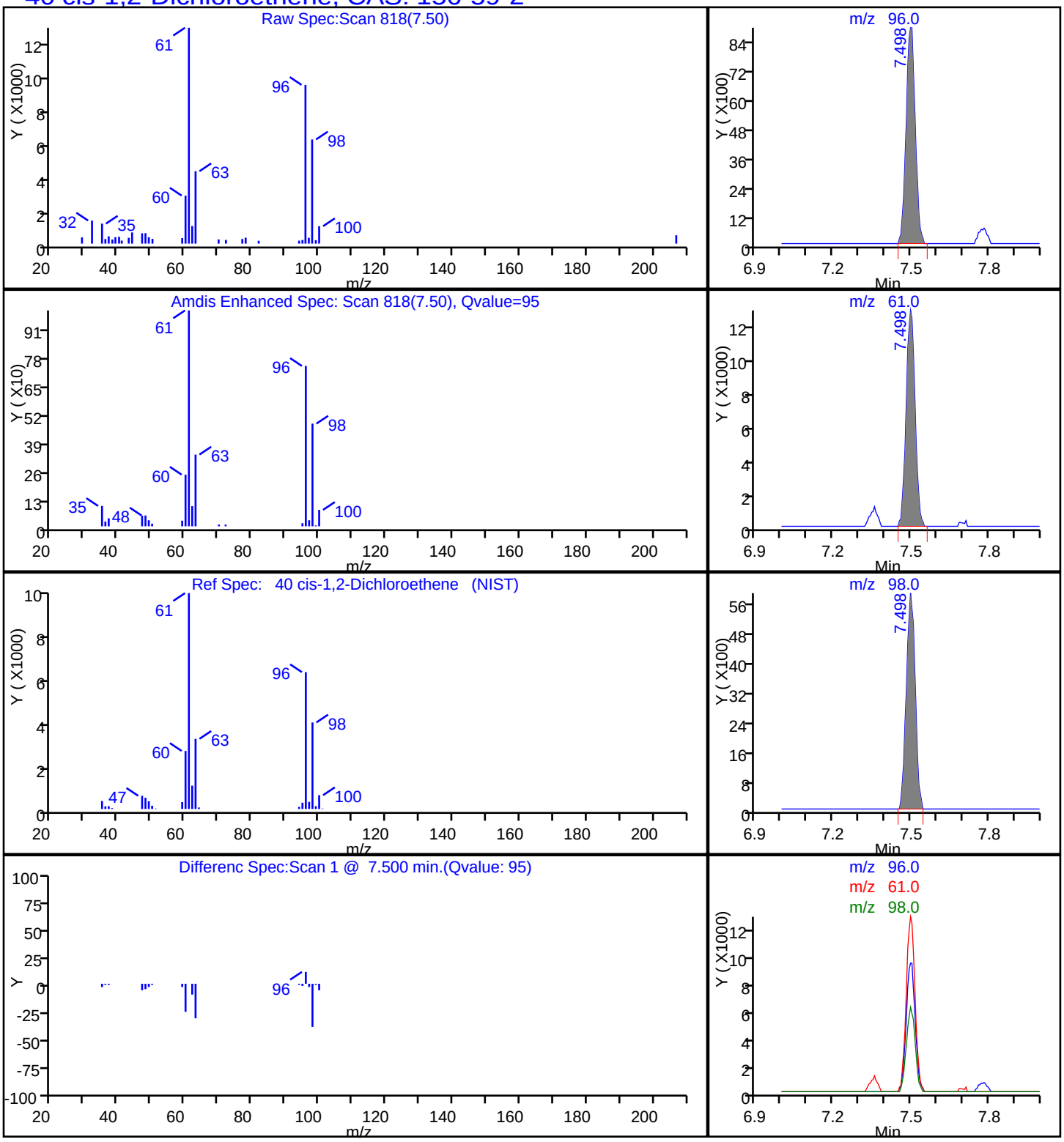
Lims ID:	140-9854-A-6	Lab Sample ID:	140-9854-6
Client ID:	BLDG-C INFLUENT		
Operator ID:		ALS Bottle#:	9 Worklist Smp#: 16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

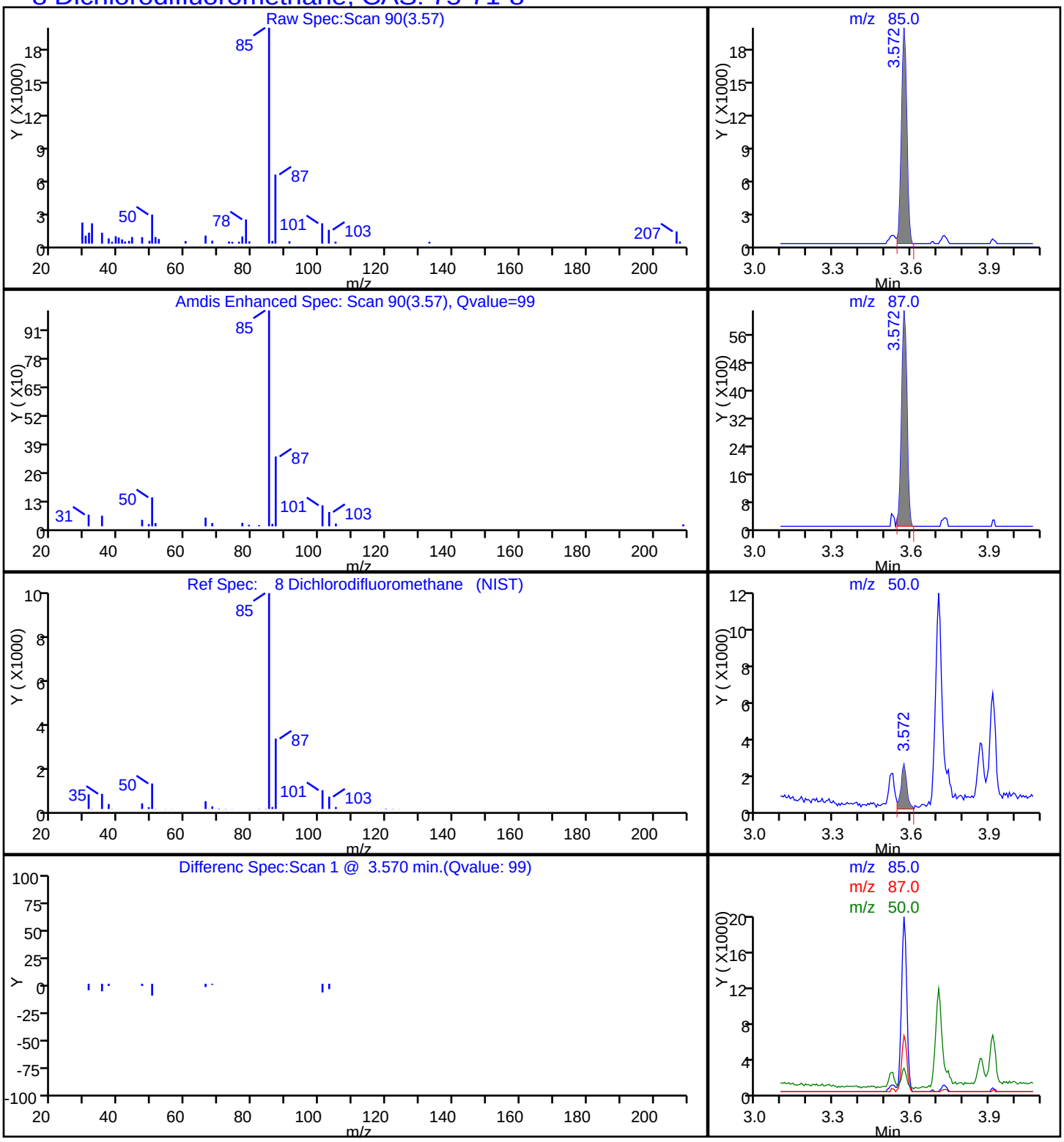
40 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P109.D				
Injection Date:	13-Nov-2017 22:21:30	Instrument ID:	MR		
Lims ID:	140-9854-A-6	Lab Sample ID:	140-9854-6		
Client ID:	BLDG-C INFLUENT				
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

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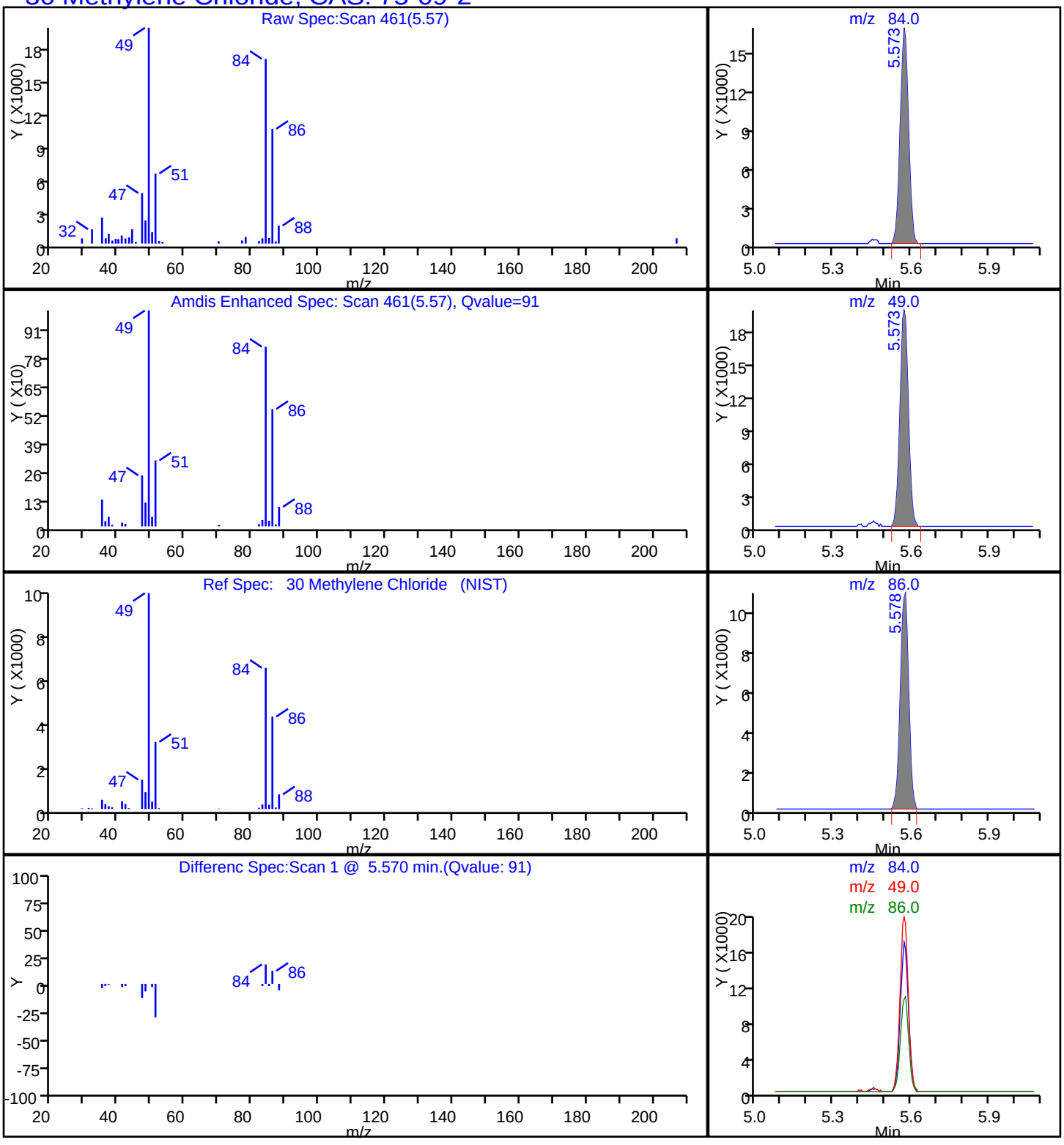
Lims ID:	140-9854-A-6	Lab Sample ID:	140-9854-6		
Client ID:	BLDG-C INFLUENT				
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

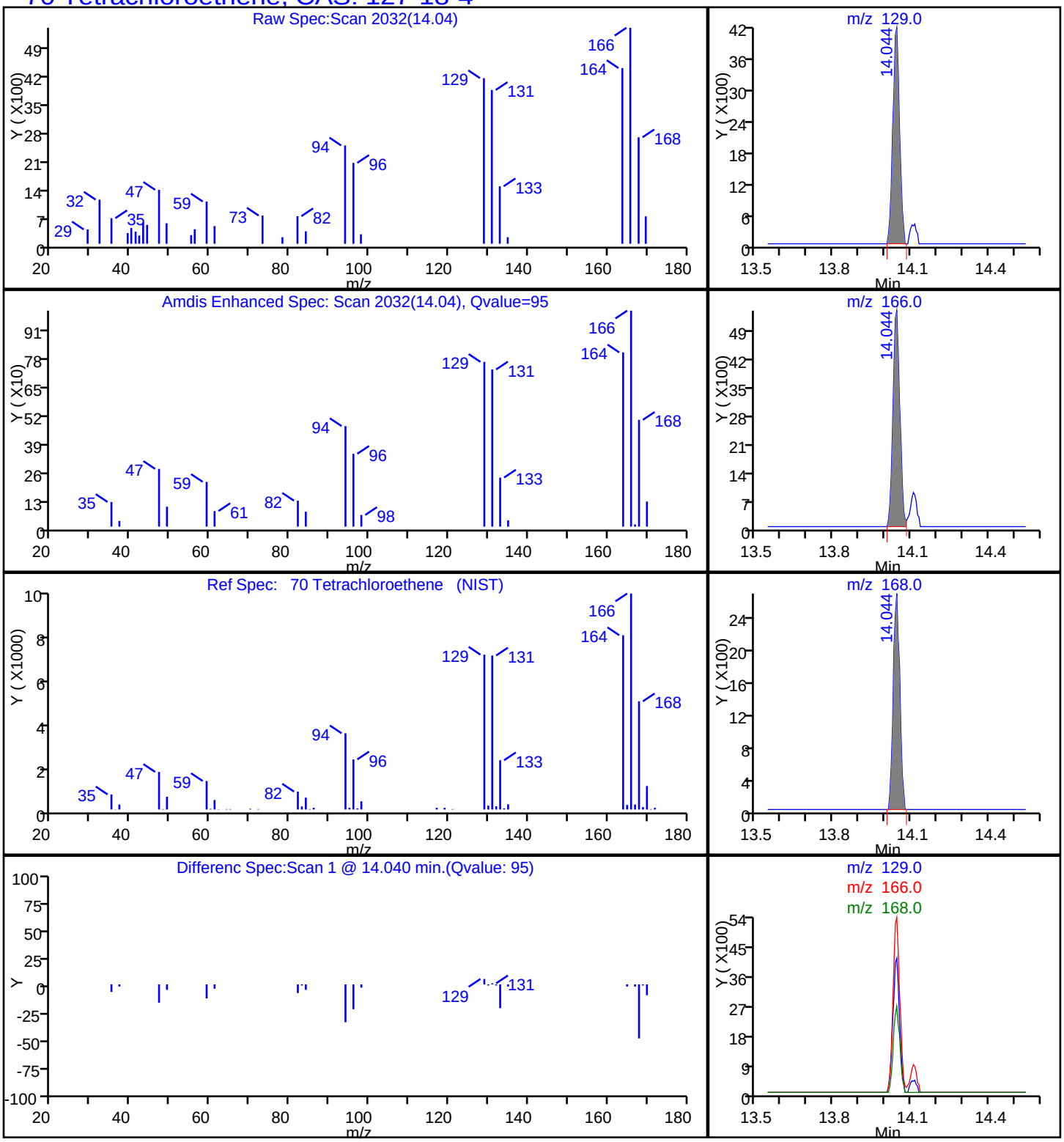
30 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P109.D				
Injection Date:	13-Nov-2017 22:21:30	Instrument ID:	MR		
Lims ID:	140-9854-A-6	Lab Sample ID:	140-9854-6		
Client ID:	BLDG-C INFLUENT				
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

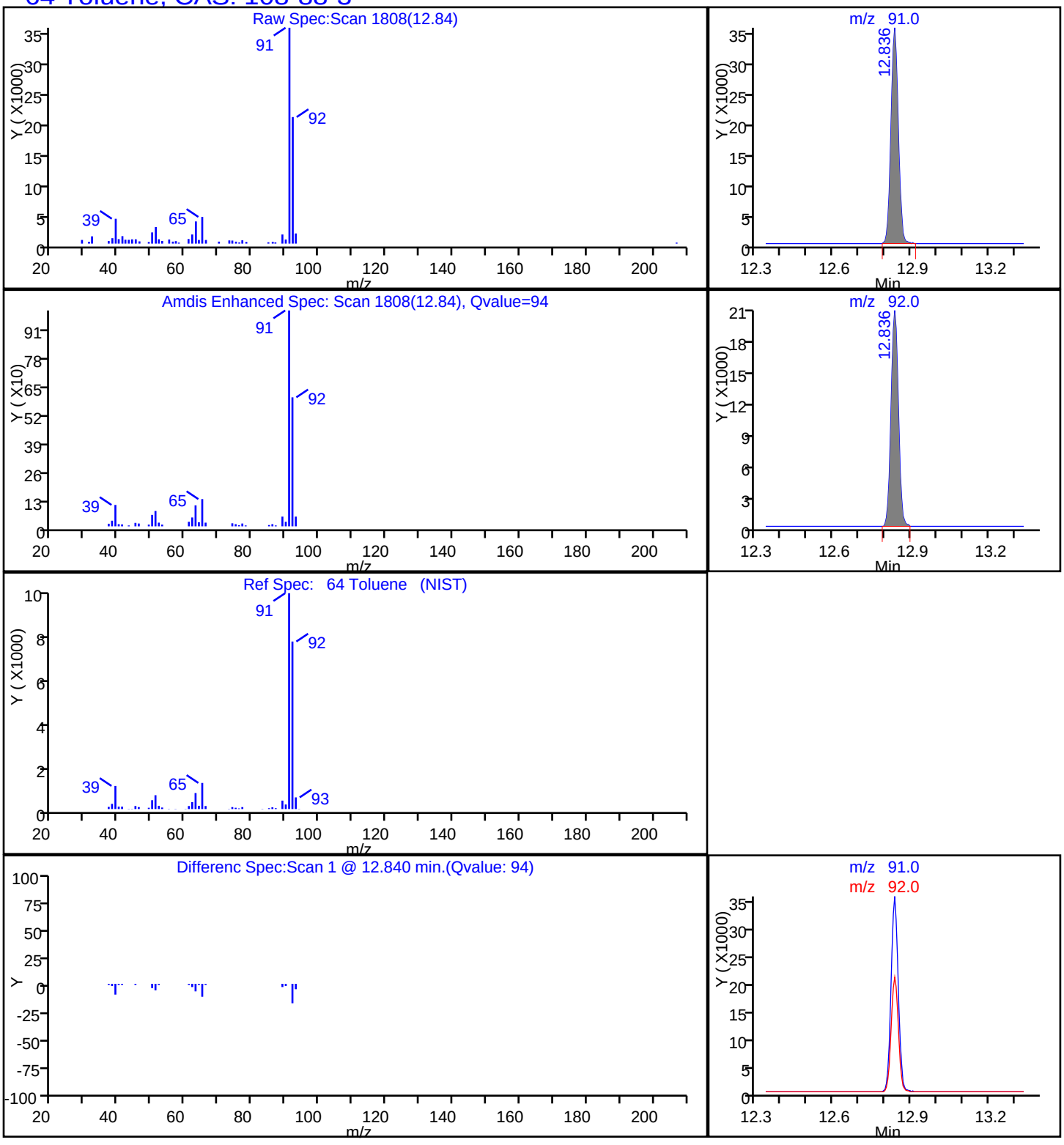
70 Tetrachloroethene, CAS: 127-18-4



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P109.D		
Injection Date:	13-Nov-2017 22:21:30	Instrument ID:	MR
Lims ID:	140-9854-A-6	Lab Sample ID:	140-9854-6
Client ID:	BLDG-C INFLUENT		
Operator ID:		ALS Bottle#:	9 Worklist Smp#: 16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

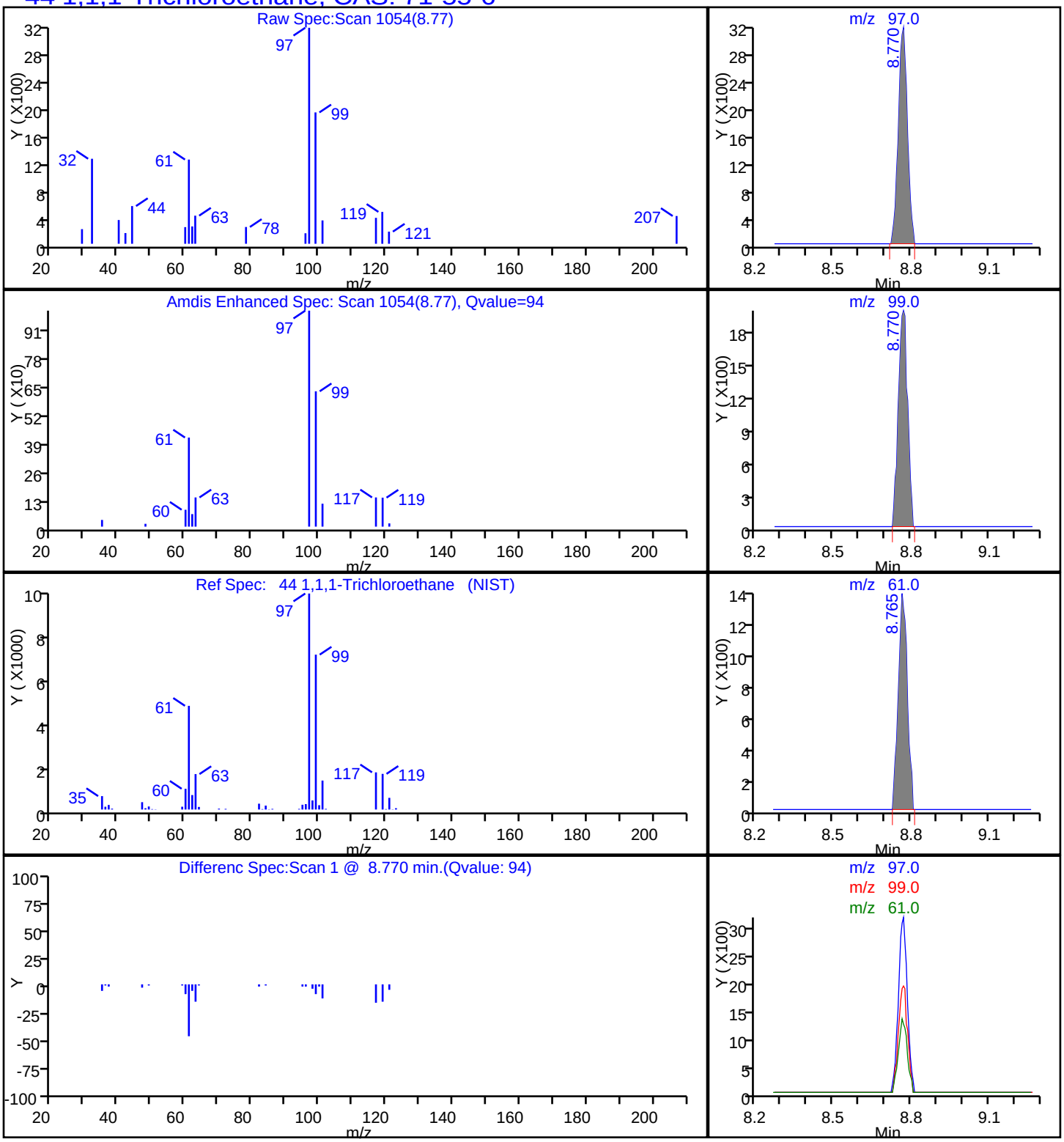
64 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P109.D				
Injection Date:	13-Nov-2017 22:21:30	Instrument ID:	MR		
Lims ID:	140-9854-A-6	Lab Sample ID:	140-9854-6		
Client ID:	BLDG-C INFLUENT				
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

44 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P109.D		
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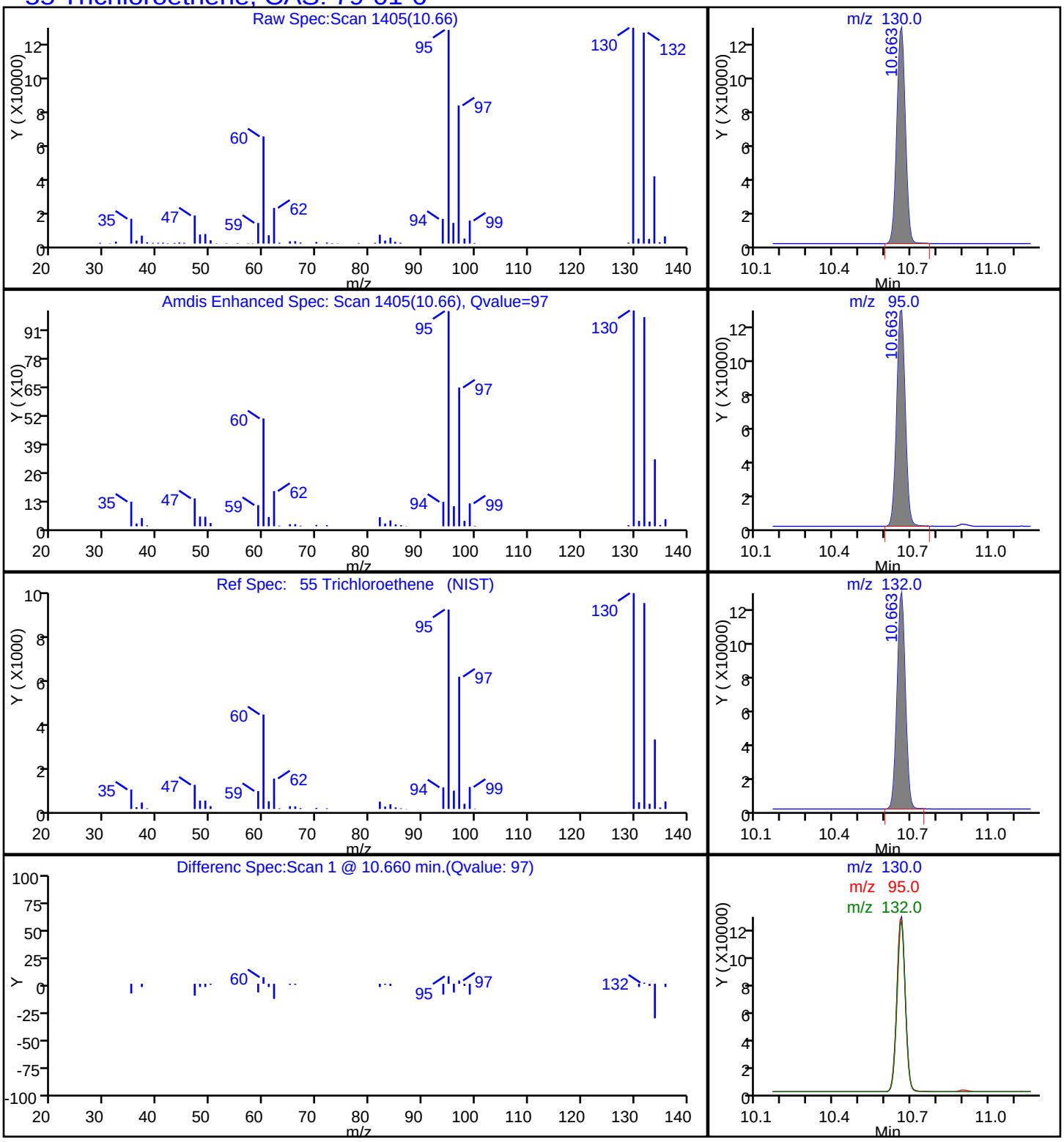
Lims ID:	140-9854-A-6	Lab Sample ID:	140-9854-6
Client ID:	BLDG-C INFLUENT		
Operator ID:		ALS Bottle#:	9 Worklist Smp#: 16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

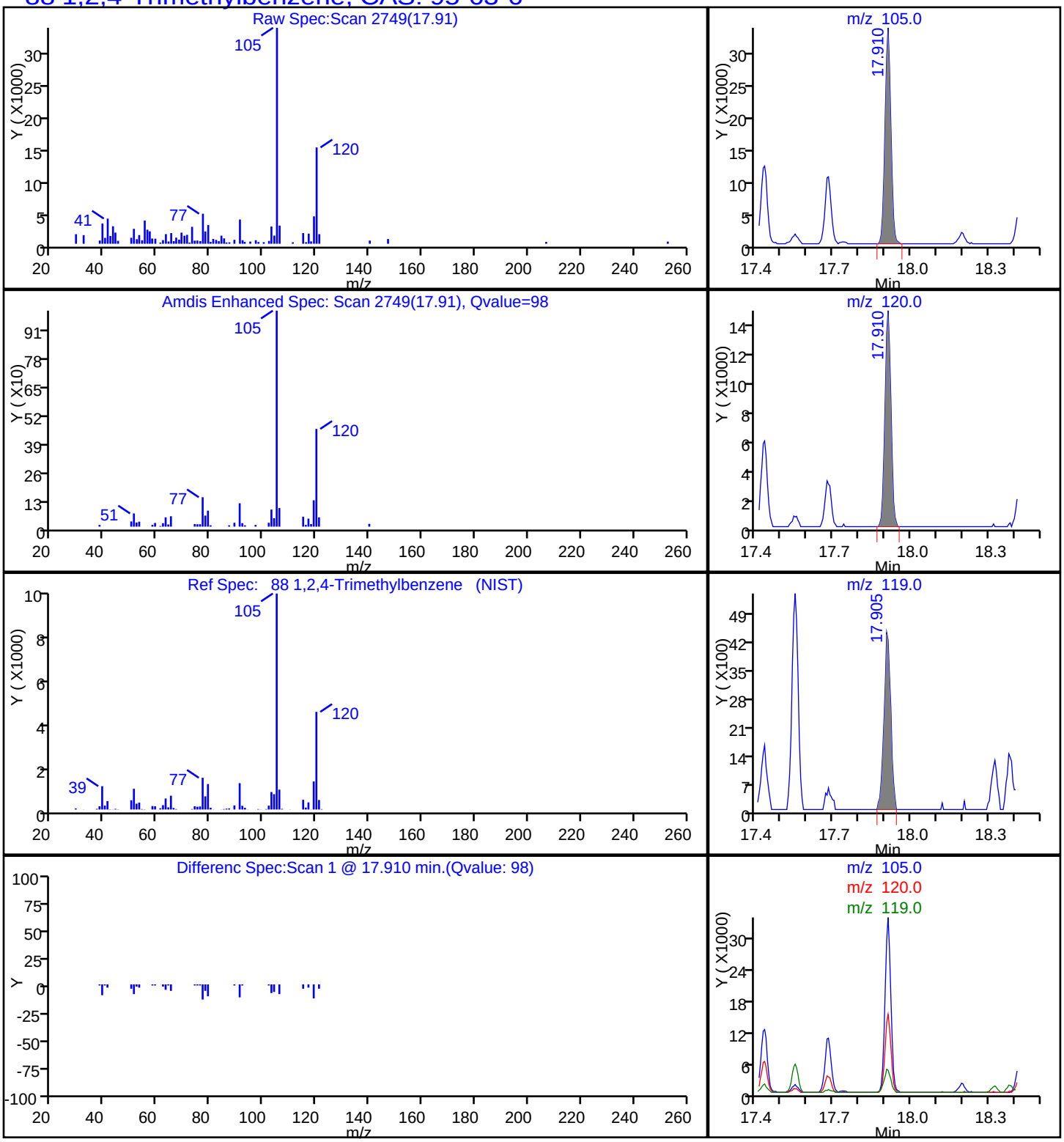
55 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P109.D				
Injection Date:	13-Nov-2017 22:21:30	Instrument ID:	MR		
Lims ID:	140-9854-A-6	Lab Sample ID:	140-9854-6		
Client ID:	BLDG-C INFLUENT				
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

88 1,2,4-Trimethylbenzene, CAS: 95-63-6



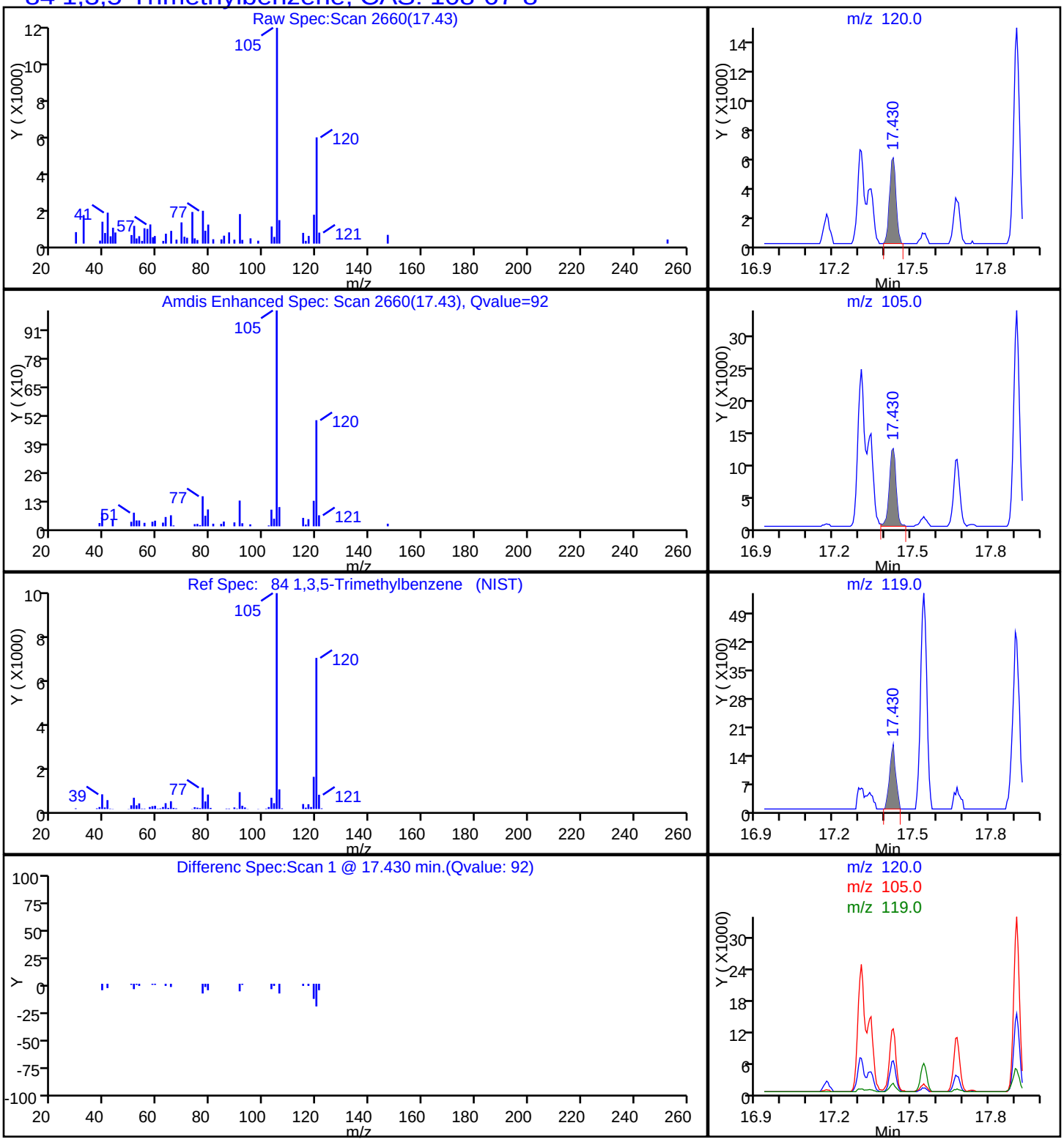
Report Date: 14-Nov-2017 11:46:10 Chrom Revision: 2.2 13-Nov-2017 17:19:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P109.D

Injection Date:	13-Nov-2017 22:21:30	Instrument ID:	MR		
Lims ID:	140-9854-A-6	Lab Sample ID:	140-9854-6		
Client ID:	BLDG-C INFLUENT				
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

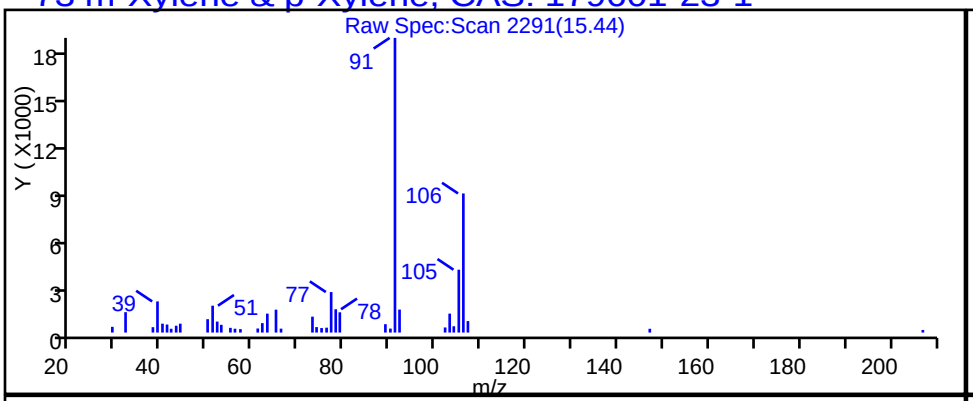
84 1,3,5-Trimethylbenzene, CAS: 108-67-8

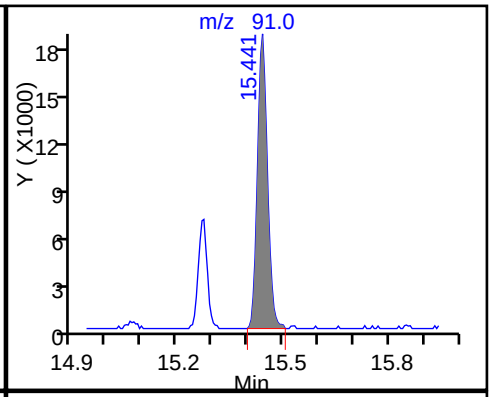


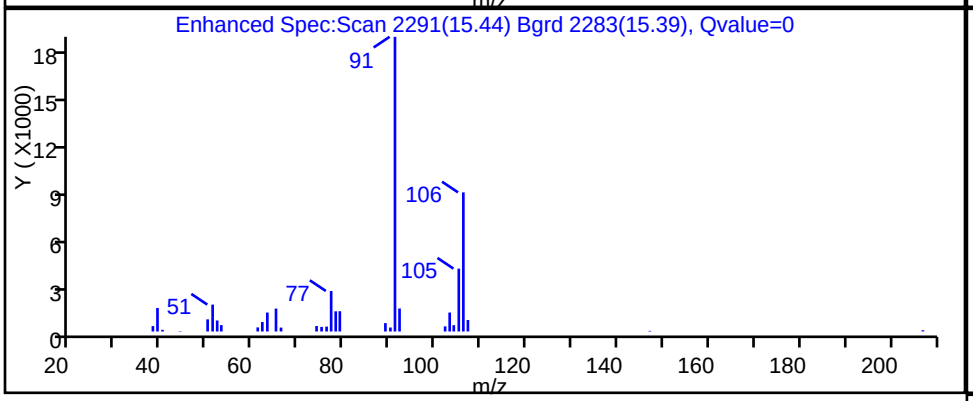
TestAmerica Knoxville

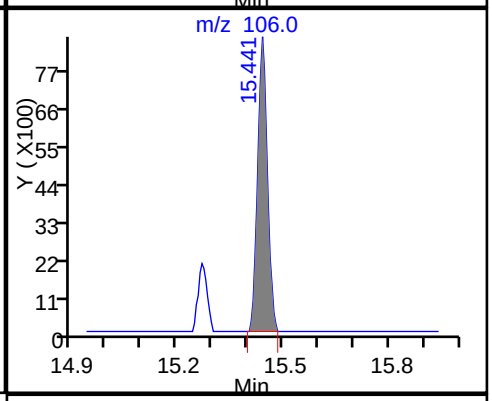
Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P109.D				
Injection Date:	13-Nov-2017 22:21:30	Instrument ID:	MR		
Lims ID:	140-9854-A-6	Lab Sample ID:	140-9854-6		
Client ID:	BLDG-C INFLUENT				
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

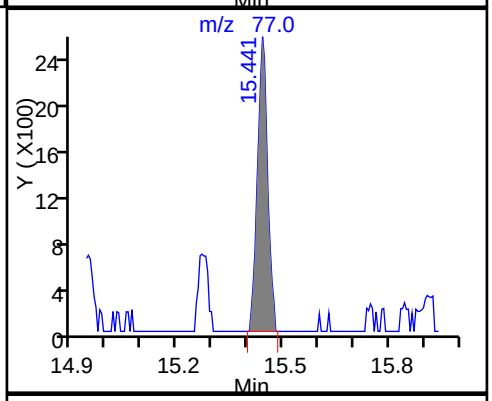
73 m-Xylene & p-Xylene, CAS: 179601-23-1

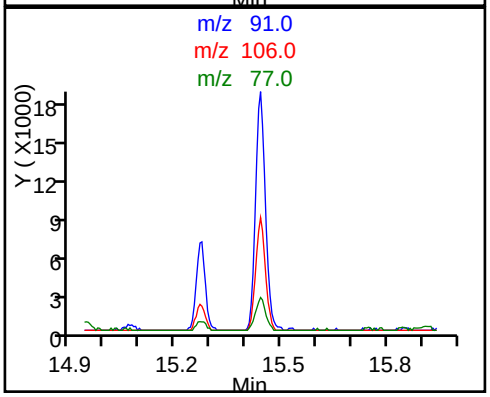












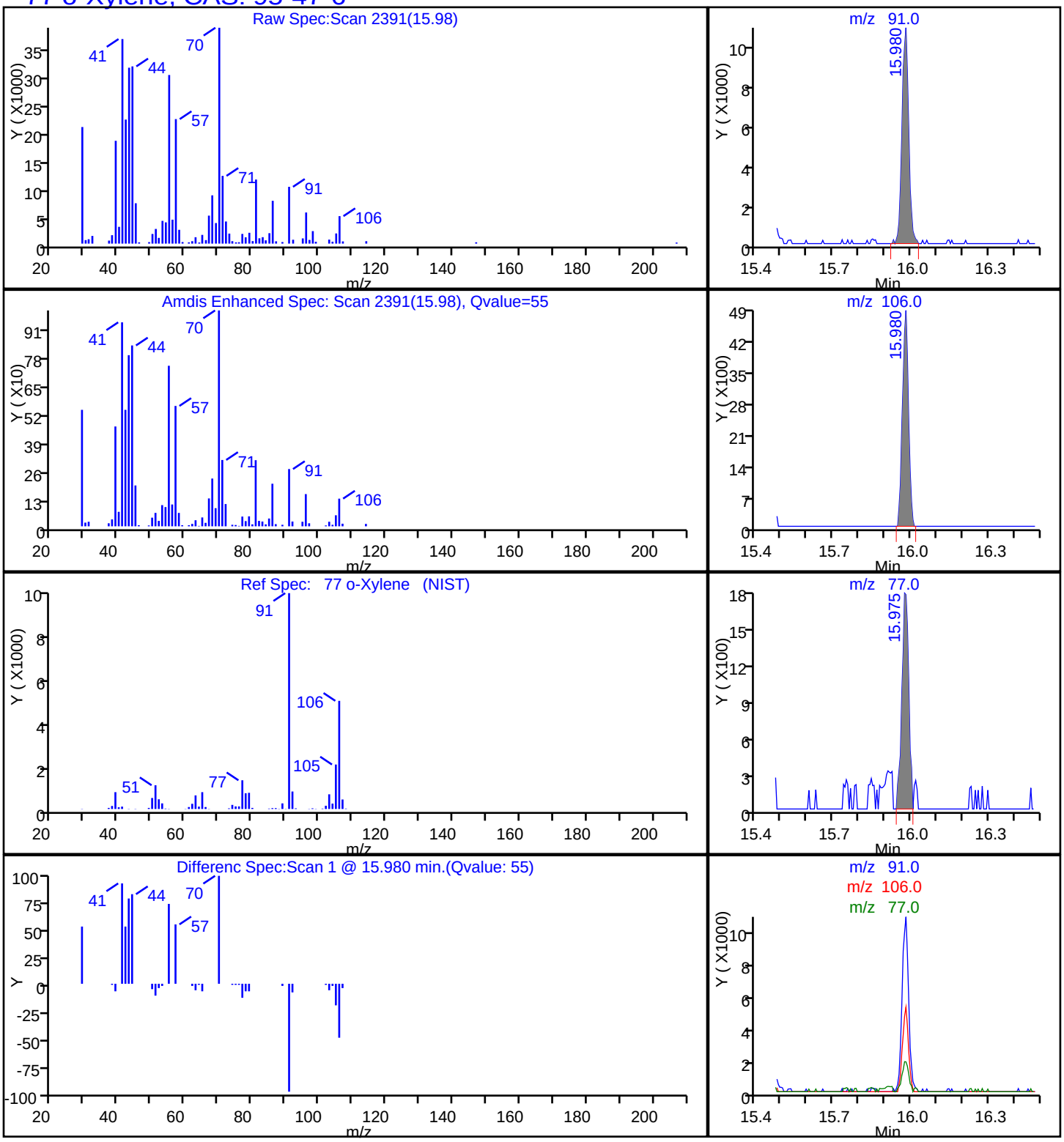
Report Date: 14-Nov-2017 11:46:10 Chrom Revision: 2.2 13-Nov-2017 17:19:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RK13P109.D

Injection Date:	13-Nov-2017 22:21:30	Instrument ID:	MR
Lims ID:	140-9854-A-6	Lab Sample ID:	140-9854-6
Client ID:	BLDG-C INFLUENT		
Operator ID:		ALS Bottle#:	9 Worklist Smp#: 16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

77 o-Xylene, CAS: 95-47-6



FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-15542/3	RJ25IC01.D
Level 2	IC 140-15542/4	RJ25IC02.D
Level 3	IC 140-15542/5	RJ25IC03.D
Level 4	IC 140-15542/6	RJ25IC04.D
Level 5	IC 140-15542/7	RJ25IC05.D
Level 6	IC 140-15542/8	RJ25IC06.D
Level 7	ICIS 140-15542/9	RJ25IC07.D
Level 8	IC 140-15542/10	RJ25IC08.D
Level 9	IC 140-15542/11	RJ25IC09.D
Level 10	IC 140-15542/12	RJ25IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Chlorodifluoromethane	+++++ 0.5284	0.5498 0.4869	0.5388 0.4776	0.5514 0.4437	0.5122 0.4332	Ave		0.5024				8.9		30.0			
Propene	+++++ 1.2081	+++++ 1.1108	1.2646 1.0852	1.2728 0.9817	1.1663 0.9148	Ave		1.1255				11.5		30.0			
Dichlorodifluoromethane	+++++ 3.9909	+++++ 3.8141	4.5987 3.9931	4.0497 3.6894	4.0128 3.2171	Ave		3.9207				9.9		30.0			
Chloromethane	+++++ 0.4116	+++++ 0.3616	+++++ 0.3895	0.4111 0.3351	0.4051 0.3187	Ave		0.3761				10.1		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++ 3.0515	+++++ 2.8159	3.0416 2.9081	3.0050 2.6689	2.9047 2.5575	Ave		2.8691				6.2		30.0			
Vinyl chloride	1.3671 1.1454	1.3059 1.0931	1.1656 1.0562	1.1683 0.9864	1.1298 0.9446	Ave		1.1362				11.4		30.0			
1,3-Butadiene	+++++ 0.7792	+++++ 0.7365	0.8596 0.7109	0.8017 0.6647	0.7534 0.6270	Ave		0.7416				10.1		30.0			
Butane	+++++ 1.3174	+++++ 1.2614	1.4036 1.2076	1.3738 1.1090	1.2919 1.0300	Ave		1.2493				10.3		30.0			
Bromomethane	+++++ 1.2347	+++++ 1.1667	1.2049 1.1542	1.2405 1.0697	1.1939 1.0402	Ave		1.1631				6.3		30.0			
Chloroethane	+++++ 0.5232	+++++ 0.5083	0.6044 0.5006	0.5876 0.4680	0.5358 0.4487	Ave		0.5221				10.3		30.0			
Ethanol	+++++ 0.3806	+++++ 0.3657	0.4194 0.3594	0.4087 0.3240	0.3758 0.2895	Ave		0.3654				11.6		30.0			
Vinyl bromide	+++++ 1.2472	+++++ 1.1823	1.3997 1.1573	1.3081 1.0917	1.2478 1.0557	Ave		1.2112				9.3		30.0			
2-Methylbutane	+++++ 0.8799	+++++ 0.8645	0.9173 0.8285	0.9723 0.7731	0.8592 0.7294	Ave		0.8530				9.0		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Acrolein	+++++ 0.3247	+++++ 0.3251	+++++ 0.3096	0.4515 0.2725	0.3179 0.2686	Ave		0.3243				18.8		30.0			
Trichlorofluoromethane	+++++ 4.2099	+++++ 3.9483	4.3466 3.8229	4.2598 3.5155	4.1478 3.2490	Ave		3.9375				9.9		30.0			
Acetonitrile	+++++ 0.2877	+++++ 0.2707	+++++ 0.2631	0.2664 0.2836	0.2659 0.2681	Ave		0.2722				3.5		30.0			
Acetone	+++++ 0.4388	+++++ 0.4317	+++++ 0.4039	0.5941 0.3861	0.4720 0.3595	Ave		0.4409				17.5		30.0			
Pentane	+++++ 0.2794	+++++ 0.2839	+++++ 0.2643	0.2943 0.2603	0.2820 0.2474	Ave		0.2731				6.0		30.0			
Isopropyl alcohol	+++++ 1.7956	+++++ 1.7656	1.8207 1.6884	1.8180 1.5825	1.7570 1.4204	Ave		1.7060				8.2		30.0			
Ethyl ether	+++++ 1.2446	+++++ 1.1803	1.2561 1.1394	1.2411 1.0701	1.2076 1.0311	Ave		1.1713				7.2		30.0			
1,1-Dichloroethene	1.8089 1.6087	1.7207 1.5302	1.6111 1.5478	1.5863 1.4839	1.5436 1.4952	Ave		1.5936				6.4		30.0			
Acrylonitrile	+++++ 1.0563	+++++ 0.9844	0.9679 0.9980	1.0591 0.9662	0.9578 0.9584	Ave		0.9935				4.2		30.0			
tert-Butyl alcohol	+++++ 3.1960	+++++ 3.0657	2.9798 3.0580	3.0771 2.9311	2.9858 2.7796	Ave		3.0091				4.1		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++ 3.5686	3.7467 3.3630	3.5432 3.3638	3.5431 3.1737	3.4737 3.0611	Ave		3.4263				6.2		30.0			
Methylene Chloride	+++++ 1.6389	+++++ 1.4623	+++++ 1.4218	2.4173 1.3471	1.7931 1.3204	Ave		1.6287				23.7		30.0			
3-Chloropropene	+++++ 1.4043	+++++ 1.2922	1.2624 1.2868	1.3073 1.2170	1.3032 1.1720	Ave		1.2806				5.4		30.0			
Carbon disulfide	+++++ 4.5562	+++++ 4.2698	4.4603 4.3410	4.3596 4.1377	4.3768 4.0665	Ave		4.3210				3.7		30.0			
trans-1,2-Dichloroethene	1.8154 1.6726	1.7919 1.5890	1.6255 1.6145	1.5941 1.5669	1.5688 1.5630	Ave		1.6402				5.6		30.0			
Methyl tert-butyl ether	+++++ 4.8940	4.8207 4.6951	4.5643 4.7557	4.5992 4.5445	4.5994 4.4091	Ave		4.6535				3.3		30.0			
1,1-Dichloroethane	3.1254 2.9871	3.1325 2.8151	2.9741 2.8056	3.0246 2.6622	2.8860 2.6015	Ave		2.9014				6.2		30.0			
Vinyl acetate	+++++ 3.3745	+++++ 3.3132	2.6662 3.4378	2.8636 3.3276	2.9765 3.3006	Ave		3.1575				9.0		30.0			
2-Butanone (MEK)	+++++ 0.7408	+++++ 0.7222	0.6292 0.7386	0.7368 0.7192	0.6927 0.7157	Ave		0.7119				5.2		30.0			
Hexane	+++++ 1.1962	+++++ 1.1320	1.1952 1.1397	1.1913 1.0739	1.1475 1.0325	Ave		1.1385				5.2		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
cis-1,2-Dichloroethene	1.7777 1.7143	1.7900 1.6382	1.6687 1.6819	1.6562 1.6167	1.6070 1.6130	Ave		1.6764				3.9		30.0			
Ethyl acetate	+++++ 2.9873	+++++ 2.8362	2.7319 2.9106	2.7331 2.7482	2.6995 2.6863	Ave		2.7916				3.9		30.0			
Chloroform	4.2002 3.8862	4.1393 3.6677	3.7970 3.6669	3.8508 3.4657	3.7285 3.3729	Ave		3.7775				6.9		30.0			
Tetrahydrofuran	1.5974 1.3952	1.4904 1.3613	1.3532 1.3696	1.3431 1.3057	1.3117 1.2739	Ave		1.3802				7.0		30.0			
1,1,1-Trichloroethane	4.1022 4.1028	4.1446 3.9110	3.8572 3.9680	3.9403 3.7653	3.8814 3.6726	Ave		3.9345				3.9		30.0			
1,2-Dichloroethane	0.4376 0.4545	0.4586 0.4265	0.4367 0.4301	0.4298 0.4022	0.4313 0.4027	Ave		0.4310				4.3		30.0			
Benzene	0.8874 0.8377	0.8387 0.7949	0.8005 0.8129	0.8016 0.7541	0.7867 0.7073	Ave		0.8022				6.1		30.0			
1-Butanol	+++++ 0.0669	+++++ 0.0692	+++++ 0.0721	+++++ 0.0712	0.0540 0.0656	Ave		0.0665				9.9		30.0			
Cyclohexane	+++++ 0.1326	+++++ 0.1266	0.1107 0.1275	0.1162 0.1174	0.1216 0.1097	Ave		0.1203				6.8		30.0			
Carbon tetrachloride	0.6796 0.7358	0.6730 0.7073	0.6550 0.7210	0.6741 0.6748	0.6693 0.6573	Ave		0.6847				4.0		30.0			
2,2,4-Trimethylpentane	+++++ 1.2439	+++++ 1.1739	1.1169 1.1877	1.1465 1.0995	1.1539 1.0350	Ave		1.1447				5.5		30.0			
1,2-Dichloropropane	+++++ 0.2956	0.2944 0.2783	0.2863 0.2811	0.2784 0.2589	0.2796 0.2451	Ave		0.2775				5.8		30.0			
Heptane	+++++ 0.2917	+++++ 0.2811	0.2463 0.2865	0.2614 0.2666	0.2679 0.2521	Ave		0.2692				6.0		30.0			
Trichloroethene	0.3868 0.4089	0.3833 0.3915	0.3714 0.4007	0.3792 0.3827	0.3806 0.3815	Ave		0.3866				2.9		30.0			
Dibromomethane	+++++ 0.3485	0.3979 0.3352	0.3510 0.3421	0.3356 0.3252	0.3268 0.3238	Ave		0.3429				6.7		30.0			
Bromodichloromethane	+++++ 0.6564	0.5743 0.6406	0.5553 0.6635	0.5717 0.6328	0.5804 0.6202	Ave		0.6106				6.6		30.0			
1,4-Dioxane	+++++ 0.1342	+++++ 0.1284	+++++ 0.1314	0.1128 0.1227	0.1208 0.1144	Ave		0.1235				6.7		30.0			
Methyl methacrylate	+++++ 0.2930	+++++ 0.2991	0.1956 0.3136	0.2214 0.3010	0.2473 0.2988	Ave		0.2712				16.2		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.5139	+++++ 0.5046	+++++ 0.5184	0.4085 0.4915	0.4384 0.4709	Ave		0.4780				8.7		30.0			
cis-1,3-Dichloropropene	0.3917 0.4936	0.3928 0.4868	0.3807 0.5057	0.4204 0.4814	0.4360 0.4785	Ave		0.4468				10.7		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
trans-1,3-Dichloropropene	0.3882 0.5309	0.4202 0.5238	0.4155 0.5568	0.4506 0.5354	0.4726 0.5456	Ave		0.4839				12.8		30.0			
Toluene	1.1241 1.2084	1.0868 1.1506	1.0517 1.1907	1.0960 1.1068	1.1100 1.0717	Ave		1.1197				4.5		30.0			
1,1,2-Trichloroethane	0.3102 0.3473	0.3229 0.3300	0.3082 0.3361	0.3193 0.3146	0.3197 0.3103	Ave		0.3219				3.9		30.0			
2-Hexanone	+++++ 0.3134	+++++ 0.3241	0.1763 0.3399	0.2213 0.3226	0.2561 0.3137	Ave		0.2834				20.8		30.0			
Dibromochloromethane	0.5587 0.7291	0.5598 0.7381	0.5475 0.7922	0.5886 0.7537	0.6237 0.7415	Ave		0.6633				14.5		30.0			
Octane	+++++ 0.3937	+++++ 0.3800	0.3096 0.3881	0.3400 0.3585	0.3548 0.3431	Ave		0.3585				7.9		30.0			
1,2-Dibromoethane (EDB)	+++++ 0.6389	+++++ 0.6187	0.5190 0.6466	0.5500 0.6149	0.5703 0.6122	Ave		0.5963				7.6		30.0			
Tetrachloroethene	0.4304 0.4653	0.4501 0.4431	0.4223 0.4543	0.4370 0.4282	0.4336 0.4230	Ave		0.4387				3.2		30.0			
Chlorobenzene	0.9992 0.9864	0.9718 0.9345	0.9281 0.9494	0.9398 0.8849	0.9365 0.8618	Ave		0.9392				4.5		30.0			
Ethylbenzene	1.4401 1.6275	1.3993 1.5401	1.3903 1.5662	1.4540 1.4291	1.4862 1.3231	Ave		1.4656				6.2		30.0			
m-Xylene & p-Xylene	1.0711 1.2823	1.0649 1.2091	1.0702 1.2012	1.1449 1.0714	1.1823 0.9448	Ave		1.1242				8.7		30.0			
Bromoform	0.4674 0.6394	0.4865 0.6797	0.4696 0.7422	0.4946 0.7185	0.5232 0.7222	Ave		0.5943				19.5		30.0			
Styrene	+++++ 0.8867	+++++ 0.8831	0.5643 0.9141	0.6456 0.8567	0.7237 0.8325	Ave		0.7883				16.3		30.0			
Nonane	+++++ 0.7206	+++++ 0.6652	0.5507 0.6497	0.6229 0.5720	0.6636 0.5123	Ave		0.6196				11.2		30.0			
o-Xylene	1.1302 1.3545	1.1569 1.2573	1.1624 1.2520	1.2472 1.1358	1.2666 1.0500	Ave		1.2013				7.4		30.0			
1,1,2,2-Tetrachloroethane	+++++ 0.8957	0.7355 0.8362	0.7299 0.8372	0.7901 0.7630	0.8060 0.7191	Ave		0.7903				7.5		30.0			
1,2,3-Trichloropropane	+++++ 0.3061	+++++ 0.2848	0.2659 0.2816	0.2880 0.2587	0.2822 0.2535	Ave		0.2776				6.2		30.0			
Isopropylbenzene	+++++ 1.8916	1.8696 1.7566	1.7791 1.7343	1.8252 1.5487	1.8101 1.3945	Ave		1.7344				9.3		30.0			
Propylbenzene	+++++ 0.5358	0.4255 0.5029	0.4062 0.4998	0.4593 0.4505	0.4832 0.4206	Ave		0.4649				9.4		30.0			
2-Chlorotoluene	+++++ 0.4797	0.4156 0.4462	0.4109 0.4420	0.4537 0.3971	0.4522 0.3770	Ave		0.4305				7.5		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
4-Ethyltoluene	+++++ 2.0232	1.5384 1.8873	1.5441 1.8623	1.7128 1.6421	1.8142 1.4584	Ave		1.7203				11.0		30.0			
1,3,5-Trimethylbenzene	0.6131 0.8251	0.6256 0.7732	0.6275 0.7713	0.7130 0.6963	0.7475 0.6549	Ave		0.7048				10.4		30.0			
Alpha Methyl Styrene	+++++ 0.7234	+++++ 0.7310	+++++ 0.7573	0.4842 0.7002	0.5590 0.6628	Ave		0.6597				15.3		30.0			
Decane	+++++ 1.0382	+++++ 0.9664	0.7218 0.9491	0.8677 0.8185	0.9184 0.6960	Ave		0.8720				13.8		30.0			
tert-Butylbenzene	+++++ 1.9116	1.5250 1.7775	1.5052 1.7572	1.7050 1.5403	1.7410 1.3578	Ave		1.6467				10.5		30.0			
1,2,4-Trimethylbenzene	1.2958 1.7741	1.3547 1.6220	1.3822 1.5674	1.5708 1.3511	1.6211 1.1658	Ave		1.4705				12.7		30.0			
1,3-Dichlorobenzene	0.9501 1.1491	0.9755 1.0709	0.9435 1.0555	1.0461 0.9334	1.0454 0.8545	Ave		1.0024				8.6		30.0			
sec-Butylbenzene	+++++ 2.5239	1.9242 2.3507	1.9211 2.2918	2.1731 1.9258	2.2800 1.5928	Ave		2.1093				13.7		30.0			
Benzyl chloride	+++++ 1.4749	+++++ 1.4399	+++++ 1.4370	1.1324 1.2503	1.2318 1.0883	Ave		1.2935				12.2		30.0			
1,4-Dichlorobenzene	0.9723 1.1642	0.9722 1.0795	0.9703 1.0577	1.0618 0.9359	1.0514 0.8577	Ave		1.0123				8.6		30.0			
4-Isopropyltoluene	+++++ 2.2611	1.6211 2.1503	1.6490 2.1293	1.9267 1.8090	2.0038 1.4958	Ave		1.8940				14.1		30.0			
1,2,3-Trimethylbenzene	1.4171 1.9595	1.5428 1.8127	1.5222 1.7708	1.7559 1.5408	1.7871 1.3448	Ave		1.6454				12.0		30.0			
1,2-Dichlorobenzene	0.9674 1.1266	0.9741 1.0457	0.9121 1.0282	1.0300 0.9062	1.0081 0.8238	Ave		0.9822				8.7		30.0			
Butylbenzene	+++++ 2.1055	1.4970 1.9952	1.4408 1.9800	1.7130 1.6753	1.8234 1.3513	Ave		1.7313				15.4		30.0			
Undecane	+++++ 1.2182	+++++ 1.1654	0.7698 1.1579	0.9546 1.0014	1.0143 0.8324	Ave		1.0142				15.9		30.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.8502	+++++ 0.8663	0.4966 0.9051	0.6087 0.7949	0.6550 0.7083	Ave		0.7356				19.4		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 2.9309	+++++ 2.7917	1.9390 2.7937	2.3411 2.3234	2.4353 +++++	Ave		2.5079				13.9		30.0			
Dodecane	+++++ 1.2500	+++++ 1.1858	0.7480 1.2104	0.9446 1.0380	0.8935 0.8562	Ave		1.0158				18.2		30.0			
1,2,4-Trichlorobenzene	0.6124 0.9441	0.6407 0.9438	0.6398 1.0228	0.7850 0.9588	0.7135 0.9088	Ave		0.8170				19.1		30.0			
Naphthalene	1.4478 2.2892	1.4742 2.2339	1.5283 2.3428	1.9081 2.0982	1.6880 +++++	Ave		1.8900				19.3		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Hexachlorobutadiene	0.7935 0.9253	0.7986 0.8965	0.7203 0.9510	0.8263 0.8975	0.7528 0.8453	Ave		0.8407				9.1		30.0			
1,2,3-Trichlorobenzene	0.6537 0.9130	0.6742 0.8952	0.6874 0.9642	0.8226 0.9021	0.6708 0.8908	Ave		0.8074				15.1		30.0			
2-Methylnaphthalene	+++++ 0.5736	+++++ 0.5700	0.2460 0.6969	0.4439 0.6255	0.2461 0.5637	Ave		0.4957				34.2		50.0			
1-Methylnaphthalene	+++++ 0.4999	+++++ 0.4680	0.2664 0.5744	0.4502 0.5052	0.2201 0.4656	Ave		0.4312				28.4		50.0			
4-Bromofluorobenzene (Surr)	0.7461 0.7392	0.7608 0.7333	0.7634 0.7106	0.7613 0.6920	0.7646 0.6584	Ave		0.7330				4.9		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-15542/3	RJ25IC01.D
Level 2	IC 140-15542/4	RJ25IC02.D
Level 3	IC 140-15542/5	RJ25IC03.D
Level 4	IC 140-15542/6	RJ25IC04.D
Level 5	IC 140-15542/7	RJ25IC05.D
Level 6	IC 140-15542/8	RJ25IC06.D
Level 7	ICIS 140-15542/9	RJ25IC07.D
Level 8	IC 140-15542/10	RJ25IC08.D
Level 9	IC 140-15542/11	RJ25IC09.D
Level 10	IC 140-15542/12	RJ25IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorodifluoromethane	CBM	Ave	+++++ 52665	2085 101769	4125 202279	8460 399853	20097 803086	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Propene	CBM	Ave	+++++ 120415	+++++ 232191	9681 459626	19529 884721	45765 1695857	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	+++++ 397784	+++++ 797253	35205 1691282	62139 3324893	157459 5963801	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Chloromethane	CBM	Ave	+++++ 41021	+++++ 75586	+++++ 164958	6308 301993	15895 590896	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroeth ane	CBM	Ave	+++++ 304153	+++++ 588597	23285 1231703	46108 2405230	113975 4741073	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	2540 114161	4952 228480	8923 447334	17927 888956	44332 1751141	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	+++++ 77662	+++++ 153951	6581 301083	12301 599027	29563 1162419	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Butane	CBM	Ave	+++++ 131312	+++++ 263673	10745 511458	21079 999430	50692 1909389	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Bromomethane	CBM	Ave	+++++ 123066	+++++ 243878	9224 488872	19034 964057	46848 1928308	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Chloroethane	CBM	Ave	+++++ 52144	+++++ 106239	4627 212019	9016 421811	21026 831792	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Ethanol	CBM	Ave	+++++ 189667	+++++ 382186	16054 761181	31352 1460090	73720 2683051	+++++ 5.01	+++++ 9.99	0.397 20.0	0.793 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	+++++ 124308	+++++ 247129	10715 490166	20071 983817	48964 1957010	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	+++++ 87697	+++++ 180708	7022 350900	14919 696681	33713 1352243	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Acrolein	CBM	Ave	+++++ 32362	+++++ 67963	+++++ 131136	6928 245571	12474 497887	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Trichlorofluoromethane	CBM	Ave	+++++	+++++	33275	65362	162753	+++++	+++++	0.0793	0.159	0.400
			419611	825311	1619197	3168243	6022956	1.00	2.00	4.00	8.00	16.0
Acetonitrile	CBM	Ave	+++++	+++++	+++++	4087	10434	+++++	+++++	+++++	0.159	0.400
			28679	56588	111432	255539	496965	1.00	2.00	4.00	8.00	16.0
Acetone	CBM	Ave	+++++	+++++	+++++	27350	55570	+++++	+++++	+++++	0.476	1.20
			131209	270718	513231	1043967	1999735	3.01	5.99	12.0	24.0	48.0
Pentane	CBM	Ave	+++++	+++++	+++++	4515	11065	+++++	+++++	+++++	0.159	0.400
			27851	59347	111955	234577	458645	1.00	2.00	4.00	8.00	16.0
Isopropyl alcohol	CBM	Ave	+++++	+++++	41818	83694	206847	+++++	+++++	0.238	0.476	1.20
			536958	1107259	2145485	4278764	7900031	3.01	5.99	12.0	24.0	48.0
Ethyl ether	CBM	Ave	+++++	+++++	9616	19044	47384	+++++	+++++	0.0793	0.159	0.400
			124053	246725	482585	964411	1911537	1.00	2.00	4.00	8.00	16.0
1,1-Dichloroethene	CBM	Ave	3361	6525	12334	24340	60569	0.0196	0.0392	0.0793	0.159	0.400
			160338	319852	655584	1337323	2771817	1.00	2.00	4.00	8.00	16.0
Acrylonitrile	CBM	Ave	+++++	+++++	7410	16250	37581	+++++	+++++	0.0793	0.159	0.400
			105280	205776	422684	870731	1776662	1.00	2.00	4.00	8.00	16.0
tert-Butyl alcohol	CBM	Ave	+++++	+++++	22812	47215	117160	+++++	+++++	0.0793	0.159	0.400
			318549	640820	1295192	2641518	5152924	1.00	2.00	4.00	8.00	16.0
1,1,2-Trichloro-1,2,2-trifluoroetha ne	CBM	Ave	+++++	14208	27125	54365	136304	+++++	0.0392	0.0793	0.159	0.400
			355686	702951	1424722	2860127	5674605	1.00	2.00	4.00	8.00	16.0
Methylene Chloride	CBM	Ave	+++++	+++++	+++++	37091	70360	+++++	+++++	+++++	0.159	0.400
			163357	305658	602192	1214064	2447809	1.00	2.00	4.00	8.00	16.0
3-Chloropropene	CBM	Ave	+++++	+++++	9664	20059	51135	+++++	+++++	0.0793	0.159	0.400
			139966	270102	545029	1096804	2172614	1.00	2.00	4.00	8.00	16.0
Carbon disulfide	CBM	Ave	+++++	+++++	34146	66894	171741	+++++	+++++	0.0793	0.159	0.400
			454130	892511	1838624	3728924	7538407	1.00	2.00	4.00	8.00	16.0
trans-1,2-Dichloroethene	CBM	Ave	3373	6795	12444	24460	61556	0.0196	0.0392	0.0793	0.159	0.400
			166711	332139	683800	1412134	2897432	1.00	2.00	4.00	8.00	16.0
Methyl tert-butyl ether	CBM	Ave	+++++	18281	34942	70570	180474	+++++	0.0392	0.0793	0.159	0.400
			487791	981395	2014267	4095585	8173520	1.00	2.00	4.00	8.00	16.0
1,1-Dichloroethane	CBM	Ave	5807	11879	22768	46409	113245	0.0196	0.0392	0.0793	0.159	0.400
			297732	588426	1188290	2399193	4822750	1.00	2.00	4.00	8.00	16.0
Vinyl acetate	CBM	Ave	+++++	+++++	20411	43939	116793	+++++	+++++	0.0793	0.159	0.400
			336347	692559	1456065	2998874	6118655	1.00	2.00	4.00	8.00	16.0
2-Butanone (MEK)	CBM	Ave	+++++	+++++	4817	11306	27179	+++++	+++++	0.0793	0.159	0.400
			73837	150957	312840	648132	1326766	1.00	2.00	4.00	8.00	16.0
Hexane	CBM	Ave	+++++	+++++	9150	18279	45026	+++++	+++++	0.0793	0.159	0.400
			119227	236625	482705	967848	1914109	1.00	2.00	4.00	8.00	16.0
cis-1,2-Dichloroethene	CBM	Ave	3303	6788	12775	25412	63056	0.0196	0.0392	0.0793	0.159	0.400
			170867	342438	712388	1456970	2990205	1.00	2.00	4.00	8.00	16.0
Ethyl acetate	CBM	Ave	+++++	+++++	20914	41937	105925	+++++	+++++	0.0793	0.159	0.400
			297748	592846	1232791	2476675	4979960	1.00	2.00	4.00	8.00	16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chloroform	CBM	Ave	7804 387346	15697 766644	29068 1553122	59087 3123300	146303 6252680	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	2968 139063	5652 284558	10359 580107	20608 1176753	51471 2361471	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	7622 408931	15717 817496	29529 1680641	60460 3393282	152300 6808210	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	4708 261684	10148 517134	19447 1044848	38556 2085161	98892 4238188	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Benzene	DFBZ	Ave	9547 482364	18558 963873	35648 1974761	71904 3909074	180361 7444515	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	+++++ 38505	+++++ 83873	+++++ 175085	+++++ 369245	12391 690517	+++++ 1.00	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	+++++ 76338	+++++ 153538	4928 309783	10422 608419	27883 1155065	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	7312 423680	14892 857647	29168 1751616	60470 3498240	153437 6918118	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	+++++ 716205	+++++ 1423496	49738 2885411	102839 5699452	264556 10894189	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	+++++ 170193	6514 337441	12751 682983	24970 1342220	64112 2579606	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Heptane	DFBZ	Ave	+++++ 167936	+++++ 340822	10970 695938	23448 1381937	61428 2653569	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	4162 235437	8482 474722	16538 973448	34011 1983769	87248 4015133	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	+++++ 200653	8804 406474	15629 831073	30101 1685672	74912 3407808	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	+++++ 377939	12709 776763	24729 1611990	51286 3280388	133067 6527638	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	+++++ 77269	+++++ 155698	+++++ 319197	10114 635939	27703 1204443	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	+++++ 168681	+++++ 362703	8710 761754	19860 1560531	56707 3144744	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	+++++ 295912	+++++ 611907	+++++ 1259401	36640 2547644	100514 4956312	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0
cis-1,3-Dichloropropene	DFBZ	Ave	4214 284232	8692 590333	16952 1228466	37708 2495678	99963 5036601	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	3642 264230	8127 550671	16117 1169692	34823 2418731	92653 4954997	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Toluene	CBZd 5	Ave	10546 601460	21020 1209692	40799 2501333	84708 5000244	217615 9732782	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	2910 172853	6246 346900	11956 705972	24681 1421474	62680 2818197	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Hexanone	CBZd 5	Ave	+++++ 155983	+++++ 340754	6841 714062	17103 1457582	50215 2849200	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Dibromochloromethane	CBZd 5	Ave	5242 362871	10827 776008	21241 1664137	45494 3404955	122286 6733481	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Octane	CBZd 5	Ave	+++++ 195933	+++++ 399529	12011 815331	26281 1619656	69565 3115693	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	+++++ 317987	+++++ 650482	20134 1358421	42511 2777984	111812 5559926	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Tetrachloroethene	CBZd 5	Ave	4038 231568	8705 465829	16381 954469	33774 1934461	85007 3841103	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Chlorobenzene	CBZd 5	Ave	9374 490951	18796 982434	36005 1994464	72632 3997886	183593 7825995	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Ethylbenzene	CBZd 5	Ave	13511 810050	27063 1619183	53935 3290297	112376 6456253	291382 12015013	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd 5	Ave	20098 1276477	41194 2542321	83030 5046733	176975 9680607	463595 17160895	0.0392 2.00	0.0784 3.99	0.159 8.00	0.317 16.0	0.800 32.0
Bromoform	CBZd 5	Ave	4385 318253	9410 714603	18219 1559205	38228 3245877	102577 6558869	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Styrene	CBZd 5	Ave	+++++ 441338	+++++ 928423	21890 1920288	49897 3870267	141877 7560228	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Nonane	CBZd 5	Ave	+++++ 358631	+++++ 699319	21365 1364959	48143 2584312	130104 4652330	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
o-Xylene	CBZd 5	Ave	10603 674160	22375 1321857	45094 2630168	96395 5131084	248316 9535161	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	+++++ 445782	14226 879160	28316 1758724	61062 3446997	158018 6530374	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd 5	Ave	+++++ 152327	+++++ 299434	10316 591665	22255 1168938	55328 2302436	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Isopropylbenzene	CBZd 5	Ave	+++++ 941474	36160 1846740	69017 3643421	141062 6996543	354883 12663589	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Propylbenzene	CBZd 5	Ave	+++++ 266687	8230 528723	15756 1049883	35494 2035261	94728 3819742	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
2-Chlorotoluene	CBZd 5	Ave	+++++ 238746	8038 469063	15941 928581	35064 1794004	88647 3423413	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	+++++ 1006964	29754 1984214	59901 3912288	132375 7418547	355685 13244430	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	5752 410670	12100 812865	24343 1620384	55107 3145506	146542 5947640	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	+++++ 360064	+++++ 768512	+++++ 1590809	37420 3163348	109602 6018724	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0
Decane	CBZd 5	Ave	+++++ 516714	+++++ 1015986	28000 1993844	67062 3697959	180060 6320845	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
tert-Butylbenzene	CBZd5	Ave	+++++ 951442	29495 1868713	58391 3691545	131776 6958642	341330 12330820	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd5	Ave	12157 883002	26201 1705234	53619 3292671	121401 6104034	317818 10587367	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd5	Ave	8914 571936	18867 1125927	36601 2217431	80846 4216783	204946 7759848	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
sec-Butylbenzene	CBZd5	Ave	+++++ 1256189	37216 2471421	74524 4814563	167950 8700337	446997 14464983	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Benzyl chloride	CBZd5	Ave	+++++ 734076	+++++ 1513870	+++++ 3018732	87519 5648570	241503 9882812	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd5	Ave	9122 579460	18804 1134967	37641 2222060	82059 4227916	206120 7788742	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
4-Isopropyltoluene	CBZd5	Ave	+++++ 1125379	31354 2260739	63969 4473245	148906 8172682	392846 13583476	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd5	Ave	13295 975263	29839 1905721	59053 3720027	135710 6961070	350369 12212729	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd5	Ave	9076 560747	18839 1099439	35383 2160064	79606 4093958	197633 7481468	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Butylbenzene	CBZd5	Ave	+++++ 1047935	28954 2097682	55892 4159498	132390 7568750	357490 12271794	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Undecane	CBZd5	Ave	+++++ 606307	+++++ 1225234	29862 2432418	73775 4523930	198846 7559425	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd5	Ave	+++++ 423136	+++++ 910820	19265 1901418	47048 3591223	128407 6432249	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2,4,5-Tetramethylbenzene	CBZd5	Ave	+++++ 1458763	+++++ 2935017	75221 5868924	180933 10496588	477440 +++++	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 +++++
Dodecane	CBZd5	Ave	+++++ 622152	+++++ 1246644	29017 2542680	73006 4689410	175178 7775809	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2,4-Trichlorobenzene	CBZd5	Ave	5745 469912	12391 992300	24821 2148606	60667 4331499	139886 8252878	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Naphthalene	CBZd5	Ave	13583 1139353	28513 2348566	59288 4921580	147471 9478899	330933 +++++	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 +++++
Hexachlorobutadiene	CBZd5	Ave	7444 460520	15446 942489	27942 1997835	63860 4054563	147591 7676608	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd5	Ave	6133 454418	13039 941154	26665 2025469	63574 4075342	131520 8089214	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
2-Methylnaphthalene	CBZd5	Ave	+++++ 656625	+++++ 1378404	21947 3367217	78912 6499587	110967 11773396	+++++ 2.30	+++++ 4.59	0.182 9.20	0.365 18.4	0.920 36.8
1-Methylnaphthalene	CBZd5	Ave	+++++ 572233	+++++ 1131655	23773 2775316	80019 5249732	99268 9724344	+++++ 2.30	+++++ 4.59	0.182 9.20	0.365 18.4	0.920 36.8
4-Bromofluorobenzene (Surr)	CBZd5	Ave	1428582 1469194	1501404 1544010	1493098 1492736	1483356 1563108	1499096 1494682	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

Curve Type Legend:
Ave = Average ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-15542/3	RJ25IC01.D
Level 2	IC 140-15542/4	RJ25IC02.D
Level 3	IC 140-15542/5	RJ25IC03.D
Level 4	IC 140-15542/6	RJ25IC04.D
Level 5	IC 140-15542/7	RJ25IC05.D
Level 6	IC 140-15542/8	RJ25IC06.D
Level 7	ICIS 140-15542/9	RJ25IC07.D
Level 8	IC 140-15542/10	RJ25IC08.D
Level 9	IC 140-15542/11	RJ25IC09.D
Level 10	IC 140-15542/12	RJ25IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	9.4						50				
Propene	+++++	+++++	12.4						50			
Dichlorodifluoromethane	+++++	+++++	17.3						50			
Chloromethane	+++++	+++++	+++++	9.3						50		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	+++++	6.0						50			
Vinyl chloride	20.3						50					
1,3-Butadiene	+++++	+++++	15.9						50			
Butane	+++++	+++++	12.3						50			
Bromomethane	+++++	+++++	3.6						50			
Chloroethane	+++++	+++++	15.8						50			
Ethanol	+++++	+++++	14.8						50			
Vinyl bromide	+++++	+++++	15.6						50			
2-Methylbutane	+++++	+++++	7.5						50			
Acrolein	+++++	+++++	+++++	39.2						50		

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Trichlorofluoromethane	+++++	+++++	10.4						50			
Acetonitrile	+++++	+++++	+++++	-2.1						50		
Acetone	+++++	+++++	+++++	34.8						80		
Pentane	+++++	+++++	+++++	7.8						50		
Isopropyl alcohol	+++++	+++++	6.7						50			
Ethyl ether	+++++	+++++	7.2						50			
1,1-Dichloroethene	13.5						50					
Acrylonitrile	+++++	+++++	-2.6						50			
tert-Butyl alcohol	+++++	+++++	-1.0						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	9.4						50				
Methylene Chloride	+++++	+++++	+++++	48.4						80		
3-Chloropropene	+++++	+++++	-1.4						50			
Carbon disulfide	+++++	+++++	3.2						50			
trans-1,2-Dichloroethene	10.7						50					
Methyl tert-butyl ether	+++++	3.6						50				
1,1-Dichloroethane	7.7						50					
Vinyl acetate	+++++	+++++	-15.6						50			
2-Butanone (MEK)	+++++	+++++	-11.6						50			
Hexane	+++++	+++++	5.0						50			
cis-1,2-Dichloroethene	6.0						50					
Ethyl acetate	+++++	+++++	-2.1						50			

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chloroform	11.2						50					
Tetrahydrofuran	15.7						50					
1,1,1-Trichloroethane	4.3						50					
1,2-Dichloroethane	1.5						50					
Benzene	10.6						50					
1-Butanol	+++++	+++++	+++++	+++++	-18.7						50	
Cyclohexane	+++++	+++++	-8.0						50			
Carbon tetrachloride	-0.7						50					
2,2,4-Trimethylpentane	+++++	+++++	-2.4						50			
1,2-Dichloropropane	+++++	6.1						50				
Heptane	+++++	+++++	-8.5						50			
Trichloroethene	0.1						50					
Dibromomethane	+++++	16.0						50				
Bromodichloromethane	+++++	-5.9						50				
1,4-Dioxane	+++++	+++++	+++++	-8.7						50		
Methyl methacrylate	+++++	+++++	-27.9						50			
4-Methyl-2-pentanone (MIBK)	+++++	+++++	+++++	-14.6						50		
cis-1,3-Dichloropropene	-12.3						50					
trans-1,3-Dichloropropene	-19.8						50					
Toluene	0.4						50					
1,1,2-Trichloroethane	-3.6						50					

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
2-Hexanone	+++++	+++++	-37.8						50			
Dibromochloromethane	-15.8						50					
Octane	+++++	+++++	-13.6						50			
1,2-Dibromoethane (EDB)	+++++	+++++	-13.0						50			
Tetrachloroethene	-1.9						50					
Chlorobenzene	6.4						50					
Ethylbenzene	-1.7						50					
m-Xylene & p-Xylene	-4.7						50					
Bromoform	-21.4						50					
Styrene	+++++	+++++	-28.4						50			
Nonane	+++++	+++++	-11.1						50			
o-Xylene	-5.9						50					
1,1,2,2-Tetrachloroethane	+++++	-6.9						50				
1,2,3-Trichloropropane	+++++	+++++	-4.2						50			
Isopropylbenzene	+++++	7.8						50				
Propylbenzene	+++++	-8.5						50				
2-Chlorotoluene	+++++	-3.5						50				
4-Ethyltoluene	+++++	-10.6						50				
1,3,5-Trimethylbenzene	-13.0						50					
Alpha Methyl Styrene	+++++	+++++	+++++	-26.6						50		
Decane	+++++	+++++	-17.2						50			

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
tert-Butylbenzene	+++++	-7.4						50				
1,2,4-Trimethylbenzene	-11.9						50					
1,3-Dichlorobenzene	-5.2						50					
sec-Butylbenzene	+++++	-8.8						50				
Benzyl chloride	+++++	+++++	+++++	-12.5						50		
1,4-Dichlorobenzene	-3.9						50					
4-Isopropyltoluene	+++++	-14.4						50				
1,2,3-Trimethylbenzene	-13.9						50					
1,2-Dichlorobenzene	-1.5						50					
Butylbenzene	+++++	-13.5						50				
Undecane	+++++	+++++	-24.1						50			
1,2-Dibromo-3-Chloropropane	+++++	+++++	-32.5						50			
1,2,4,5-Tetramethylbenzene	+++++	+++++	-22.7	+++++					50			
Dodecane	+++++	+++++	-26.4						50			
1,2,4-Trichlorobenzene	-25.0						50					
Naphthalene	-23.4			+++++			80					
Hexachlorobutadiene	-5.6						50					
1,2,3-Trichlorobenzene	-19.0						50					
2-Methylnaphthalene	+++++	+++++	-50.4						80			
1-Methylnaphthalene	+++++	+++++	-38.2						80			

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC01.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 25-Oct-2017 13:00:30 ALS Bottle#: 1 Worklist Smp#: 3
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-003
Misc. Info.: 123609
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 11:55:51 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 25-Oct-2017 14:08:18

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.767	7.779	-0.012	82	379185	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.914	9.918	-0.004	94	2195698	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.902	14.903	-0.001	88	1914633	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.611	16.610	0.001	89	1428582	4.00	4.07	
6 Chlorodifluoromethane	67	3.507	3.505	0.002	95	1198	0.0196	0.0252	
7 Propene	41	3.507	3.509	-0.002	65	3765	0.0196	0.0353	
8 Dichlorodifluoromethane	85	3.556	3.554	0.002	98	10141	0.0196	0.0273	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.712	3.713	-0.001	91	6176	0.0196	0.0227	
11 Vinyl chloride	62	3.826	3.827	-0.001	58	2540	0.0196	0.0236	
13 Butadiene	54	3.896	3.900	-0.004	70	1998	0.0196	0.0284	
12 Butane	43	3.901	3.904	-0.003	84	3278	0.0196	0.0277	
14 Bromomethane	94	4.138	4.140	-0.002	97	3331	0.0196	0.0302	
15 Chloroethane	64	4.257	4.254	0.003	90	1503	0.0196	0.0304	
16 Ethanol	31	4.365	4.368	-0.003	93	4622	0.0980	0.1334	
17 Vinyl bromide	106	4.483	4.488	-0.005	95	2969	0.0196	0.0259	
18 2-Methylbutane	43	4.543	4.546	-0.003	82	2059	0.0196	0.0255	
19 Acrolein	56	4.710	4.709	0.001	32	1264	0.0196	0.0411	
20 Trichlorofluoromethane	101	4.705	4.710	-0.005	97	8594	0.0196	0.0230	
21 Acetonitrile	40	4.882	4.793	0.089	76	690	0.0196	0.0267	
22 Acetone	58	4.807	4.807	0.000	97	4780	0.0588	0.1144	
24 Pentane	72	4.893	4.899	-0.006	97	672	0.0196	0.0260	
23 Isopropyl alcohol	45	4.909	4.906	0.003	93	11844	0.0588	0.0732	
25 Ethyl ether	31	5.050	5.033	0.017	84	2423	0.0196	0.0218	
26 1,1-Dichloroethene	96	5.271	5.274	-0.003	95	3361	0.0196	0.0222	
27 Acrylonitrile	53	5.341	5.349	-0.008	91	2366	0.0196	0.0251	
28 2-Methyl-2-propanol	59	5.406	5.393	0.013	94	5480	0.0196	0.0192	
29 1,1,2-Trichloro-1,2,2-trif	101	5.438	5.446	-0.008	95	7324	0.0196	0.0225	
30 Methylene Chloride	84	5.546	5.552	-0.006	91	17345	0.0196	0.1123	
31 3-Chloro-1-propene	39	5.567	5.572	-0.005	98	4234	0.0196	0.0349	
32 Carbon disulfide	76	5.675	5.683	-0.008	99	9161	0.0196	0.0224	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 trans-1,2-Dichloroethene	96	6.241	6.253	-0.012	96	3373	0.0196	0.0217	
34 Methyl tert-butyl ether	73	6.414	6.392	0.022	96	9211	0.0196	0.0209	
36 1,1-Dichloroethane	63	6.597	6.609	-0.012	99	5807	0.0196	0.0211	
37 Vinyl acetate	43	6.727	6.727	0.000	98	5384	0.0196	0.0180	
38 2-Butanone (MEK)	72	7.131	7.107	0.024	97	1036	0.0196	0.0154	
39 Hexane	56	7.174	7.179	-0.005	82	2301	0.0196	0.0213	
40 cis-1,2-Dichloroethene	96	7.482	7.492	-0.010	89	3303	0.0196	0.0208	
41 Ethyl acetate	43	7.703	7.688	0.015	97	5375	0.0196	0.0203	
42 Chloroform	83	7.800	7.811	-0.011	90	7804	0.0196	0.0218	
43 Tetrahydrofuran	42	8.204	8.178	0.026	80	2968	0.0196	0.0227	
44 1,1,1-Trichloroethane	97	8.760	8.769	-0.009	95	7622	0.0196	0.0204	
45 1,2-Dichloroethane	62	8.835	8.840	-0.005	96	4708	0.0196	0.0199	
47 Benzene	78	9.331	9.341	-0.010	97	9547	0.0196	0.0217	
48 Cyclohexane	69	9.353	9.362	-0.009	92	1227	0.0196	0.0186	
50 Carbon tetrachloride	117	9.374	9.378	-0.004	89	7312	0.0196	0.0195	
52 Isooctane	57	10.205	10.206	-0.001	97	12771	0.0196	0.0203	
53 1,2-Dichloropropane	63	10.598	10.602	-0.004	85	3370	0.0196	0.0221	
54 n-Heptane	71	10.615	10.617	-0.002	79	2765	0.0196	0.0187	
55 Trichloroethene	130	10.663	10.667	-0.004	93	4162	0.0196	0.0196	
56 Dibromomethane	93	10.706	10.711	-0.005	95	4973	0.0196	0.0264	
57 Dichlorobromomethane	83	10.879	10.886	-0.007	99	6206	0.0196	0.0185	
58 1,4-Dioxane	88	10.933	10.912	0.021	62	1025	0.0196	0.0151	
59 Methyl methacrylate	41	11.051	11.045	0.006	19	1257	0.0196	0.008443	
61 4-Methyl-2-pentanone (MIBK	43	11.952	11.931	0.021	94	3969	0.0196	0.0151	
62 cis-1,3-Dichloropropene	75	11.968	11.968	0.000	95	4214	0.0196	0.0172	
63 trans-1,3-Dichloropropene	75	12.712	12.709	0.003	96	3642	0.0196	0.0157	
64 Toluene	91	12.847	12.845	0.002	94	10546	0.0196	0.0197	
65 1,1,2-Trichloroethane	83	12.906	12.904	0.002	94	2910	0.0196	0.0189	
66 2-Hexanone	58	13.381	13.355	0.026	87	663	0.0196	0.004887	
67 Chlorodibromomethane	129	13.624	13.628	-0.004	96	5242	0.0196	0.0165	
68 n-Octane	85	13.656	13.658	-0.002	83	2664	0.0196	0.0155	
69 Ethylene Dibromide	107	13.920	13.923	-0.003	98	4839	0.0196	0.0170	
70 Tetrachloroethene	129	14.044	14.048	-0.004	94	4038	0.0196	0.0192	
71 Chlorobenzene	112	14.950	14.952	-0.002	95	9374	0.0196	0.0209	
72 Ethylbenzene	91	15.279	15.278	0.001	98	13511	0.0196	0.0193	
73 m-Xylene & p-Xylene	91	15.452	15.452	0.000	0	20098	0.0392	0.0373	
74 Bromoform	173	15.856	15.854	0.002	94	4385	0.0196	0.0154	
75 Styrene	104	15.926	15.923	0.003	98	5160	0.0196	0.0137	
76 n-Nonane	57	15.964	15.961	0.003	83	5092	0.0196	0.0172	
77 o-Xylene	91	15.991	15.986	0.005	99	10603	0.0196	0.0184	
78 1,1,2,2-Tetrachloroethane	83	16.309	16.308	0.001	95	7069	0.0196	0.0187	
79 1,2,3-Trichloropropane	110	16.465	16.464	0.001	95	2509	0.0196	0.0189	
80 Isopropylbenzene	105	16.605	16.605	0.000	46	19278	0.0196	0.0232	
81 N-Propylbenzene	120	17.182	17.182	0.000	99	3895	0.0196	0.0175	
82 2-Chlorotoluene	126	17.204	17.203	0.001	95	3954	0.0196	0.0192	
83 4-Ethyltoluene	105	17.355	17.351	0.004	98	14130	0.0196	0.0172	
84 1,3,5-Trimethylbenzene	120	17.436	17.436	0.000	93	5752	0.0196	0.0171	
85 Alpha Methyl Styrene	118	17.695	17.691	0.004	88	3853	0.0196	0.0122	
86 n-Decane	57	17.824	17.826	-0.002	94	6182	0.0196	0.0148	
87 tert-Butylbenzene	119	17.905	17.906	-0.001	93	14100	0.0196	0.0179	
88 1,2,4-Trimethylbenzene	105	17.921	17.921	0.000	95	12157	0.0196	0.0173	
89 1,3-Dichlorobenzene	146	18.185	18.189	-0.004	96	8914	0.0196	0.0186	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
90 sec-Butylbenzene	105	18.207	18.206	0.001	98	18076	0.0196	0.0179	
91 Benzyl chloride	91	18.277	18.273	0.004	97	9621	0.0196	0.0155	
92 1,4-Dichlorobenzene	146	18.288	18.287	0.001	93	9122	0.0196	0.0188	
93 4-Isopropyltoluene	119	18.390	18.391	-0.001	96	15276	0.0196	0.0169	
94 1,2,3-Trimethylbenzene	105	18.428	18.429	-0.001	96	13295	0.0196	0.0169	
95 1,2-Dichlorobenzene	146	18.671	18.672	-0.001	94	9076	0.0196	0.0193	
98 n-Butylbenzene	91	18.865	18.865	0.000	98	13421	0.0196	0.0162	
99 Undecane	57	19.259	19.259	0.000	93	6979	0.0196	0.0144	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	90	4714	0.0196	0.0134	
101 1,2,4,5-Tetramethylbenzene	119	19.674	19.674	0.000	96	18980	0.0196	0.0158	
104 Dodecane	57	20.369	20.366	0.003	96	5984	0.0196	0.0123	
105 1,2,4-Trichlorobenzene	180	20.477	20.474	0.003	93	5745	0.0196	0.0147	
106 Naphthalene	128	20.601	20.603	-0.002	99	13583	0.0196	0.0150	
107 Hexachlorobutadiene	225	20.860	20.859	0.001	93	7444	0.0196	0.0185	
108 1,2,3-Trichlorobenzene	180	20.898	20.897	0.001	93	6133	0.0196	0.0159	
109 2-Methylnaphthalene	142	21.701	21.702	-0.001	93	1424	0.0451	0.006001	
110 1-Methylnaphthalene	142	21.847	21.847	0.000	97	2144	0.0451	0.0104	
S 111 Xylenes, Total	100				0		0.0588	0.0558	
S 112 1,2-Dichloroethene, Total	1				0		0.0392	0.0425	

Reagents:

40L12DNP_00015	Amount Added: 50.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

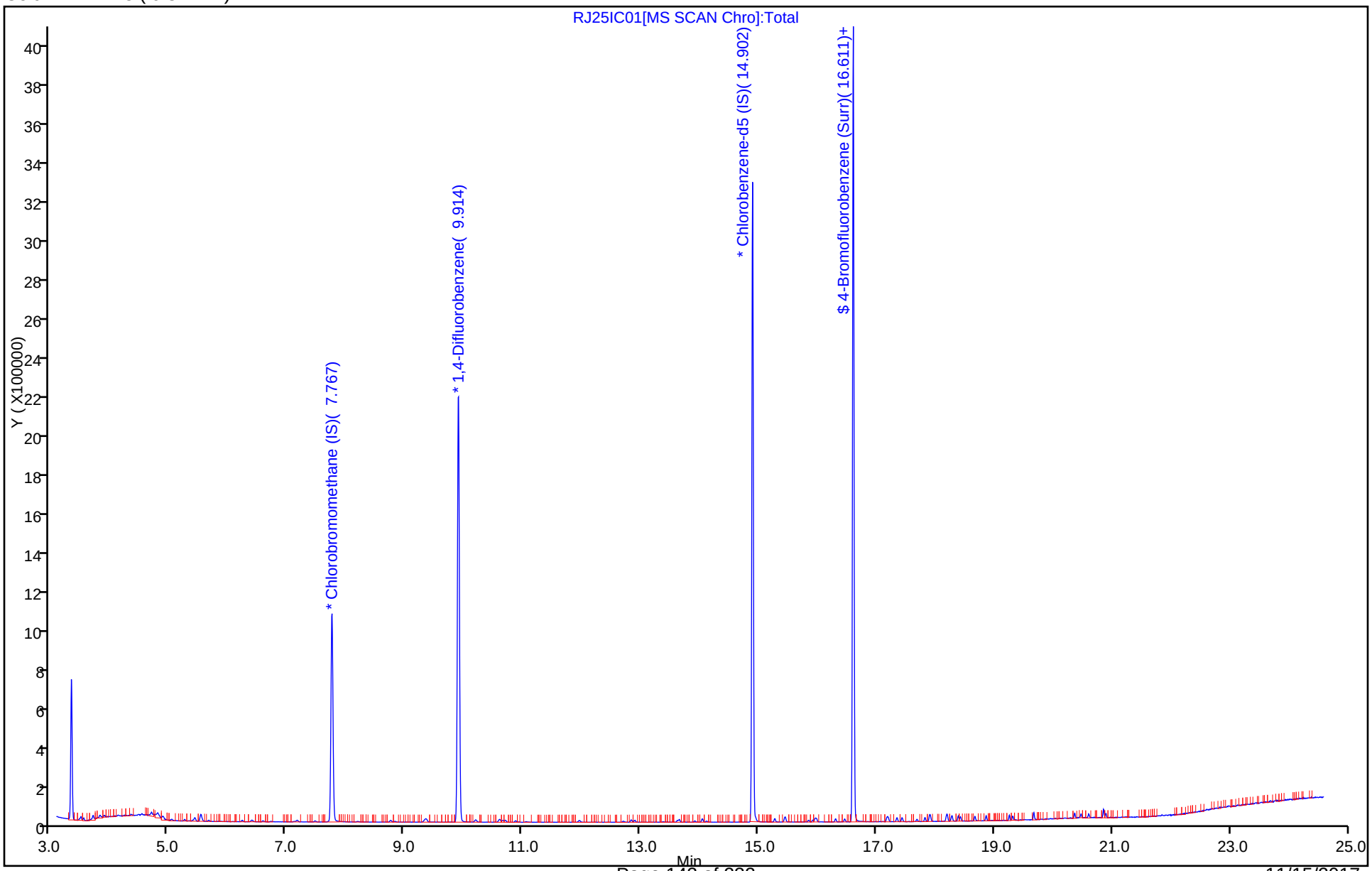
Report Date: 27-Oct-2017 11:55:53 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC01.D

Injection Date:	25-Oct-2017 13:00:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L1			Worklist Smp#:	3
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC02.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 25-Oct-2017 13:46:30 ALS Bottle#: 1 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-004
Misc. Info.: 123609
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 11:55:54 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 25-Oct-2017 15:07:47

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.767	7.779	-0.012	83	386955	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.914	9.918	-0.004	94	2257959	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.902	14.903	-0.001	88	1973559	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.611	16.610	0.001	88	1501404	4.00	4.15	
6 Chlorodifluoromethane	67	3.518	3.505	0.013	97	2085	0.0392	0.0429	
7 Propene	41	3.518	3.509	0.009	78	5687	0.0392	0.0522	
8 Dichlorodifluoromethane	85	3.561	3.554	0.007	99	19272	0.0392	0.0508	
9 Chloromethane	52	3.696	3.690	0.006	99	2219	0.0392	0.0610	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.723	3.713	0.010	90	12064	0.0392	0.0435	
11 Vinyl chloride	62	3.836	3.827	0.009	74	4952	0.0392	0.0451	
13 Butadiene	54	3.907	3.900	0.007	72	3559	0.0392	0.0496	
12 Butane	43	3.912	3.904	0.008	81	5368	0.0392	0.0444	
14 Bromomethane	94	4.149	4.140	0.009	97	5122	0.0392	0.0455	
15 Chloroethane	64	4.262	4.254	0.008	96	2104	0.0392	0.0417	
16 Ethanol	31	4.359	4.368	-0.009	95	8149	0.1960	0.2305	
17 Vinyl bromide	106	4.494	4.488	0.006	97	5939	0.0392	0.0507	
18 2-Methylbutane	43	4.548	4.546	0.002	90	4418	0.0392	0.0535	
19 Acrolein	56	4.710	4.709	0.001	34	3362	0.0392	0.1072	
20 Trichlorofluoromethane	101	4.715	4.710	0.005	99	16836	0.0392	0.0442	
21 Acetonitrile	40	4.753	4.785	-0.032	88	1032	0.0392	0.0392	
22 Acetone	58	4.812	4.807	0.005	99	7719	0.1176	0.1810	
24 Pentane	72	4.899	4.899	0.000	76	1154	0.0392	0.0437	
23 Isopropyl alcohol	45	4.904	4.906	-0.002	84	20814	0.1176	0.1261	
25 Ethyl ether	31	5.044	5.033	0.011	85	4965	0.0392	0.0438	
26 1,1-Dichloroethene	96	5.271	5.274	-0.003	98	6525	0.0392	0.0423	
27 Acrylonitrile	53	5.346	5.349	-0.003	90	4454	0.0392	0.0463	
28 2-Methyl-2-propanol	59	5.400	5.393	0.007	93	11747	0.0392	0.0404	
29 1,1,2-Trichloro-1,2,2-trif	101	5.443	5.446	-0.003	96	14208	0.0392	0.0429	
30 Methylene Chloride	84	5.546	5.552	-0.006	90	20826	0.0392	0.1322	
31 3-Chloro-1-propene	39	5.567	5.572	-0.005	96	7272	0.0392	0.0587	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.686	5.683	0.003	98	18402	0.0392	0.0440	
33 trans-1,2-Dichloroethene	96	6.247	6.253	-0.006	97	6795	0.0392	0.0428	
34 Methyl tert-butyl ether	73	6.403	6.392	0.011	95	18281	0.0392	0.0406	
36 1,1-Dichloroethane	63	6.597	6.609	-0.012	99	11879	0.0392	0.0423	
37 Vinyl acetate	43	6.732	6.727	0.005	98	11113	0.0392	0.0364	
38 2-Butanone (MEK)	72	7.120	7.107	0.013	96	2274	0.0392	0.0330	
39 Hexane	56	7.180	7.179	0.001	83	4707	0.0392	0.0427	
40 cis-1,2-Dichloroethene	96	7.482	7.492	-0.010	93	6788	0.0392	0.0419	
41 Ethyl acetate	43	7.703	7.688	0.015	97	10101	0.0392	0.0374	
42 Chloroform	83	7.805	7.811	-0.006	88	15697	0.0392	0.0430	
43 Tetrahydrofuran	42	8.193	8.178	0.015	86	5652	0.0392	0.0423	
44 1,1,1-Trichloroethane	97	8.770	8.769	0.001	95	15717	0.0392	0.0413	
45 1,2-Dichloroethane	62	8.835	8.840	-0.005	97	10148	0.0392	0.0417	
47 Benzene	78	9.342	9.341	0.001	97	18558	0.0392	0.0410	
48 Cyclohexane	69	9.353	9.362	-0.009	88	2574	0.0392	0.0379	
46 n-Butanol	31	9.428	9.365	0.063	1	209	0.0392	0.005568	
50 Carbon tetrachloride	117	9.369	9.378	-0.009	94	14892	0.0392	0.0385	
52 Isooctane	57	10.205	10.206	-0.001	97	25184	0.0392	0.0390	
53 1,2-Dichloropropane	63	10.593	10.602	-0.009	70	6514	0.0392	0.0416	
54 n-Heptane	71	10.615	10.617	-0.002	83	5361	0.0392	0.0353	
55 Trichloroethene	130	10.663	10.667	-0.004	91	8482	0.0392	0.0389	
56 Dibromomethane	93	10.706	10.711	-0.005	93	8804	0.0392	0.0455	
57 Dichlorobromomethane	83	10.879	10.886	-0.007	99	12709	0.0392	0.0369	
58 1,4-Dioxane	88	10.933	10.912	0.021	77	2410	0.0392	0.0346	
59 Methyl methacrylate	41	11.051	11.045	0.006	44	2355	0.0392	0.0154	
61 4-Methyl-2-pentanone (MIBK	43	11.947	11.931	0.016	91	8126	0.0392	0.0301	
62 cis-1,3-Dichloropropene	75	11.968	11.968	0.000	96	8692	0.0392	0.0345	
63 trans-1,3-Dichloropropene	75	12.707	12.709	-0.002	97	8127	0.0392	0.0340	
64 Toluene	91	12.842	12.845	-0.003	93	21020	0.0392	0.0380	
65 1,1,2-Trichloroethane	83	12.901	12.904	-0.003	98	6246	0.0392	0.0393	
66 2-Hexanone	58	13.370	13.355	0.015	94	1660	0.0392	0.0119	
67 Chlorodibromomethane	129	13.624	13.628	-0.004	97	10827	0.0392	0.0331	
68 n-Octane	85	13.656	13.658	-0.002	86	5883	0.0392	0.0333	
69 Ethylene Dibromide	107	13.920	13.923	-0.003	98	9997	0.0392	0.0340	
70 Tetrachloroethene	129	14.044	14.048	-0.004	95	8705	0.0392	0.0402	
71 Chlorobenzene	112	14.956	14.952	0.004	94	18796	0.0392	0.0406	
72 Ethylbenzene	91	15.279	15.278	0.001	99	27063	0.0392	0.0374	
73 m-Xylene & p-Xylene	91	15.452	15.452	0.000	0	41194	0.0784	0.0743	
74 Bromoform	173	15.851	15.854	-0.003	94	9410	0.0392	0.0321	
75 Styrene	104	15.921	15.923	-0.002	98	10882	0.0392	0.0280	
76 n-Nonane	57	15.958	15.961	-0.003	84	10244	0.0392	0.0335	
77 o-Xylene	91	15.985	15.986	-0.001	98	22375	0.0392	0.0378	
78 1,1,2,2-Tetrachloroethane	83	16.309	16.308	0.001	96	14226	0.0392	0.0365	
79 1,2,3-Trichloropropane	110	16.465	16.464	0.001	97	5493	0.0392	0.0401	
80 Isopropylbenzene	105	16.606	16.605	0.001	74	36160	0.0392	0.0423	
81 N-Propylbenzene	120	17.188	17.182	0.006	98	8230	0.0392	0.0359	
82 2-Chlorotoluene	126	17.204	17.203	0.001	89	8038	0.0392	0.0378	
83 4-Ethyltoluene	105	17.350	17.351	-0.001	98	29754	0.0392	0.0351	
84 1,3,5-Trimethylbenzene	120	17.436	17.436	0.000	93	12100	0.0392	0.0348	
85 Alpha Methyl Styrene	118	17.695	17.691	0.004	86	7847	0.0392	0.0241	
86 n-Decane	57	17.824	17.826	-0.002	94	13108	0.0392	0.0305	
87 tert-Butylbenzene	119	17.905	17.906	-0.001	93	29495	0.0392	0.0363	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.921	17.921	0.000	96	26201	0.0392	0.0361	
89 1,3-Dichlorobenzene	146	18.191	18.189	0.002	98	18867	0.0392	0.0381	
90 sec-Butylbenzene	105	18.207	18.206	0.001	98	37216	0.0392	0.0358	
91 Benzyl chloride	91	18.272	18.273	-0.001	98	18994	0.0392	0.0298	
92 1,4-Dichlorobenzene	146	18.288	18.287	0.001	92	18804	0.0392	0.0376	
93 4-Isopropyltoluene	119	18.390	18.391	-0.001	97	31354	0.0392	0.0336	
94 1,2,3-Trimethylbenzene	105	18.428	18.429	-0.001	97	29839	0.0392	0.0368	
95 1,2-Dichlorobenzene	146	18.671	18.672	-0.001	93	18839	0.0392	0.0389	
98 n-Butylbenzene	91	18.865	18.865	0.000	98	28954	0.0392	0.0339	
99 Undecane	57	19.259	19.259	0.000	92	14443	0.0392	0.0289	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	91	10022	0.0392	0.0276	
101 1,2,4,5-Tetramethylbenzene	119	19.674	19.674	0.000	97	37837	0.0392	0.0306	
104 Dodecane	57	20.364	20.366	-0.002	95	13461	0.0392	0.0269	
105 1,2,4-Trichlorobenzene	180	20.477	20.474	0.003	94	12391	0.0392	0.0307	
106 Naphthalene	128	20.607	20.603	0.004	99	28513	0.0392	0.0306	
107 Hexachlorobutadiene	225	20.855	20.859	-0.004	93	15446	0.0392	0.0372	
108 1,2,3-Trichlorobenzene	180	20.898	20.897	0.001	94	13039	0.0392	0.0327	
109 2-Methylnaphthalene	142	21.701	21.702	-0.001	99	7137	0.0902	0.0292	
110 1-Methylnaphthalene	142	21.847	21.847	0.000	98	8889	0.0902	0.0418	
S 111 Xylenes, Total	100				0		0.1176	0.1120	
S 112 1,2-Dichloroethene, Total	1				0		0.0784	0.0847	

Reagents:

40L12DNP_00015	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

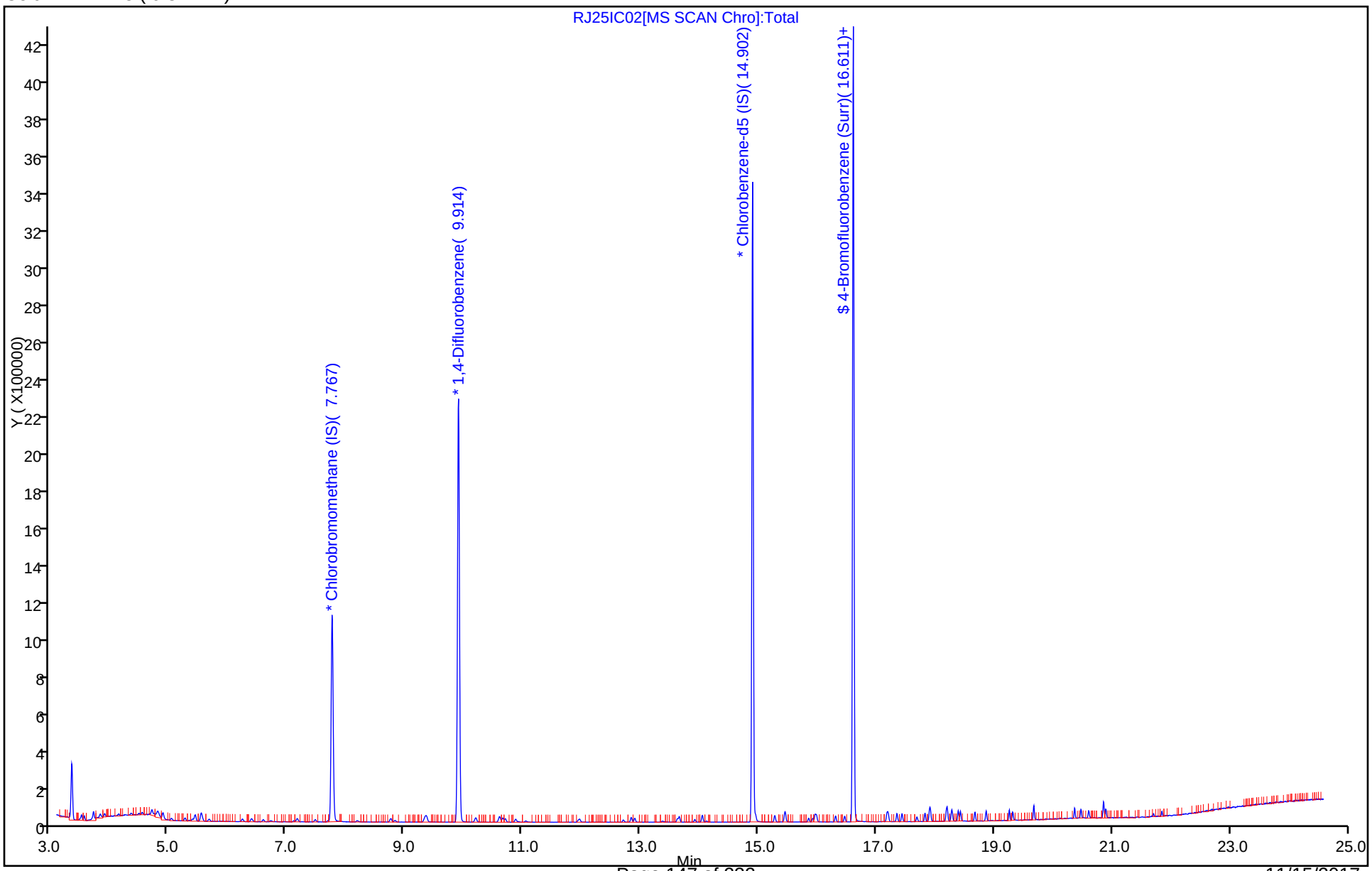
Report Date: 27-Oct-2017 11:55:55 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC02.D

Injection Date:	25-Oct-2017 13:46:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L2			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC03.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 25-Oct-2017 14:33:30 ALS Bottle#: 2 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-005
Misc. Info.: 123608
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 11:55:58 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 25-Oct-2017 15:13:17

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.778	7.779	-0.001	82	385990	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.919	9.918	0.001	94	2245350	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.901	14.903	-0.002	88	1955968	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.611	16.610	0.001	92	1493098	4.00	4.17	
6 Chlorodifluoromethane	67	3.523	3.505	0.018	97	4125	0.0793	0.0851	
7 Propene	41	3.529	3.509	0.020	83	9681	0.0793	0.0891	
8 Dichlorodifluoromethane	85	3.572	3.554	0.018	100	35205	0.0793	0.0931	
9 Chloromethane	52	3.707	3.690	0.017	98	3924	0.0793	0.1081	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.728	3.713	0.015	91	23285	0.0793	0.0841	
11 Vinyl chloride	62	3.842	3.827	0.015	90	8923	0.0793	0.0814	
13 Butadiene	54	3.917	3.900	0.017	71	6581	0.0793	0.0920	
12 Butane	43	3.917	3.904	0.013	82	10745	0.0793	0.0891	
14 Bromomethane	94	4.154	4.140	0.014	96	9224	0.0793	0.0822	
15 Chloroethane	64	4.268	4.254	0.014	96	4627	0.0793	0.0918	
16 Ethanol	31	4.365	4.368	-0.003	92	16054	0.3967	0.4553	
17 Vinyl bromide	106	4.500	4.488	0.012	98	10715	0.0793	0.0917	
18 2-Methylbutane	43	4.559	4.546	0.013	83	7022	0.0793	0.0853	
19 Acrolein	56	4.721	4.709	0.012	31	3432	0.0793	0.1097	
20 Trichlorofluoromethane	101	4.721	4.710	0.011	99	33275	0.0793	0.0876	
21 Acetonitrile	40	4.764	4.782	-0.018	93	2611	0.0793	0.0994	
22 Acetone	58	4.818	4.807	0.011	99	15256	0.2380	0.3586	
24 Pentane	72	4.909	4.899	0.010	75	2509	0.0793	0.0952	
23 Isopropyl alcohol	45	4.904	4.906	-0.002	83	41818	0.2380	0.2540	
25 Ethyl ether	31	5.044	5.033	0.011	90	9616	0.0793	0.0851	
26 1,1-Dichloroethene	96	5.281	5.274	0.007	97	12334	0.0793	0.0802	
27 Acrylonitrile	53	5.352	5.349	0.003	92	7410	0.0793	0.0773	
28 2-Methyl-2-propanol	59	5.400	5.393	0.007	92	22812	0.0793	0.0786	
29 1,1,2-Trichloro-1,2,2-trif	101	5.454	5.446	0.008	96	27125	0.0793	0.0820	
30 Methylene Chloride	84	5.556	5.552	0.004	90	25644	0.0793	0.1632	
31 3-Chloro-1-propene	39	5.578	5.572	0.006	98	9664	0.0793	0.0782	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.691	5.683	0.008	98	34146	0.0793	0.0819	
33 trans-1,2-Dichloroethene	96	6.257	6.253	0.004	98	12444	0.0793	0.0786	
34 Methyl tert-butyl ether	73	6.403	6.392	0.011	95	34942	0.0793	0.0778	
36 1,1-Dichloroethane	63	6.608	6.609	-0.001	99	22768	0.0793	0.0813	
37 Vinyl acetate	43	6.732	6.727	0.005	99	20411	0.0793	0.0670	
38 2-Butanone (MEK)	72	7.120	7.107	0.013	98	4817	0.0793	0.0701	
39 Hexane	56	7.180	7.179	0.001	84	9150	0.0793	0.0833	
40 cis-1,2-Dichloroethene	96	7.492	7.492	0.000	94	12775	0.0793	0.0790	
41 Ethyl acetate	43	7.697	7.688	0.009	99	20914	0.0793	0.0776	
42 Chloroform	83	7.805	7.811	-0.006	93	29068	0.0793	0.0797	
43 Tetrahydrofuran	42	8.199	8.178	0.021	87	10359	0.0793	0.0778	
44 1,1,1-Trichloroethane	97	8.770	8.769	0.001	95	29529	0.0793	0.0778	
45 1,2-Dichloroethane	62	8.840	8.840	0.000	99	19447	0.0793	0.0804	
47 Benzene	78	9.342	9.341	0.001	97	35648	0.0793	0.0792	
48 Cyclohexane	69	9.369	9.362	0.007	92	4928	0.0793	0.0730	
46 n-Butanol	31	9.412	9.365	0.047	58	1291	0.0793	0.0346	
50 Carbon tetrachloride	117	9.374	9.378	-0.004	99	29168	0.0793	0.0759	
52 Isooctane	57	10.210	10.206	0.004	98	49738	0.0793	0.0774	
53 1,2-Dichloropropane	63	10.604	10.602	0.002	85	12751	0.0793	0.0819	
54 n-Heptane	71	10.620	10.617	0.003	84	10970	0.0793	0.0726	
55 Trichloroethene	130	10.668	10.667	0.001	93	16538	0.0793	0.0762	
56 Dibromomethane	93	10.712	10.711	0.001	85	15629	0.0793	0.0812	
57 Dichlorobromomethane	83	10.889	10.886	0.003	98	24729	0.0793	0.0721	
58 1,4-Dioxane	88	10.922	10.912	0.010	87	5002	0.0793	0.0721	
59 Methyl methacrylate	41	11.051	11.045	0.006	97	8710	0.0793	0.0572	
61 4-Methyl-2-pentanone (MIBK	43	11.941	11.931	0.010	93	17085	0.0793	0.0637	
62 cis-1,3-Dichloropropene	75	11.968	11.968	0.000	96	16952	0.0793	0.0676	
63 trans-1,3-Dichloropropene	75	12.712	12.709	0.003	97	16117	0.0793	0.0681	
64 Toluene	91	12.842	12.845	-0.003	93	40799	0.0793	0.0745	
65 1,1,2-Trichloroethane	83	12.901	12.904	-0.003	98	11956	0.0793	0.0760	
66 2-Hexanone	58	13.365	13.355	0.010	95	6841	0.0793	0.0494	
67 Chlorodibromomethane	129	13.629	13.628	0.001	97	21241	0.0793	0.0655	
68 n-Octane	85	13.656	13.658	-0.002	86	12011	0.0793	0.0685	
69 Ethylene Dibromide	107	13.920	13.923	-0.003	97	20134	0.0793	0.0690	
70 Tetrachloroethene	129	14.049	14.048	0.001	96	16381	0.0793	0.0764	
71 Chlorobenzene	112	14.950	14.952	-0.002	94	36005	0.0793	0.0784	
72 Ethylbenzene	91	15.279	15.278	0.001	99	53935	0.0793	0.0753	
73 m-Xylene & p-Xylene	91	15.451	15.452	-0.001	0	83030	0.1587	0.1510	
74 Bromoform	173	15.856	15.854	0.002	95	18219	0.0793	0.0627	
75 Styrene	104	15.926	15.923	0.003	98	21890	0.0793	0.0568	
76 n-Nonane	57	15.964	15.961	0.003	82	21365	0.0793	0.0705	
77 o-Xylene	91	15.985	15.986	-0.001	98	45094	0.0793	0.0768	
78 1,1,2,2-Tetrachloroethane	83	16.309	16.308	0.001	97	28316	0.0793	0.0733	
79 1,2,3-Trichloropropane	110	16.460	16.464	-0.004	97	10316	0.0793	0.0760	
80 Isopropylbenzene	105	16.605	16.605	0.000	91	69017	0.0793	0.0814	
81 N-Propylbenzene	120	17.182	17.182	0.000	99	15756	0.0793	0.0693	
82 2-Chlorotoluene	126	17.204	17.203	0.001	94	15941	0.0793	0.0757	
83 4-Ethyltoluene	105	17.350	17.351	-0.001	99	59901	0.0793	0.0712	
84 1,3,5-Trimethylbenzene	120	17.436	17.436	0.000	92	24343	0.0793	0.0706	
85 Alpha Methyl Styrene	118	17.689	17.691	-0.002	87	15980	0.0793	0.0495	
86 n-Decane	57	17.829	17.826	0.003	94	28000	0.0793	0.0657	
87 tert-Butylbenzene	119	17.905	17.906	-0.001	93	58391	0.0793	0.0725	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.921	17.921	0.000	96	53619	0.0793	0.0746	
89 1,3-Dichlorobenzene	146	18.185	18.189	-0.004	99	36601	0.0793	0.0747	
90 sec-Butylbenzene	105	18.207	18.206	0.001	98	74524	0.0793	0.0723	
91 Benzyl chloride	91	18.272	18.273	-0.001	98	36422	0.0793	0.0576	
92 1,4-Dichlorobenzene	146	18.288	18.287	0.001	93	37641	0.0793	0.0760	
93 4-Isopropyltoluene	119	18.390	18.391	-0.001	97	63969	0.0793	0.0691	
94 1,2,3-Trimethylbenzene	105	18.428	18.429	-0.001	97	59053	0.0793	0.0734	
95 1,2-Dichlorobenzene	146	18.671	18.672	-0.001	93	35383	0.0793	0.0737	
98 n-Butylbenzene	91	18.865	18.865	0.000	98	55892	0.0793	0.0660	
99 Undecane	57	19.258	19.259	-0.001	93	29862	0.0793	0.0602	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	90	19265	0.0793	0.0536	
101 1,2,4,5-Tetramethylbenzene	119	19.674	19.674	0.000	96	75221	0.0793	0.0613	
104 Dodecane	57	20.364	20.366	-0.002	97	29017	0.0793	0.0584	
105 1,2,4-Trichlorobenzene	180	20.472	20.474	-0.002	93	24821	0.0793	0.0621	
106 Naphthalene	128	20.601	20.603	-0.002	99	59288	0.0793	0.0641	
107 Hexachlorobutadiene	225	20.860	20.859	0.001	94	27942	0.0793	0.0680	
108 1,2,3-Trichlorobenzene	180	20.898	20.897	0.001	96	26665	0.0793	0.0675	
109 2-Methylnaphthalene	142	21.701	21.702	-0.001	100	21947	0.1825	0.0905	
110 1-Methylnaphthalene	142	21.847	21.847	0.000	98	23773	0.1825	0.1127	
S 111 Xylenes, Total	100				0		0.2380	0.2278	
S 112 1,2-Dichloroethene, Total	1				0		0.1587	0.1576	

Reagents:

40L3DNP_00016	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

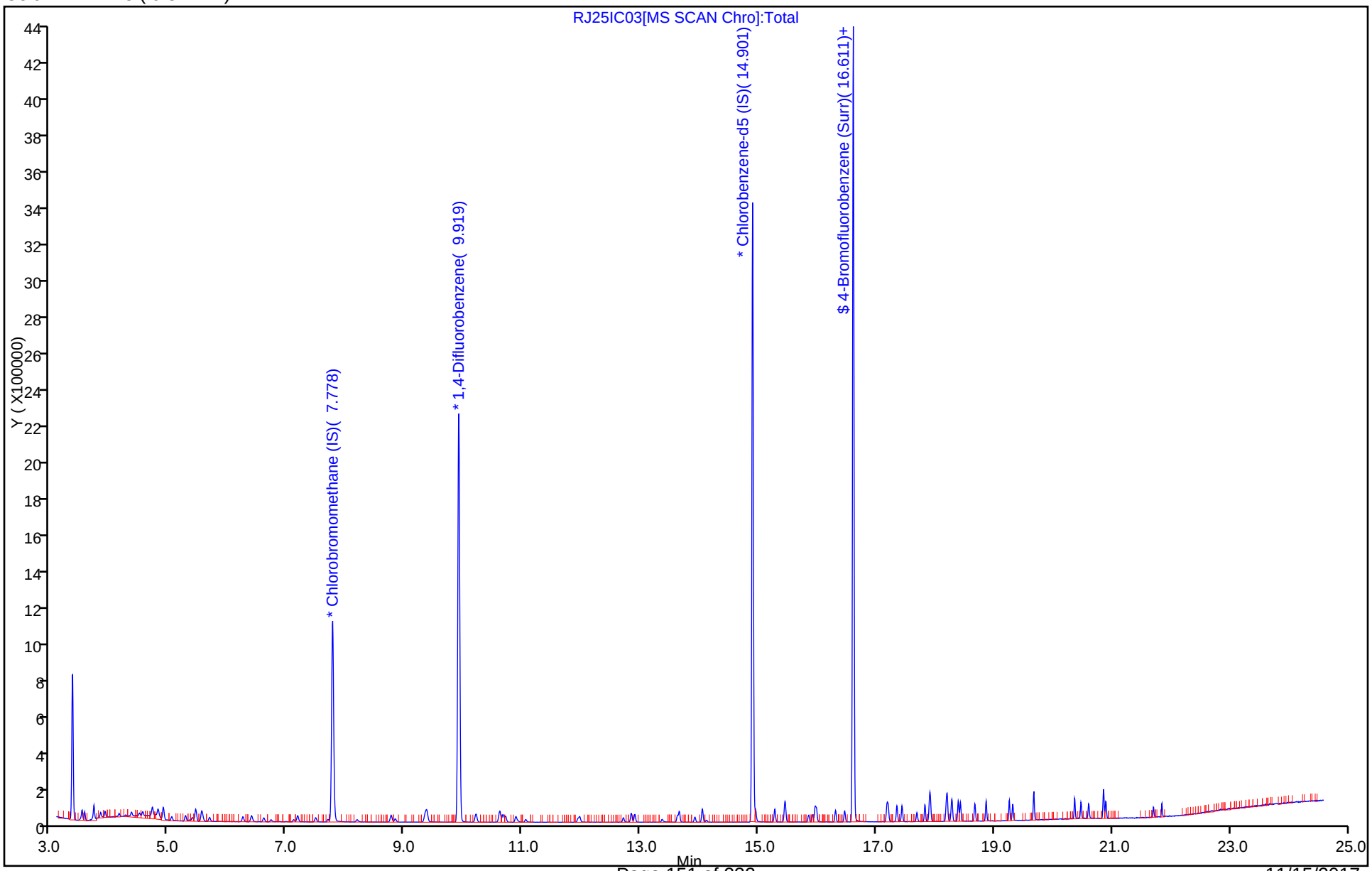
Report Date: 27-Oct-2017 11:55:59 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC03.D

Injection Date:	25-Oct-2017 14:33:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L3			Worklist Smp#:	5
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC04.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 25-Oct-2017 15:20:30 ALS Bottle#: 2 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-006
Misc. Info.: 123608
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 11:56:01 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 25-Oct-2017 16:00:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.773	7.779	-0.006	83	386822	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.914	9.918	-0.004	94	2261393	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.901	14.903	-0.002	88	1948400	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.611	16.610	0.001	92	1483356	4.00	4.15	
6 Chlorodifluoromethane	67	3.507	3.505	0.002	97	8460	0.1587	0.1741	
7 Propene	41	3.507	3.509	-0.002	97	19529	0.1587	0.1794	
8 Dichlorodifluoromethane	85	3.556	3.554	0.002	100	62139	0.1587	0.1639	
9 Chloromethane	52	3.691	3.690	0.001	100	6308	0.1587	0.1734	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.712	3.713	-0.001	92	46108	0.1587	0.1662	
11 Vinyl chloride	62	3.826	3.827	-0.001	99	17927	0.1587	0.1632	
13 Butadiene	54	3.901	3.900	0.001	73	12301	0.1587	0.1715	
12 Butane	43	3.901	3.904	-0.003	82	21079	0.1587	0.1745	
14 Bromomethane	94	4.138	4.140	-0.002	98	19034	0.1587	0.1692	
15 Chloroethane	64	4.246	4.254	-0.008	98	9016	0.1587	0.1786	
16 Ethanol	31	4.359	4.368	-0.009	94	31352	0.7933	0.8873	
17 Vinyl bromide	106	4.483	4.488	-0.005	97	20071	0.1587	0.1714	
18 2-Methylbutane	43	4.543	4.546	-0.003	85	14919	0.1587	0.1809	
19 Acrolein	56	4.710	4.709	0.001	30	6928	0.1587	0.2209	
20 Trichlorofluoromethane	101	4.704	4.710	-0.006	99	65362	0.1587	0.1717	
21 Acetonitrile	40	4.753	4.778	-0.025	98	4087	0.1587	0.1553	
22 Acetone	58	4.802	4.807	-0.005	99	27350	0.4760	0.6415	
24 Pentane	72	4.893	4.899	-0.006	92	4515	0.1587	0.1710	
23 Isopropyl alcohol	45	4.899	4.906	-0.007	92	83694	0.4760	0.5073	
25 Ethyl ether	31	5.033	5.033	0.000	87	19044	0.1587	0.1681	
26 1,1-Dichloroethene	96	5.265	5.274	-0.009	97	24340	0.1587	0.1579	
27 Acrylonitrile	53	5.346	5.349	-0.003	97	16250	0.1587	0.1691	
28 2-Methyl-2-propanol	59	5.389	5.393	-0.004	94	47215	0.1587	0.1623	
29 1,1,2-Trichloro-1,2,2-trif	101	5.443	5.446	-0.003	97	54365	0.1587	0.1641	
30 Methylene Chloride	84	5.540	5.552	-0.012	92	37091	0.1587	0.2355	
31 3-Chloro-1-propene	39	5.567	5.572	-0.005	98	20059	0.1587	0.1620	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.675	5.683	-0.008	98	66894	0.1587	0.1601	
33 trans-1,2-Dichloroethene	96	6.241	6.253	-0.012	99	24460	0.1587	0.1542	
34 Methyl tert-butyl ether	73	6.392	6.392	0.000	96	70570	0.1587	0.1568	
36 1,1-Dichloroethane	63	6.603	6.609	-0.006	100	46409	0.1587	0.1654	
37 Vinyl acetate	43	6.727	6.727	0.000	99	43939	0.1587	0.1439	
38 2-Butanone (MEK)	72	7.109	7.107	0.002	98	11306	0.1587	0.1642	
39 Hexane	56	7.180	7.179	0.001	85	18279	0.1587	0.1660	
40 cis-1,2-Dichloroethene	96	7.487	7.492	-0.005	94	25412	0.1587	0.1568	
41 Ethyl acetate	43	7.686	7.688	-0.002	99	41937	0.1587	0.1553	
42 Chloroform	83	7.805	7.811	-0.006	94	59087	0.1587	0.1617	
43 Tetrahydrofuran	42	8.183	8.178	0.005	87	20608	0.1587	0.1544	
44 1,1,1-Trichloroethane	97	8.765	8.769	-0.004	95	60460	0.1587	0.1589	
45 1,2-Dichloroethane	62	8.835	8.840	-0.005	98	38556	0.1587	0.1582	
47 Benzene	78	9.337	9.341	-0.004	97	71904	0.1587	0.1586	
48 Cyclohexane	69	9.363	9.362	0.001	93	10422	0.1587	0.1533	
46 n-Butanol	31	9.380	9.365	0.015	57	3605	0.1587	0.0959	
50 Carbon tetrachloride	117	9.374	9.378	-0.004	97	60470	0.1587	0.1562	
52 Isooctane	57	10.205	10.206	-0.001	98	102839	0.1587	0.1589	
53 1,2-Dichloropropane	63	10.604	10.602	0.002	80	24970	0.1587	0.1591	
54 n-Heptane	71	10.615	10.617	-0.002	81	23448	0.1587	0.1541	
55 Trichloroethene	130	10.663	10.667	-0.004	94	34011	0.1587	0.1556	
56 Dibromomethane	93	10.706	10.711	-0.005	95	30101	0.1587	0.1553	
57 Dichlorobromomethane	83	10.884	10.886	-0.002	98	51286	0.1587	0.1486	
58 1,4-Dioxane	88	10.917	10.912	0.004	86	10114	0.1587	0.1448	
59 Methyl methacrylate	41	11.051	11.045	0.006	96	19860	0.1587	0.1295	
61 4-Methyl-2-pentanone (MIBK	43	11.936	11.931	0.005	93	36640	0.1587	0.1356	
62 cis-1,3-Dichloropropene	75	11.968	11.968	0.000	93	37708	0.1587	0.1493	
63 trans-1,3-Dichloropropene	75	12.707	12.709	-0.002	96	34823	0.1587	0.1477	
64 Toluene	91	12.847	12.845	0.002	94	84708	0.1587	0.1553	
65 1,1,2-Trichloroethane	83	12.901	12.904	-0.003	99	24681	0.1587	0.1574	
66 2-Hexanone	58	13.359	13.355	0.004	95	17103	0.1587	0.1239	
67 Chlorodibromomethane	129	13.629	13.628	0.001	98	45494	0.1587	0.1408	
68 n-Octane	85	13.661	13.658	0.003	85	26281	0.1587	0.1505	
69 Ethylene Dibromide	107	13.925	13.923	0.002	98	42511	0.1587	0.1463	
70 Tetrachloroethene	129	14.049	14.048	0.001	95	33774	0.1587	0.1580	
71 Chlorobenzene	112	14.950	14.952	-0.002	94	72632	0.1587	0.1588	
72 Ethylbenzene	91	15.279	15.278	0.001	99	112376	0.1587	0.1574	
73 m-Xylene & p-Xylene	91	15.451	15.452	-0.001	0	176975	0.3173	0.3232	
74 Bromoform	173	15.851	15.854	-0.003	95	38228	0.1587	0.1320	
75 Styrene	104	15.926	15.923	0.003	98	49897	0.1587	0.1299	
76 n-Nonane	57	15.964	15.961	0.003	85	48143	0.1587	0.1595	
77 o-Xylene	91	15.985	15.986	-0.001	98	96395	0.1587	0.1647	
78 1,1,2,2-Tetrachloroethane	83	16.309	16.308	0.001	98	61062	0.1587	0.1586	
79 1,2,3-Trichloropropane	110	16.465	16.464	0.001	97	22255	0.1587	0.1646	
80 Isopropylbenzene	105	16.605	16.605	0.000	96	141062	0.1587	0.1670	
81 N-Propylbenzene	120	17.182	17.182	0.000	99	35494	0.1587	0.1568	
82 2-Chlorotoluene	126	17.204	17.203	0.001	97	35064	0.1587	0.1672	
83 4-Ethyltoluene	105	17.350	17.351	-0.001	99	132375	0.1587	0.1580	
84 1,3,5-Trimethylbenzene	120	17.436	17.436	0.000	92	55107	0.1587	0.1605	
85 Alpha Methyl Styrene	118	17.689	17.691	-0.002	89	37420	0.1587	0.1165	
86 n-Decane	57	17.824	17.826	-0.002	93	67062	0.1587	0.1579	
87 tert-Butylbenzene	119	17.905	17.906	-0.001	91	131776	0.1587	0.1643	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.921	17.921	0.000	96	121401	0.1587	0.1695	
89 1,3-Dichlorobenzene	146	18.191	18.189	0.002	99	80846	0.1587	0.1656	
90 sec-Butylbenzene	105	18.202	18.206	-0.004	98	167950	0.1587	0.1635	
91 Benzyl chloride	91	18.272	18.273	-0.001	98	87519	0.1587	0.1389	
92 1,4-Dichlorobenzene	146	18.288	18.287	0.001	93	82059	0.1587	0.1664	
93 4-Isopropyltoluene	119	18.390	18.391	-0.001	96	148906	0.1587	0.1614	
94 1,2,3-Trimethylbenzene	105	18.428	18.429	-0.001	98	135710	0.1587	0.1693	
95 1,2-Dichlorobenzene	146	18.671	18.672	-0.001	94	79606	0.1587	0.1664	
98 n-Butylbenzene	91	18.865	18.865	0.000	99	132390	0.1587	0.1570	
99 Undecane	57	19.259	19.259	-0.001	93	73775	0.1587	0.1493	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	94	47048	0.1587	0.1313	
101 1,2,4,5-Tetramethylbenzene	119	19.674	19.674	0.000	96	180933	0.1587	0.1481	
104 Dodecane	57	20.364	20.366	-0.002	96	73006	0.1587	0.1475	
105 1,2,4-Trichlorobenzene	180	20.472	20.474	-0.002	94	60667	0.1587	0.1525	
106 Naphthalene	128	20.601	20.603	-0.002	99	147471	0.1587	0.1602	
107 Hexachlorobutadiene	225	20.855	20.859	-0.004	94	63860	0.1587	0.1559	
108 1,2,3-Trichlorobenzene	180	20.898	20.897	0.001	95	63574	0.1587	0.1617	
109 2-Methylnaphthalene	142	21.701	21.702	-0.001	100	78912	0.3649	0.3268	
110 1-Methylnaphthalene	142	21.847	21.847	0.000	99	80019	0.3649	0.3810	
S 111 Xylenes, Total	100				0		0.4760	0.4879	
S 112 1,2-Dichloroethene, Total	1				0		0.3173	0.3110	

Reagents:

40L3DNP_00016	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

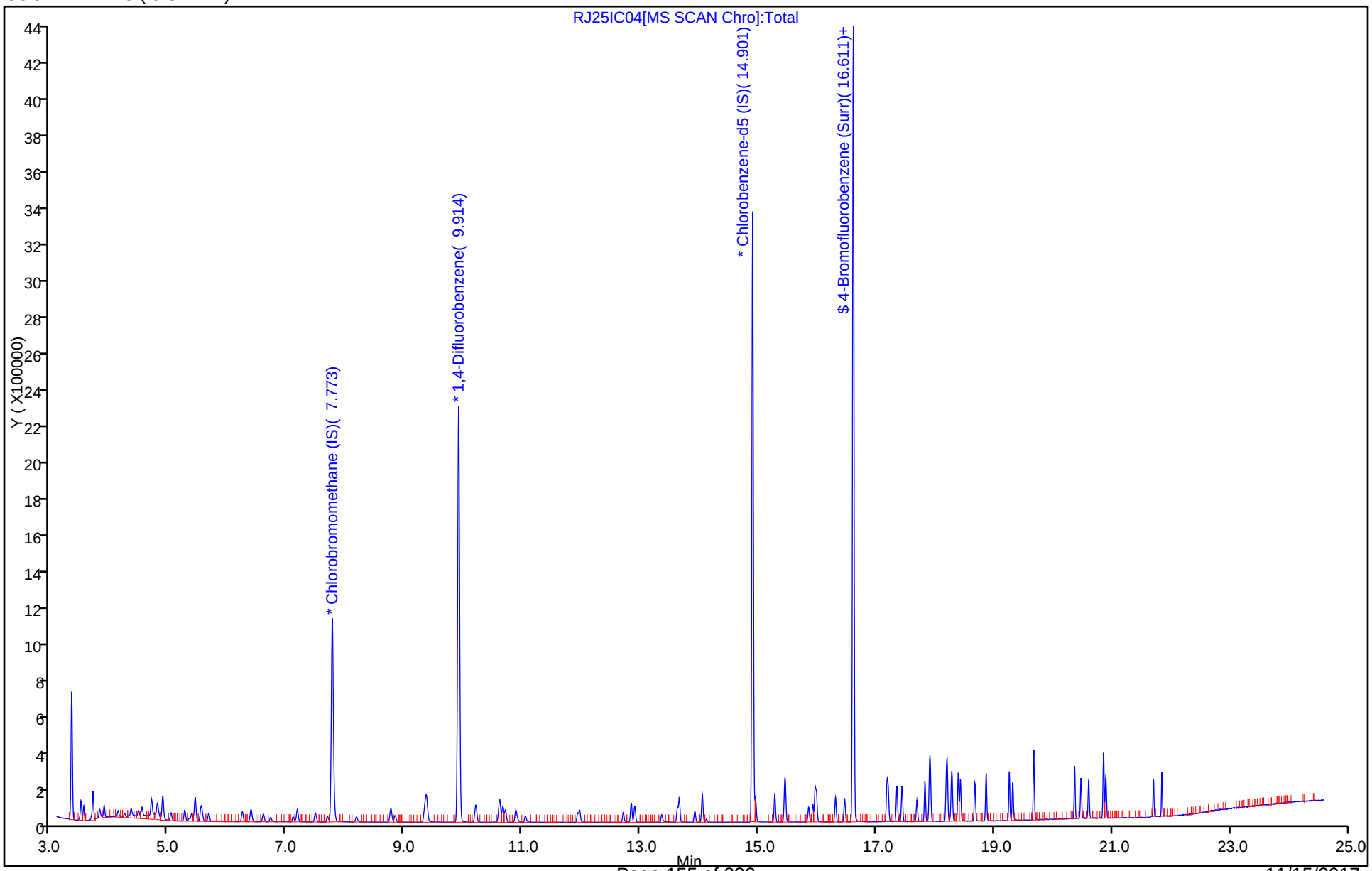
Report Date: 27-Oct-2017 11:56:02 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC04.D

Injection Date:	25-Oct-2017 15:20:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L4			Worklist Smp#:	6
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC05.D
Lims ID: IC L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 25-Oct-2017 16:08:30 ALS Bottle#: 3 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-007
Misc. Info.: 123607
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 11:56:05 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 26-Oct-2017 12:07:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.768	7.779	-0.011	84	392388	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.914	9.918	-0.004	94	2292620	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.902	14.903	-0.001	88	1960520	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.606	16.610	-0.004	91	1499096	4.00	4.17	
6 Chlorodifluoromethane	67	3.497	3.505	-0.008	96	20097	0.4000	0.4078	
7 Propene	41	3.502	3.509	-0.007	99	45765	0.4000	0.4145	
8 Dichlorodifluoromethane	85	3.545	3.554	-0.009	100	157459	0.4000	0.4094	
9 Chloromethane	52	3.680	3.690	-0.010	99	15895	0.4000	0.4308	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.707	3.713	-0.006	92	113975	0.4000	0.4050	
11 Vinyl chloride	62	3.820	3.827	-0.007	99	44332	0.4000	0.3977	
13 Butadiene	54	3.890	3.900	-0.010	90	29563	0.4000	0.4064	
12 Butane	43	3.896	3.904	-0.008	90	50692	0.4000	0.4136	
14 Bromomethane	94	4.128	4.140	-0.012	98	46848	0.4000	0.4106	
15 Chloroethane	64	4.241	4.254	-0.013	98	21026	0.4000	0.4106	
16 Ethanol	31	4.354	4.368	-0.014	96	73720	2.00	2.06	
17 Vinyl bromide	106	4.478	4.488	-0.010	98	48964	0.4000	0.4121	
18 2-Methylbutane	43	4.537	4.546	-0.009	84	33713	0.4000	0.4029	
19 Acrolein	56	4.694	4.709	-0.015	30	12474	0.4000	0.3921	
20 Trichlorofluoromethane	101	4.699	4.710	-0.011	99	162753	0.4000	0.4214	
21 Acetonitrile	40	4.748	4.774	-0.026	98	10434	0.4000	0.3907	
22 Acetone	58	4.802	4.807	-0.005	99	55570	1.20	1.28	
24 Pentane	72	4.893	4.899	-0.006	95	11065	0.4000	0.4130	
23 Isopropyl alcohol	45	4.893	4.906	-0.013	97	206847	1.20	1.24	
25 Ethyl ether	31	5.023	5.033	-0.010	86	47384	0.4000	0.4124	
26 1,1-Dichloroethene	96	5.265	5.274	-0.009	97	60569	0.4000	0.3874	
27 Acrylonitrile	53	5.341	5.349	-0.008	95	37581	0.4000	0.3856	
28 2-Methyl-2-propanol	59	5.379	5.393	-0.014	95	117160	0.4000	0.3969	
29 1,1,2-Trichloro-1,2,2-trif	101	5.438	5.446	-0.008	97	136304	0.4000	0.4055	
30 Methylene Chloride	84	5.535	5.552	-0.017	90	70360	0.4000	0.4404	
31 3-Chloro-1-propene	39	5.562	5.572	-0.010	98	51135	0.4000	0.4070	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.670	5.683	-0.013	98	171741	0.4000	0.4052	
33 trans-1,2-Dichloroethene	96	6.241	6.253	-0.012	99	61556	0.4000	0.3826	
34 Methyl tert-butyl ether	73	6.382	6.392	-0.010	95	180474	0.4000	0.3953	
36 1,1-Dichloroethane	63	6.597	6.609	-0.012	100	113245	0.4000	0.3979	
37 Vinyl acetate	43	6.716	6.727	-0.011	99	116793	0.4000	0.3771	
38 2-Butanone (MEK)	72	7.093	7.107	-0.014	99	27179	0.4000	0.3892	
39 Hexane	56	7.174	7.179	-0.005	85	45026	0.4000	0.4031	
40 cis-1,2-Dichloroethene	96	7.482	7.492	-0.010	94	63056	0.4000	0.3834	
41 Ethyl acetate	43	7.676	7.688	-0.012	99	105925	0.4000	0.3868	
42 Chloroform	83	7.805	7.811	-0.006	95	146303	0.4000	0.3948	
43 Tetrahydrofuran	42	8.172	8.178	-0.006	87	51471	0.4000	0.3802	
44 1,1,1-Trichloroethane	97	8.765	8.769	-0.004	95	152300	0.4000	0.3946	
45 1,2-Dichloroethane	62	8.835	8.840	-0.005	99	98892	0.4000	0.4003	
47 Benzene	78	9.337	9.341	-0.004	97	180361	0.4000	0.3923	
48 Cyclohexane	69	9.358	9.362	-0.004	94	27883	0.4000	0.4044	
46 n-Butanol	31	9.353	9.365	-0.012	63	12391	0.4000	0.3251	
50 Carbon tetrachloride	117	9.369	9.378	-0.009	96	153437	0.4000	0.3910	
52 Isooctane	57	10.199	10.206	-0.007	98	264556	0.4000	0.4032	
53 1,2-Dichloropropane	63	10.599	10.602	-0.004	84	64112	0.4000	0.4031	
54 n-Heptane	71	10.609	10.617	-0.008	84	61428	0.4000	0.3981	
55 Trichloroethene	130	10.663	10.667	-0.004	94	87248	0.4000	0.3937	
56 Dibromomethane	93	10.706	10.711	-0.005	95	74912	0.4000	0.3812	
57 Dichlorobromomethane	83	10.879	10.886	-0.007	99	133067	0.4000	0.3802	
58 1,4-Dioxane	88	10.906	10.912	-0.006	85	27703	0.4000	0.3913	
59 Methyl methacrylate	41	11.041	11.045	-0.004	97	56707	0.4000	0.3648	
61 4-Methyl-2-pentanone (MIBK	43	11.925	11.931	-0.006	95	100514	0.4000	0.3669	
62 cis-1,3-Dichloropropene	75	11.963	11.968	-0.005	92	99963	0.4000	0.3904	
63 trans-1,3-Dichloropropene	75	12.707	12.709	-0.002	96	92653	0.4000	0.3906	
64 Toluene	91	12.842	12.845	-0.003	93	217615	0.4000	0.3965	
65 1,1,2-Trichloroethane	83	12.901	12.904	-0.003	98	62680	0.4000	0.3973	
66 2-Hexanone	58	13.349	13.355	-0.006	96	50215	0.4000	0.3615	
67 Chlorodibromomethane	129	13.629	13.628	0.001	98	122286	0.4000	0.3761	
68 n-Octane	85	13.656	13.658	-0.002	88	69565	0.4000	0.3959	
69 Ethylene Dibromide	107	13.920	13.923	-0.003	98	111812	0.4000	0.3825	
70 Tetrachloroethene	129	14.044	14.048	-0.004	96	85007	0.4000	0.3953	
71 Chlorobenzene	112	14.950	14.952	-0.002	93	183593	0.4000	0.3988	
72 Ethylbenzene	91	15.279	15.278	0.001	98	291382	0.4000	0.4056	
73 m-Xylene & p-Xylene	91	15.452	15.452	0.000	0	463595	0.8000	0.8413	
74 Bromoform	173	15.851	15.854	-0.003	95	102577	0.4000	0.3521	
75 Styrene	104	15.921	15.923	-0.002	99	141877	0.4000	0.3672	
76 n-Nonane	57	15.959	15.961	-0.002	85	130104	0.4000	0.4284	
77 o-Xylene	91	15.985	15.986	-0.001	98	248316	0.4000	0.4217	
78 1,1,2,2-Tetrachloroethane	83	16.309	16.308	0.001	99	158018	0.4000	0.4079	
79 1,2,3-Trichloropropane	110	16.460	16.464	-0.004	98	55328	0.4000	0.4066	
80 Isopropylbenzene	105	16.606	16.605	0.001	97	354883	0.4000	0.4175	
81 N-Propylbenzene	120	17.177	17.182	-0.005	99	94728	0.4000	0.4158	
82 2-Chlorotoluene	126	17.199	17.203	-0.004	94	88647	0.4000	0.4201	
83 4-Ethyltoluene	105	17.350	17.351	-0.001	99	355685	0.4000	0.4218	
84 1,3,5-Trimethylbenzene	120	17.436	17.436	0.000	92	146542	0.4000	0.4242	
85 Alpha Methyl Styrene	118	17.689	17.691	-0.002	89	109602	0.4000	0.3390	
86 n-Decane	57	17.824	17.826	-0.002	93	180060	0.4000	0.4213	
87 tert-Butylbenzene	119	17.905	17.906	-0.001	92	341330	0.4000	0.4229	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.916	17.921	-0.005	96	317818	0.4000	0.4410	
89 1,3-Dichlorobenzene	146	18.186	18.189	-0.003	99	204946	0.4000	0.4171	
90 sec-Butylbenzene	105	18.202	18.206	-0.004	99	446997	0.4000	0.4324	
91 Benzyl chloride	91	18.272	18.273	-0.001	98	241503	0.4000	0.3809	
92 1,4-Dichlorobenzene	146	18.283	18.287	-0.004	93	206120	0.4000	0.4154	
93 4-Isopropyltoluene	119	18.390	18.391	-0.001	97	392846	0.4000	0.4232	
94 1,2,3-Trimethylbenzene	105	18.428	18.429	-0.001	97	350369	0.4000	0.4345	
95 1,2-Dichlorobenzene	146	18.671	18.672	-0.001	94	197633	0.4000	0.4105	
98 n-Butylbenzene	91	18.865	18.865	0.000	98	357490	0.4000	0.4213	
99 Undecane	57	19.259	19.259	0.000	94	198846	0.4000	0.4000	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	97	128407	0.4000	0.3561	
101 1,2,4,5-Tetramethylbenzene	119	19.674	19.674	0.000	97	477440	0.4000	0.3884	
104 Dodecane	57	20.364	20.366	-0.002	97	175178	0.4000	0.3518	
105 1,2,4-Trichlorobenzene	180	20.472	20.474	-0.002	94	139886	0.4000	0.3493	
106 Naphthalene	128	20.601	20.603	-0.002	99	330933	0.4000	0.3572	
107 Hexachlorobutadiene	225	20.860	20.859	0.001	95	147591	0.4000	0.3582	
108 1,2,3-Trichlorobenzene	180	20.898	20.897	0.001	95	131520	0.4000	0.3324	
109 2-Methylnaphthalene	142	21.701	21.702	-0.001	100	110967	0.9200	0.4567	
110 1-Methylnaphthalene	142	21.847	21.847	0.000	100	99268	0.9200	0.4697	
S 111 Xylenes, Total	100				0		1.20	1.26	
S 112 1,2-Dichloroethene, Total	1				0		0.8000	0.7660	

Reagents:

40L4DNP_00015	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

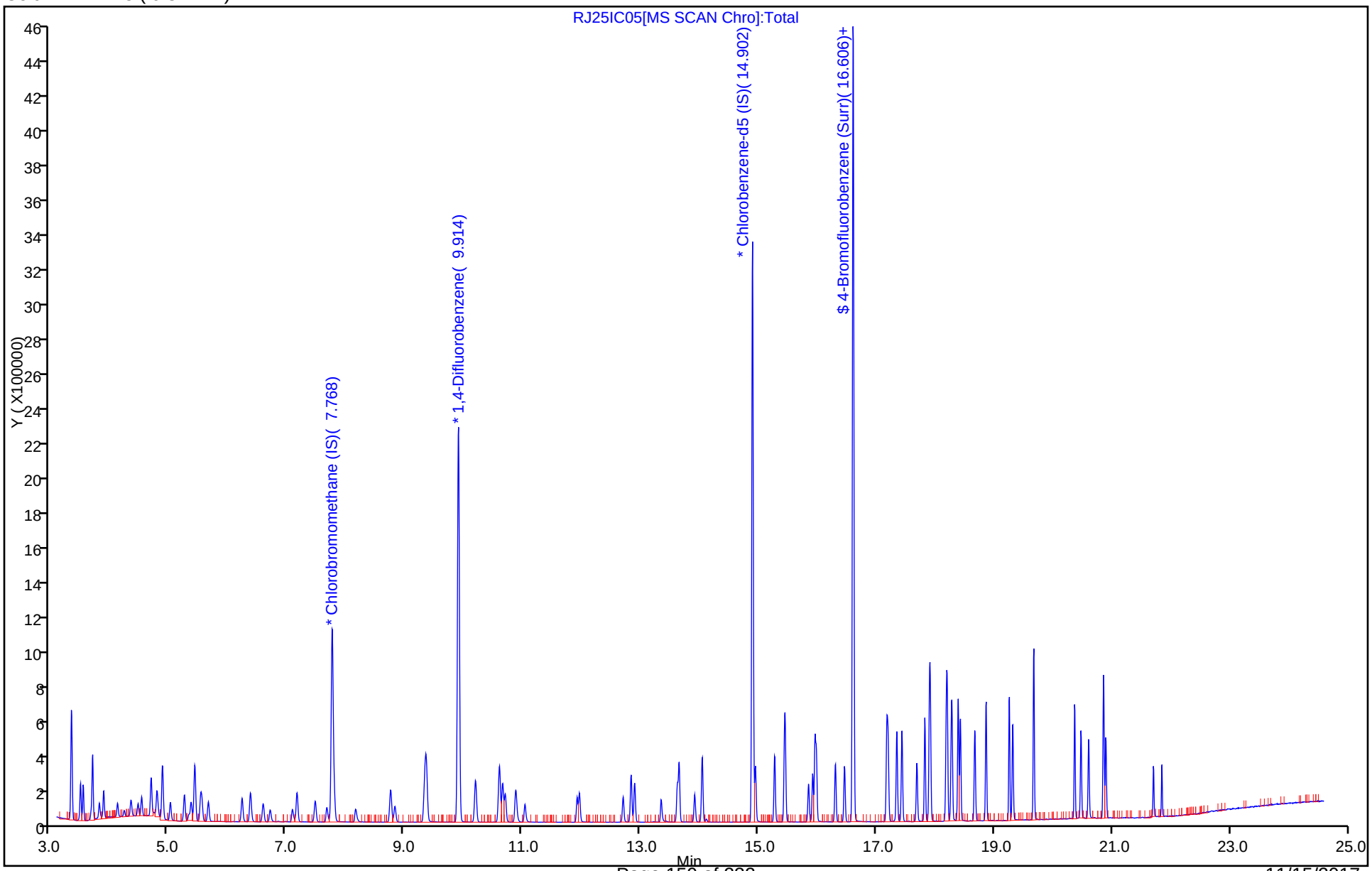
Report Date: 27-Oct-2017 11:56:06 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC05.D

Injection Date:	25-Oct-2017 16:08:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L5			Worklist Smp#:	7
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC06.D
Lims ID: IC L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 25-Oct-2017 16:56:30 ALS Bottle#: 4 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-008
Misc. Info.: 123606
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 11:56:09 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 26-Oct-2017 09:01:51

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.767	7.779	-0.012	82	398052	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.908	9.918	-0.010	94	2299462	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.902	14.903	-0.001	87	1987679	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.606	16.610	-0.004	92	1469194	4.00	4.03	
6 Chlorodifluoromethane	67	3.486	3.505	-0.019	96	52665	1.00	1.05	
7 Propene	41	3.491	3.509	-0.018	98	120415	1.00	1.08	
8 Dichlorodifluoromethane	85	3.534	3.554	-0.020	100	397784	1.00	1.02	
9 Chloromethane	52	3.669	3.690	-0.021	100	41021	1.00	1.10	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.691	3.713	-0.022	93	304153	1.00	1.07	
11 Vinyl chloride	62	3.804	3.827	-0.023	99	114161	1.00	1.01	
13 Butadiene	54	3.880	3.900	-0.020	94	77662	1.00	1.05	
12 Butane	43	3.885	3.904	-0.019	91	131312	1.00	1.06	
14 Bromomethane	94	4.117	4.140	-0.023	99	123066	1.00	1.06	
15 Chloroethane	64	4.230	4.254	-0.024	99	52144	1.00	1.00	
16 Ethanol	31	4.354	4.368	-0.014	94	189667	5.01	5.22	
17 Vinyl bromide	106	4.462	4.488	-0.026	98	124308	1.00	1.03	
18 2-Methylbutane	43	4.527	4.546	-0.019	84	87697	1.00	1.03	
19 Acrolein	56	4.688	4.709	-0.021	30	32362	1.00	1.00	
20 Trichlorofluoromethane	101	4.688	4.710	-0.022	99	419611	1.00	1.07	
21 Acetonitrile	40	4.737	4.770	-0.033	92	28679	1.00	1.06	
22 Acetone	58	4.785	4.807	-0.022	98	131209	3.01	2.99	
24 Pentane	72	4.877	4.899	-0.022	96	27851	1.00	1.02	
23 Isopropyl alcohol	45	4.888	4.906	-0.018	96	536958	3.01	3.16	
25 Ethyl ether	31	5.007	5.033	-0.026	86	124053	1.00	1.06	
26 1,1-Dichloroethene	96	5.255	5.274	-0.019	97	160338	1.00	1.01	
27 Acrylonitrile	53	5.330	5.349	-0.019	95	105280	1.00	1.06	
28 2-Methyl-2-propanol	59	5.373	5.393	-0.020	92	318549	1.00	1.06	
29 1,1,2-Trichloro-1,2,2-trif	101	5.427	5.446	-0.019	97	355686	1.00	1.04	
30 Methylene Chloride	84	5.530	5.552	-0.022	90	163357	1.00	1.01	
31 3-Chloro-1-propene	39	5.551	5.572	-0.021	98	139966	1.00	1.10	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.659	5.683	-0.024	98	454130	1.00	1.06	
33 trans-1,2-Dichloroethene	96	6.236	6.253	-0.017	99	166711	1.00	1.02	
34 Methyl tert-butyl ether	73	6.371	6.392	-0.021	95	487791	1.00	1.05	
36 1,1-Dichloroethane	63	6.597	6.609	-0.012	100	297732	1.00	1.03	
37 Vinyl acetate	43	6.711	6.727	-0.017	99	336347	1.00	1.07	
38 2-Butanone (MEK)	72	7.088	7.107	-0.019	98	73837	1.00	1.04	
39 Hexane	56	7.163	7.179	-0.016	86	119227	1.00	1.05	
40 cis-1,2-Dichloroethene	96	7.482	7.492	-0.010	94	170867	1.00	1.02	
41 Ethyl acetate	43	7.670	7.688	-0.018	99	297748	1.00	1.07	
42 Chloroform	83	7.800	7.811	-0.011	97	387346	1.00	1.03	
43 Tetrahydrofuran	42	8.156	8.178	-0.022	87	139063	1.00	1.01	
44 1,1,1-Trichloroethane	97	8.754	8.769	-0.015	95	408931	1.00	1.04	
45 1,2-Dichloroethane	62	8.830	8.840	-0.010	99	261684	1.00	1.06	
47 Benzene	78	9.331	9.341	-0.010	97	482364	1.00	1.05	
48 Cyclohexane	69	9.353	9.362	-0.009	95	76338	1.00	1.10	
46 n-Butanol	31	9.342	9.365	-0.023	69	38505	1.00	1.01	
50 Carbon tetrachloride	117	9.369	9.378	-0.009	96	423680	1.00	1.08	
52 Isooctane	57	10.194	10.206	-0.012	98	716205	1.00	1.09	
53 1,2-Dichloropropane	63	10.593	10.602	-0.009	86	170193	1.00	1.07	
54 n-Heptane	71	10.609	10.617	-0.008	86	167936	1.00	1.09	
55 Trichloroethene	130	10.658	10.667	-0.009	98	235437	1.00	1.06	
56 Dibromomethane	93	10.701	10.711	-0.010	95	200653	1.00	1.02	
57 Dichlorobromomethane	83	10.879	10.886	-0.007	99	377939	1.00	1.08	
58 1,4-Dioxane	88	10.895	10.912	-0.017	84	77269	1.00	1.09	
59 Methyl methacrylate	41	11.035	11.045	-0.010	98	168681	1.00	1.08	
61 4-Methyl-2-pentanone (MIBK	43	11.920	11.931	-0.011	95	295912	1.00	1.08	
62 cis-1,3-Dichloropropene	75	11.963	11.968	-0.005	92	284232	1.00	1.11	
63 trans-1,3-Dichloropropene	75	12.707	12.709	-0.002	96	264230	1.00	1.10	
64 Toluene	91	12.842	12.845	-0.003	94	601460	1.00	1.08	
65 1,1,2-Trichloroethane	83	12.901	12.904	-0.003	98	172853	1.00	1.08	
66 2-Hexanone	58	13.343	13.355	-0.012	96	155983	1.00	1.11	
67 Chlorodibromomethane	129	13.624	13.628	-0.004	98	362871	1.00	1.10	
68 n-Octane	85	13.656	13.658	-0.002	87	195933	1.00	1.10	
69 Ethylene Dibromide	107	13.920	13.923	-0.003	98	317987	1.00	1.07	
70 Tetrachloroethene	129	14.044	14.048	-0.004	96	231568	1.00	1.06	
71 Chlorobenzene	112	14.950	14.952	-0.002	94	490951	1.00	1.05	
72 Ethylbenzene	91	15.274	15.278	-0.004	99	810050	1.00	1.11	
73 m-Xylene & p-Xylene	91	15.452	15.452	0.000	0	1276477	2.00	2.28	
74 Bromoform	173	15.851	15.854	-0.003	96	318253	1.00	1.08	
75 Styrene	104	15.921	15.923	-0.002	98	441338	1.00	1.13	
76 n-Nonane	57	15.958	15.961	-0.003	85	358631	1.00	1.16	
77 o-Xylene	91	15.980	15.986	-0.006	98	674160	1.00	1.13	
78 1,1,2,2-Tetrachloroethane	83	16.304	16.308	-0.004	99	445782	1.00	1.14	
79 1,2,3-Trichloropropane	110	16.460	16.464	-0.004	98	152327	1.00	1.10	
80 Isopropylbenzene	105	16.600	16.605	-0.005	97	941474	1.00	1.09	
81 N-Propylbenzene	120	17.177	17.182	-0.005	99	266687	1.00	1.15	
82 2-Chlorotoluene	126	17.199	17.203	-0.004	94	238746	1.00	1.12	
83 4-Ethyltoluene	105	17.350	17.351	-0.001	99	1006964	1.00	1.18	
84 1,3,5-Trimethylbenzene	120	17.436	17.436	0.000	93	410670	1.00	1.17	
85 Alpha Methyl Styrene	118	17.689	17.691	-0.002	88	360064	1.00	1.10	
86 n-Decane	57	17.824	17.826	-0.002	93	516714	1.00	1.19	
87 tert-Butylbenzene	119	17.905	17.906	-0.001	93	951442	1.00	1.16	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.916	17.921	-0.005	96	883002	1.00	1.21	
89 1,3-Dichlorobenzene	146	18.185	18.189	-0.004	99	571936	1.00	1.15	
90 sec-Butylbenzene	105	18.202	18.206	-0.004	98	1256189	1.00	1.20	
91 Benzyl chloride	91	18.272	18.273	-0.001	98	734076	1.00	1.14	
92 1,4-Dichlorobenzene	146	18.283	18.287	-0.004	96	579460	1.00	1.15	
93 4-Isopropyltoluene	119	18.390	18.391	-0.001	97	1125379	1.00	1.20	
94 1,2,3-Trimethylbenzene	105	18.428	18.429	-0.001	97	975263	1.00	1.19	
95 1,2-Dichlorobenzene	146	18.671	18.672	-0.001	95	560747	1.00	1.15	
98 n-Butylbenzene	91	18.865	18.865	0.000	98	1047935	1.00	1.22	
99 Undecane	57	19.259	19.259	0.000	94	606307	1.00	1.20	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	99	423136	1.00	1.16	
101 1,2,4,5-Tetramethylbenzene	119	19.674	19.674	0.000	97	1458763	1.00	1.17	
104 Dodecane	57	20.364	20.366	-0.002	98	622152	1.00	1.23	
105 1,2,4-Trichlorobenzene	180	20.472	20.474	-0.002	94	469912	1.00	1.16	
106 Naphthalene	128	20.601	20.603	-0.002	99	1139353	1.00	1.21	
107 Hexachlorobutadiene	225	20.860	20.859	0.001	96	460520	1.00	1.10	
108 1,2,3-Trichlorobenzene	180	20.892	20.897	-0.005	95	454418	1.00	1.13	
109 2-Methylnaphthalene	142	21.701	21.702	-0.001	100	656625	2.30	2.67	
110 1-Methylnaphthalene	142	21.847	21.847	0.000	100	572233	2.30	2.67	
S 111 Xylenes, Total	100				0		3.00	3.41	
S 112 1,2-Dichloroethene, Total	1				0		2.00	2.05	

Reagents:

40L5DNP_00015	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

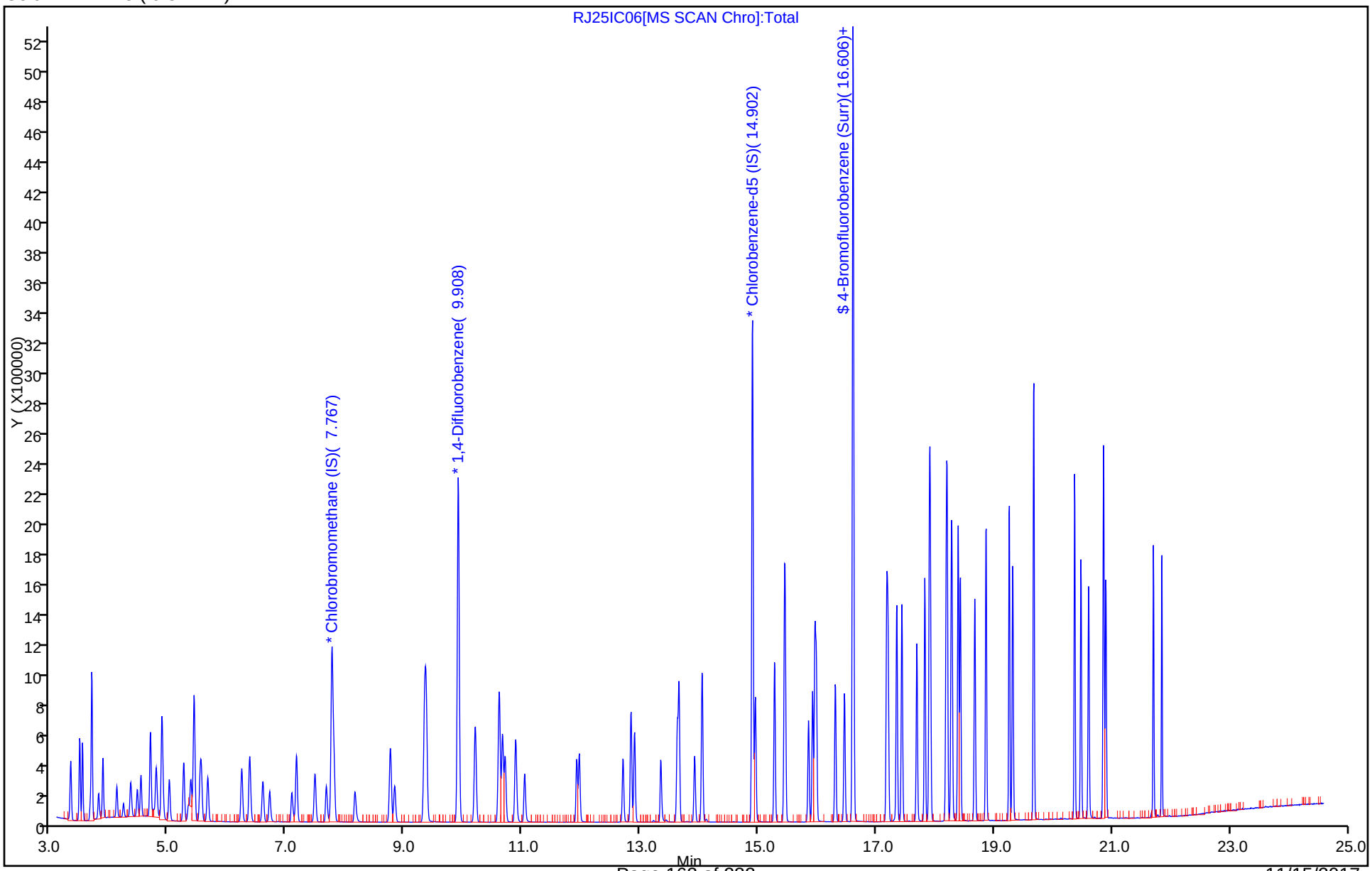
Report Date: 27-Oct-2017 11:56:10 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC06.D

Injection Date:	25-Oct-2017 16:56:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L6			Worklist Smp#:	8
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC07.D
Lims ID: ICIS L7
Client ID:
Sample Type: ICIS Calib Level: 7
Inject. Date: 25-Oct-2017 17:43:30 ALS Bottle#: 5 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-009
Misc. Info.: 123605
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 11:56:13 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 26-Oct-2017 08:58:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.789	7.779	0.010	85	418613	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.924	9.918	0.006	94	2428422	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.901	14.903	-0.002	87	2105490	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.611	16.610	0.001	90	1544010	4.00	4.00	
6 Chlorodifluoromethane	67	3.513	3.505	0.008	96	101769	2.00	1.94	
7 Propene	41	3.518	3.509	0.009	97	232191	2.00	1.97	
8 Dichlorodifluoromethane	85	3.567	3.554	0.013	100	797253	2.00	1.94	
9 Chloromethane	52	3.701	3.690	0.011	100	75586	2.00	1.92	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.723	3.713	0.010	92	588597	2.00	1.96	
11 Vinyl chloride	62	3.836	3.827	0.009	99	228480	2.00	1.92	
13 Butadiene	54	3.912	3.900	0.012	95	153951	2.00	1.98	
12 Butane	43	3.912	3.904	0.008	90	263673	2.00	2.02	
14 Bromomethane	94	4.149	4.140	0.009	99	243878	2.00	2.00	
15 Chloroethane	64	4.262	4.254	0.008	99	106239	2.00	1.94	
16 Ethanol	31	4.375	4.368	0.007	95	382186	9.99	10.0	
17 Vinyl bromide	106	4.499	4.488	0.011	98	247129	2.00	1.95	
18 2-Methylbutane	43	4.559	4.546	0.013	85	180708	2.00	2.02	
19 Acrolein	56	4.715	4.709	0.006	96	67963	2.00	2.00	
20 Trichlorofluoromethane	101	4.720	4.710	0.010	99	825311	2.00	2.00	
21 Acetonitrile	40	4.764	4.770	-0.006	96	56588	2.00	1.99	M
22 Acetone	58	4.812	4.807	0.005	99	270718	5.99	5.87	
24 Pentane	72	4.909	4.899	0.010	95	59347	2.00	2.08	
23 Isopropyl alcohol	45	4.909	4.906	0.003	93	1107259	5.99	6.20	
25 Ethyl ether	31	5.039	5.033	0.006	85	246725	2.00	2.01	
26 1,1-Dichloroethene	96	5.287	5.274	0.013	97	319852	2.00	1.92	
27 Acrylonitrile	53	5.357	5.349	0.008	94	205776	2.00	1.98	
28 2-Methyl-2-propanol	59	5.389	5.393	-0.004	94	640820	2.00	2.03	
29 1,1,2-Trichloro-1,2,2-trif	101	5.459	5.446	0.013	97	702951	2.00	1.96	
30 Methylene Chloride	84	5.567	5.552	0.015	90	305658	2.00	1.79	
31 3-Chloro-1-propene	39	5.583	5.572	0.011	98	270102	2.00	2.02	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.697	5.683	0.013	98	892511	2.00	1.97	
33 trans-1,2-Dichloroethene	96	6.268	6.253	0.015	99	332139	2.00	1.94	
34 Methyl tert-butyl ether	73	6.392	6.392	0.000	95	981395	2.00	2.02	
36 1,1-Dichloroethane	63	6.624	6.609	0.015	100	588426	2.00	1.94	
37 Vinyl acetate	43	6.732	6.727	0.005	99	692559	2.00	2.10	
38 2-Butanone (MEK)	72	7.104	7.107	-0.003	98	150957	2.00	2.03	
39 Hexane	56	7.185	7.179	0.006	86	236625	2.00	1.99	
40 cis-1,2-Dichloroethene	96	7.503	7.492	0.011	94	342438	2.00	1.95	
41 Ethyl acetate	43	7.686	7.688	-0.002	99	592846	2.00	2.03	
42 Chloroform	83	7.821	7.811	0.010	96	766644	2.00	1.94	
43 Tetrahydrofuran	42	8.172	8.178	-0.006	87	284558	2.00	1.97	
44 1,1,1-Trichloroethane	97	8.776	8.769	0.007	95	817496	2.00	1.99	
45 1,2-Dichloroethane	62	8.846	8.840	0.006	99	517134	2.00	1.98	
47 Benzene	78	9.347	9.341	0.006	96	963873	2.00	1.98	
48 Cyclohexane	69	9.369	9.362	0.007	95	153538	2.00	2.10	
46 n-Butanol	31	9.347	9.365	-0.018	61	83873	2.00	2.08	
50 Carbon tetrachloride	117	9.385	9.378	0.007	97	857647	2.00	2.06	
52 Isooctane	57	10.210	10.206	0.004	98	1423496	2.00	2.05	
53 1,2-Dichloropropane	63	10.604	10.602	0.002	86	337441	2.00	2.00	
54 n-Heptane	71	10.620	10.617	0.003	85	340822	2.00	2.09	
55 Trichloroethene	130	10.668	10.667	0.001	97	474722	2.00	2.02	
56 Dibromomethane	93	10.717	10.711	0.006	96	406474	2.00	1.95	
57 Dichlorobromomethane	83	10.889	10.886	0.003	98	776763	2.00	2.10	
58 1,4-Dioxane	88	10.906	10.912	-0.006	84	155698	2.00	2.08	
59 Methyl methacrylate	41	11.040	11.045	-0.005	98	362703	2.00	2.20	
61 4-Methyl-2-pentanone (MIBK	43	11.925	11.931	-0.006	94	611907	2.00	2.11	
62 cis-1,3-Dichloropropene	75	11.968	11.968	0.000	92	590333	2.00	2.18	
63 trans-1,3-Dichloropropene	75	12.712	12.709	0.003	96	550671	2.00	2.16	
64 Toluene	91	12.847	12.845	0.002	94	1209692	2.00	2.05	
65 1,1,2-Trichloroethane	83	12.906	12.904	0.002	98	346900	2.00	2.05	
66 2-Hexanone	58	13.348	13.355	-0.007	97	340754	2.00	2.28	
67 Chlorodibromomethane	129	13.629	13.628	0.001	98	776008	2.00	2.22	
68 n-Octane	85	13.661	13.658	0.003	86	399529	2.00	2.12	
69 Ethylene Dibromide	107	13.925	13.923	0.002	99	650482	2.00	2.07	
70 Tetrachloroethene	129	14.049	14.048	0.001	96	465829	2.00	2.02	
71 Chlorobenzene	112	14.950	14.952	-0.002	94	982434	2.00	1.99	
72 Ethylbenzene	91	15.279	15.278	0.001	98	1619183	2.00	2.10	
73 m-Xylene & p-Xylene	91	15.451	15.452	-0.001	0	2542321	3.99	4.30	
74 Bromoform	173	15.856	15.854	0.002	97	714603	2.00	2.28	
75 Styrene	104	15.920	15.923	-0.003	98	928423	2.00	2.24	
76 n-Nonane	57	15.958	15.961	-0.003	85	699319	2.00	2.14	
77 o-Xylene	91	15.985	15.986	-0.001	98	1321857	2.00	2.09	
78 1,1,2,2-Tetrachloroethane	83	16.309	16.308	0.001	100	879160	2.00	2.11	
79 1,2,3-Trichloropropane	110	16.465	16.464	0.001	97	299434	2.00	2.05	
80 Isopropylbenzene	105	16.605	16.605	0.000	97	1846740	2.00	2.02	
81 N-Propylbenzene	120	17.182	17.182	0.000	99	528723	2.00	2.16	
82 2-Chlorotoluene	126	17.204	17.203	0.001	95	469063	2.00	2.07	
83 4-Ethyltoluene	105	17.349	17.351	-0.002	99	1984214	2.00	2.19	
84 1,3,5-Trimethylbenzene	120	17.436	17.436	0.000	93	812865	2.00	2.19	
85 Alpha Methyl Styrene	118	17.689	17.691	-0.002	88	768512	2.00	2.21	
86 n-Decane	57	17.824	17.826	-0.002	93	1015986	2.00	2.21	
87 tert-Butylbenzene	119	17.905	17.906	-0.001	93	1868713	2.00	2.16	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.921	17.921	0.000	96	1705234	2.00	2.20	
89 1,3-Dichlorobenzene	146	18.191	18.189	0.002	99	1125927	2.00	2.13	
90 sec-Butylbenzene	105	18.207	18.206	0.001	98	2471421	2.00	2.23	
91 Benzyl chloride	91	18.272	18.273	-0.001	98	1513870	2.00	2.22	
92 1,4-Dichlorobenzene	146	18.288	18.287	0.001	93	1134967	2.00	2.13	
93 4-Isopropyltoluene	119	18.390	18.391	-0.001	97	2260739	2.00	2.27	
94 1,2,3-Trimethylbenzene	105	18.428	18.429	-0.001	98	1905721	2.00	2.20	
95 1,2-Dichlorobenzene	146	18.671	18.672	-0.001	95	1099439	2.00	2.13	
98 n-Butylbenzene	91	18.865	18.865	0.000	99	2097682	2.00	2.30	
99 Undecane	57	19.258	19.259	-0.001	93	1225234	2.00	2.30	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	99	910820	2.00	2.35	
101 1,2,4,5-Tetramethylbenzene	119	19.674	19.674	0.000	97	2935017	2.00	2.22	
104 Dodecane	57	20.364	20.366	-0.002	97	1246644	2.00	2.33	
105 1,2,4-Trichlorobenzene	180	20.472	20.474	-0.002	94	992300	2.00	2.31	
106 Naphthalene	128	20.601	20.603	-0.002	99	2348566	2.00	2.36	
107 Hexachlorobutadiene	225	20.860	20.859	0.001	96	942489	2.00	2.13	
108 1,2,3-Trichlorobenzene	180	20.898	20.897	0.001	95	941154	2.00	2.21	
109 2-Methylnaphthalene	142	21.701	21.702	-0.001	100	1378404	4.59	5.28	
110 1-Methylnaphthalene	142	21.847	21.847	0.000	100	1131655	4.59	4.99	
S 111 Xylenes, Total	100				0		5.99	6.39	
S 112 1,2-Dichloroethene, Total	1				0		3.99	3.89	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40L6DNP_00016	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

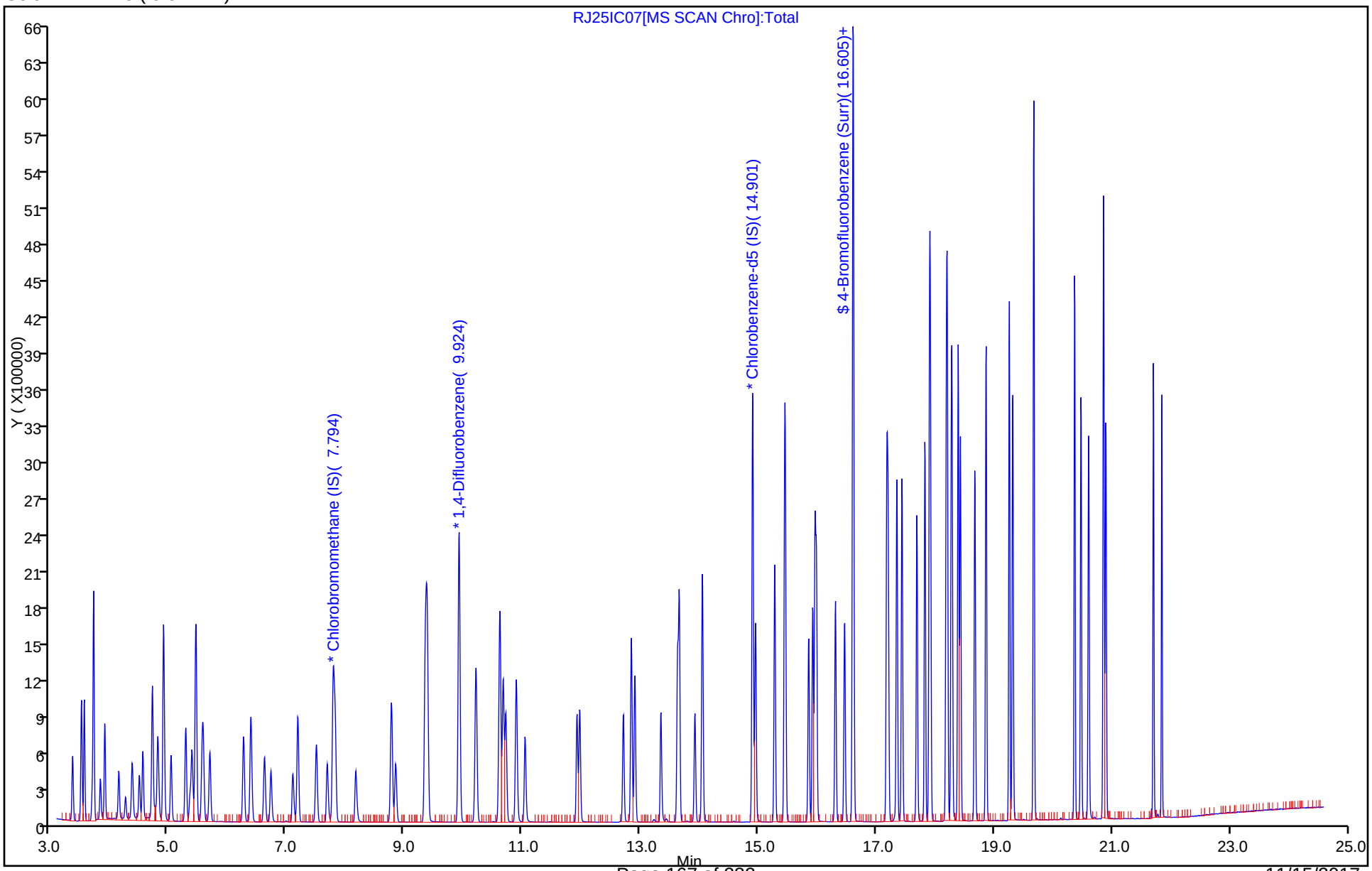
Report Date: 27-Oct-2017 11:56:14 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC07.D

Injection Date:	25-Oct-2017 17:43:30	Instrument ID:	MR	Operator ID:	
Lims ID:	ICIS L7			Worklist Smp#:	9
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

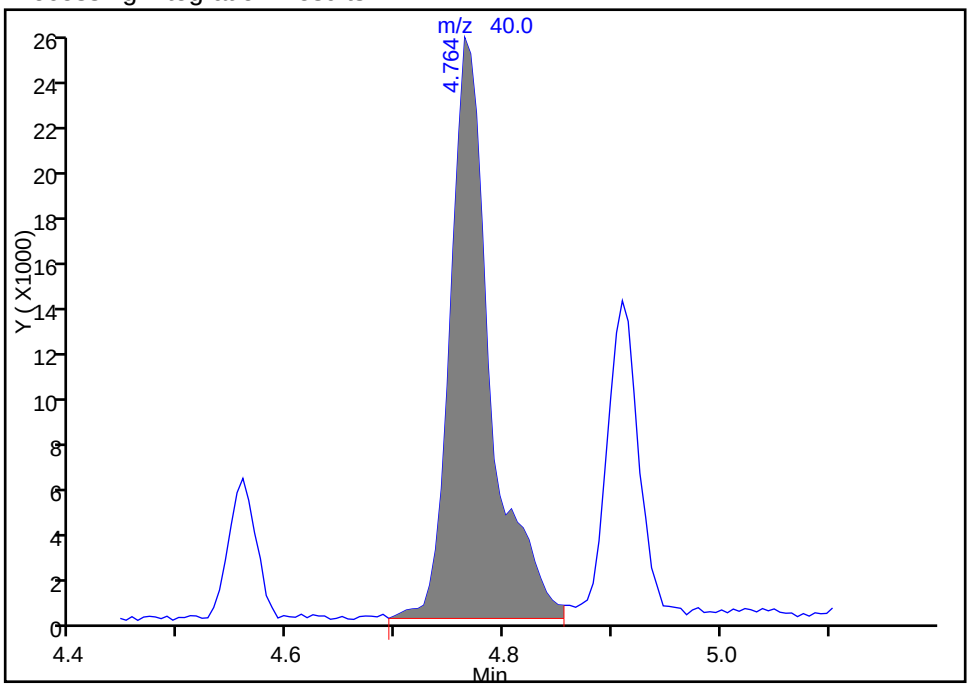
Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC07.D
Injection Date: 25-Oct-2017 17:43:30 Instrument ID: MR
Lims ID: ICIS L7
Client ID:
Operator ID: ALS Bottle#: 5 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

21 Acetonitrile, CAS: 75-05-8

Signal: 1

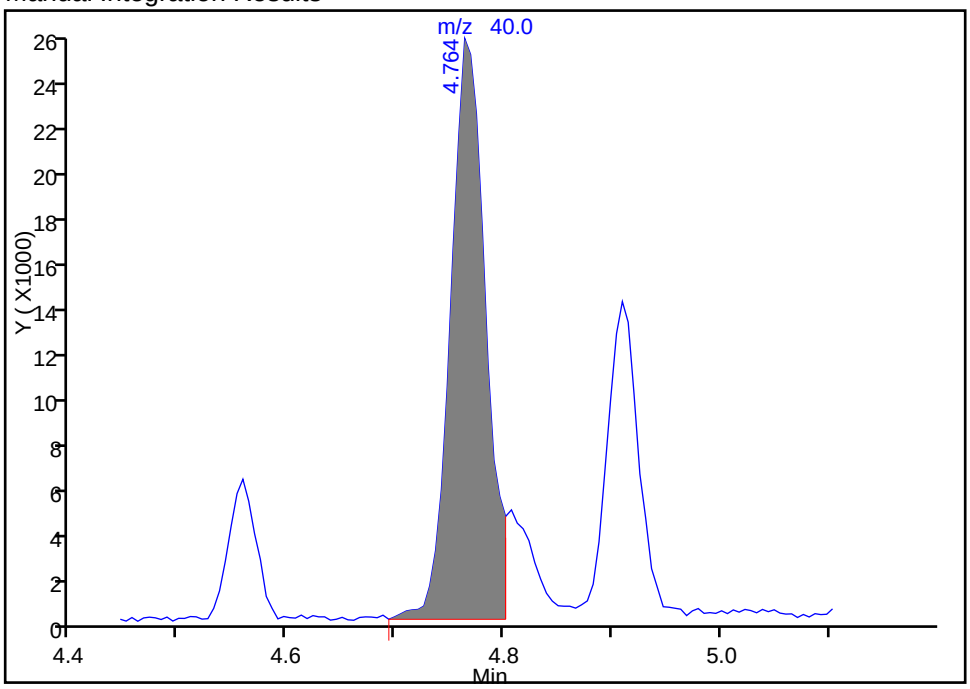
Processing Integration Results

RT: 4.76
Area: 64164
Amount: 2.173212
Amount Units: ppb v/v



Manual Integration Results

RT: 4.76
Area: 56588
Amount: 1.986431
Amount Units: ppb v/v



Reviewer: tajh, 26-Oct-2017 12:13:07
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC08.D
Lims ID: IC L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 25-Oct-2017 18:31:30 ALS Bottle#: 6 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-010
Misc. Info.: 123604
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 11:56:16 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 26-Oct-2017 12:14:17

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.783	7.779	0.004	80	423549	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.919	9.918	0.001	94	2429379	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.901	14.903	-0.002	87	2100763	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.611	16.610	0.001	91	1492736	4.00	3.88	
6 Chlorodifluoromethane	67	3.486	3.505	-0.019	96	202279	4.00	3.80	
7 Propene	41	3.491	3.509	-0.018	97	459626	4.00	3.86	
8 Dichlorodifluoromethane	85	3.534	3.554	-0.020	100	1691282	4.00	4.07	
9 Chloromethane	52	3.674	3.690	-0.016	100	164958	4.00	4.14	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.696	3.713	-0.017	92	1231703	4.00	4.05	
11 Vinyl chloride	62	3.809	3.827	-0.018	99	447334	4.00	3.72	
13 Butadiene	54	3.885	3.900	-0.015	95	301083	4.00	3.83	
12 Butane	43	3.890	3.904	-0.014	90	511458	4.00	3.87	
14 Bromomethane	94	4.127	4.140	-0.013	99	488872	4.00	3.97	
15 Chloroethane	64	4.241	4.254	-0.013	98	212019	4.00	3.84	
16 Ethanol	31	4.370	4.368	0.002	95	761181	20.0	19.7	
17 Vinyl bromide	106	4.478	4.488	-0.010	98	490166	4.00	3.82	
18 2-Methylbutane	43	4.537	4.546	-0.009	84	350900	4.00	3.88	
19 Acrolein	56	4.699	4.709	-0.010	92	131136	4.00	3.82	
20 Trichlorofluoromethane	101	4.699	4.710	-0.011	99	1619197	4.00	3.88	
21 Acetonitrile	40	4.753	4.770	-0.017	97	111432	4.00	3.87	M
22 Acetone	58	4.796	4.807	-0.011	98	513231	12.0	11.0	
24 Pentane	72	4.888	4.899	-0.011	99	111955	4.00	3.87	
23 Isopropyl alcohol	45	4.904	4.906	-0.002	97	2145485	12.0	11.9	
25 Ethyl ether	31	5.017	5.033	-0.016	84	482585	4.00	3.89	
26 1,1-Dichloroethene	96	5.265	5.274	-0.009	98	655584	4.00	3.89	
27 Acrylonitrile	53	5.346	5.349	-0.003	94	422684	4.00	4.02	
28 2-Methyl-2-propanol	59	5.384	5.393	-0.009	92	1295192	4.00	4.06	
29 1,1,2-Trichloro-1,2,2-trif	101	5.438	5.446	-0.008	97	1424722	4.00	3.93	
30 Methylene Chloride	84	5.551	5.552	-0.001	89	602192	4.00	3.49	
31 3-Chloro-1-propene	39	5.567	5.572	-0.005	98	545029	4.00	4.02	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.675	5.683	-0.008	98	1838624	4.00	4.02	
33 trans-1,2-Dichloroethene	96	6.252	6.253	-0.001	99	683800	4.00	3.94	
34 Methyl tert-butyl ether	73	6.376	6.392	-0.016	95	2014267	4.00	4.09	
36 1,1-Dichloroethane	63	6.608	6.609	-0.001	100	1188290	4.00	3.87	
37 Vinyl acetate	43	6.721	6.727	-0.006	99	1456065	4.00	4.36	
38 2-Butanone (MEK)	72	7.093	7.107	-0.014	98	312840	4.00	4.15	
39 Hexane	56	7.174	7.179	-0.005	86	482705	4.00	4.00	
40 cis-1,2-Dichloroethene	96	7.492	7.492	0.000	93	712388	4.00	4.01	
41 Ethyl acetate	43	7.676	7.688	-0.012	99	1232791	4.00	4.17	
42 Chloroform	83	7.810	7.811	-0.001	96	1553122	4.00	3.88	
43 Tetrahydrofuran	42	8.161	8.178	-0.017	86	580107	4.00	3.97	
44 1,1,1-Trichloroethane	97	8.765	8.769	-0.004	94	1680641	4.00	4.03	
45 1,2-Dichloroethane	62	8.840	8.840	0.000	99	1044848	4.00	3.99	
47 Benzene	78	9.342	9.341	0.001	96	1974761	4.00	4.05	
48 Cyclohexane	69	9.358	9.362	-0.004	95	309783	4.00	4.24	
46 n-Butanol	31	9.336	9.365	-0.029	60	175085	4.00	4.34	
50 Carbon tetrachloride	117	9.380	9.378	0.002	97	1751616	4.00	4.21	
52 Isooctane	57	10.205	10.206	-0.001	98	2885411	4.00	4.15	
53 1,2-Dichloropropane	63	10.604	10.602	0.002	86	682983	4.00	4.05	
54 n-Heptane	71	10.614	10.617	-0.003	84	695938	4.00	4.26	
55 Trichloroethene	130	10.668	10.667	0.001	95	973448	4.00	4.15	
56 Dibromomethane	93	10.712	10.711	0.001	95	831073	4.00	3.99	
57 Dichlorobromomethane	83	10.889	10.886	0.003	98	1611990	4.00	4.35	
58 1,4-Dioxane	88	10.900	10.912	-0.012	83	319197	4.00	4.25	
59 Methyl methacrylate	41	11.040	11.045	-0.005	98	761754	4.00	4.62	
61 4-Methyl-2-pentanone (MIBK	43	11.919	11.931	-0.012	94	1259401	4.00	4.34	
62 cis-1,3-Dichloropropene	75	11.968	11.968	0.000	92	1228466	4.00	4.53	
63 trans-1,3-Dichloropropene	75	12.707	12.709	-0.002	96	1169692	4.00	4.60	
64 Toluene	91	12.842	12.845	-0.003	94	2501333	4.00	4.25	
65 1,1,2-Trichloroethane	83	12.906	12.904	0.002	98	705972	4.00	4.18	
66 2-Hexanone	58	13.343	13.355	-0.012	97	714062	4.00	4.80	
67 Chlorodibromomethane	129	13.629	13.628	0.001	98	1664137	4.00	4.78	
68 n-Octane	85	13.656	13.658	-0.002	86	815331	4.00	4.33	
69 Ethylene Dibromide	107	13.920	13.923	-0.003	98	1358421	4.00	4.34	
70 Tetrachloroethene	129	14.049	14.048	0.001	97	954469	4.00	4.14	
71 Chlorobenzene	112	14.950	14.952	-0.002	94	1994464	4.00	4.04	
72 Ethylbenzene	91	15.279	15.278	0.001	98	3290297	4.00	4.27	
73 m-Xylene & p-Xylene	91	15.451	15.452	-0.001	0	5046733	8.00	8.55	
74 Bromoform	173	15.856	15.854	0.002	97	1559205	4.00	5.00	
75 Styrene	104	15.921	15.923	-0.002	98	1920288	4.00	4.64	
76 n-Nonane	57	15.958	15.961	-0.003	84	1364959	4.00	4.19	
77 o-Xylene	91	15.985	15.986	-0.001	98	2630168	4.00	4.17	
78 1,1,2,2-Tetrachloroethane	83	16.309	16.308	0.001	100	1758724	4.00	4.24	
79 1,2,3-Trichloropropane	110	16.465	16.464	0.001	97	591665	4.00	4.06	
80 Isopropylbenzene	105	16.605	16.605	0.000	96	3643421	4.00	4.00	
81 N-Propylbenzene	120	17.182	17.182	0.000	99	1049883	4.00	4.30	
82 2-Chlorotoluene	126	17.204	17.203	0.001	96	928581	4.00	4.11	
83 4-Ethyltoluene	105	17.350	17.351	-0.001	99	3912288	4.00	4.33	
84 1,3,5-Trimethylbenzene	120	17.436	17.436	0.000	93	1620384	4.00	4.38	
85 Alpha Methyl Styrene	118	17.689	17.691	-0.002	88	1590809	4.00	4.59	
86 n-Decane	57	17.824	17.826	-0.002	93	1993844	4.00	4.35	
87 tert-Butylbenzene	119	17.905	17.906	-0.001	93	3691545	4.00	4.27	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.921	17.921	0.000	96	3292671	4.00	4.26	
89 1,3-Dichlorobenzene	146	18.191	18.189	0.002	99	2217431	4.00	4.21	
90 sec-Butylbenzene	105	18.207	18.206	0.001	98	4814563	4.00	4.35	
91 Benzyl chloride	91	18.272	18.273	-0.001	98	3018732	4.00	4.44	
92 1,4-Dichlorobenzene	146	18.288	18.287	0.001	95	2222060	4.00	4.18	
93 4-Isopropyltoluene	119	18.390	18.391	-0.001	97	4473245	4.00	4.50	
94 1,2,3-Trimethylbenzene	105	18.428	18.429	-0.001	98	3720027	4.00	4.30	
95 1,2-Dichlorobenzene	146	18.671	18.672	-0.001	95	2160064	4.00	4.19	
98 n-Butylbenzene	91	18.865	18.865	0.000	99	4159498	4.00	4.57	
99 Undecane	57	19.258	19.259	-0.001	92	2432418	4.00	4.57	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	99	1901418	4.00	4.92	
101 1,2,4,5-Tetramethylbenzene	119	19.674	19.674	0.000	97	5868924	4.00	4.46	
104 Dodecane	57	20.369	20.366	0.003	97	2542680	4.00	4.77	
105 1,2,4-Trichlorobenzene	180	20.477	20.474	0.003	94	2148606	4.00	5.01	
106 Naphthalene	128	20.607	20.603	0.004	99	4921580	4.00	4.96	
107 Hexachlorobutadiene	225	20.860	20.859	0.001	97	1997835	4.00	4.52	
108 1,2,3-Trichlorobenzene	180	20.898	20.897	0.001	95	2025469	4.00	4.78	
109 2-Methylnaphthalene	142	21.701	21.702	-0.001	100	3367217	9.20	12.9	
110 1-Methylnaphthalene	142	21.847	21.847	0.000	100	2775316	9.20	12.3	
S 111 Xylenes, Total	100				0		12.0	12.7	
S 112 1,2-Dichloroethene, Total	1				0		8.00	7.95	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40L7DNP_00015	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

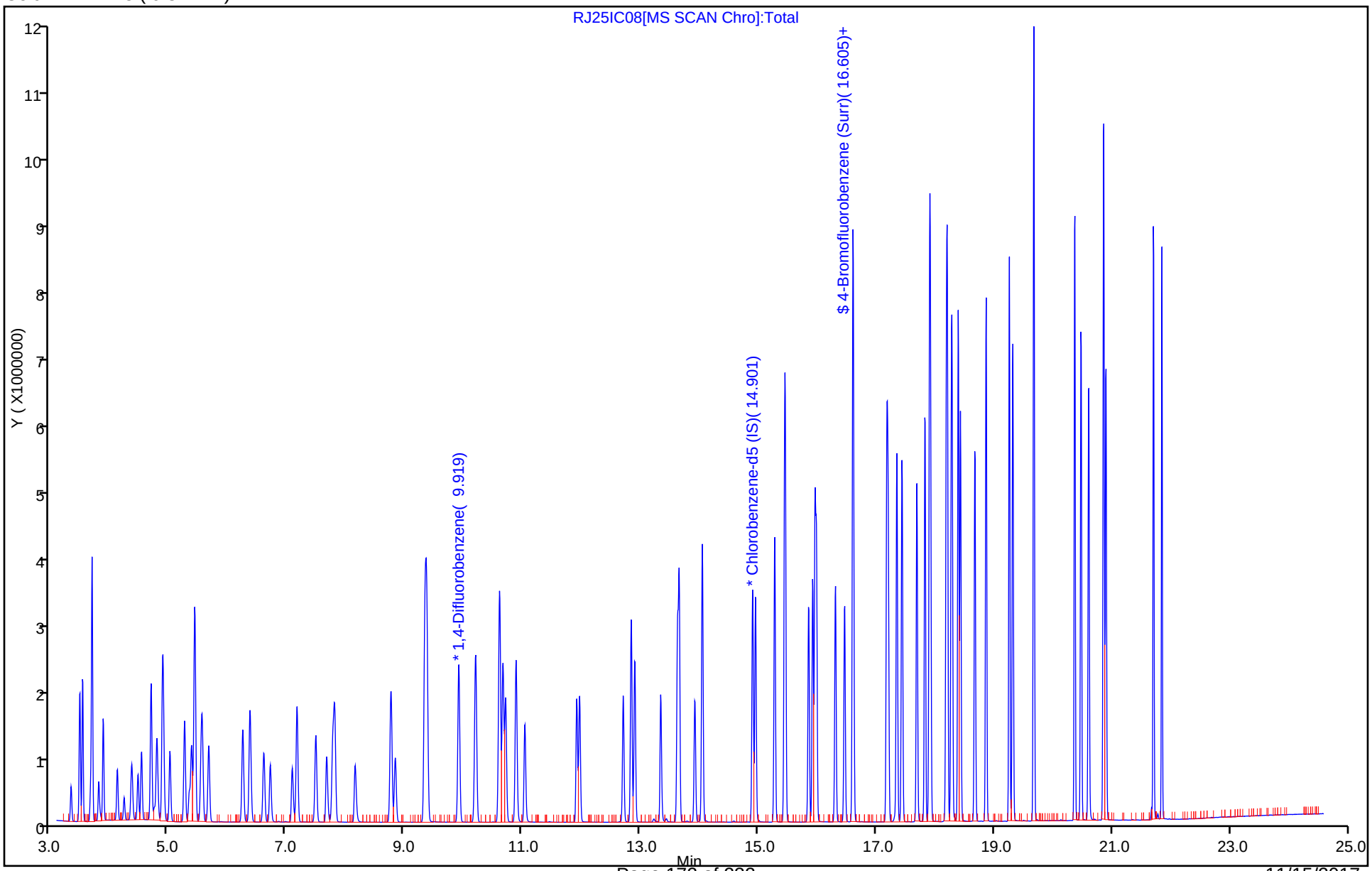
Report Date: 27-Oct-2017 11:56:17 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC08.D

Injection Date:	25-Oct-2017 18:31:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L8			Worklist Smp#:	10
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

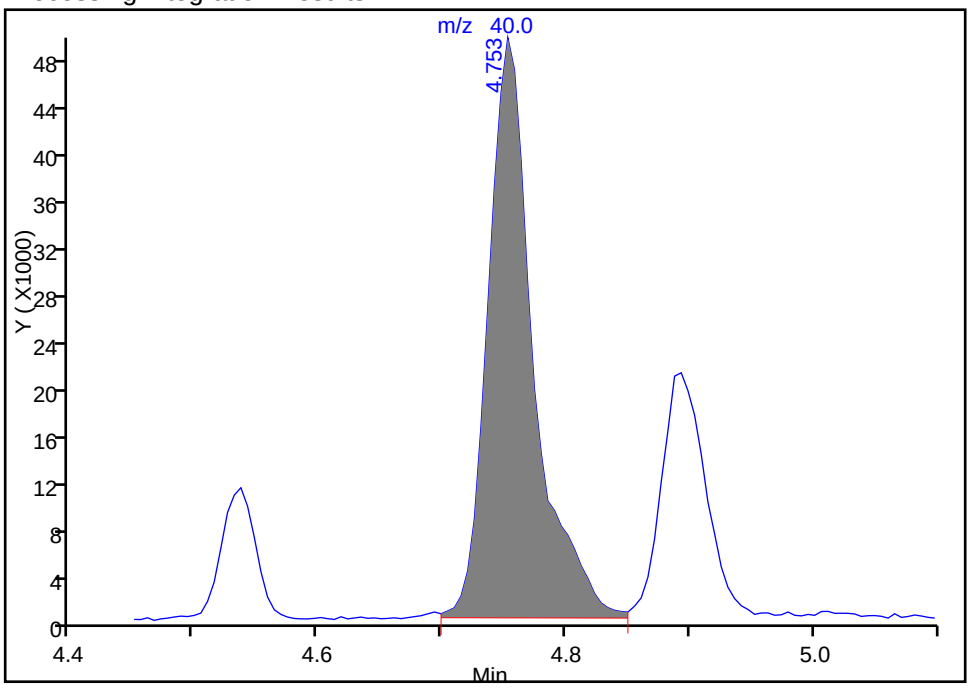
Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC08.D
Injection Date: 25-Oct-2017 18:31:30 Instrument ID: MR
Lims ID: IC L8
Client ID:
Operator ID: ALS Bottle#: 6 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

21 Acetonitrile, CAS: 75-05-8

Signal: 1

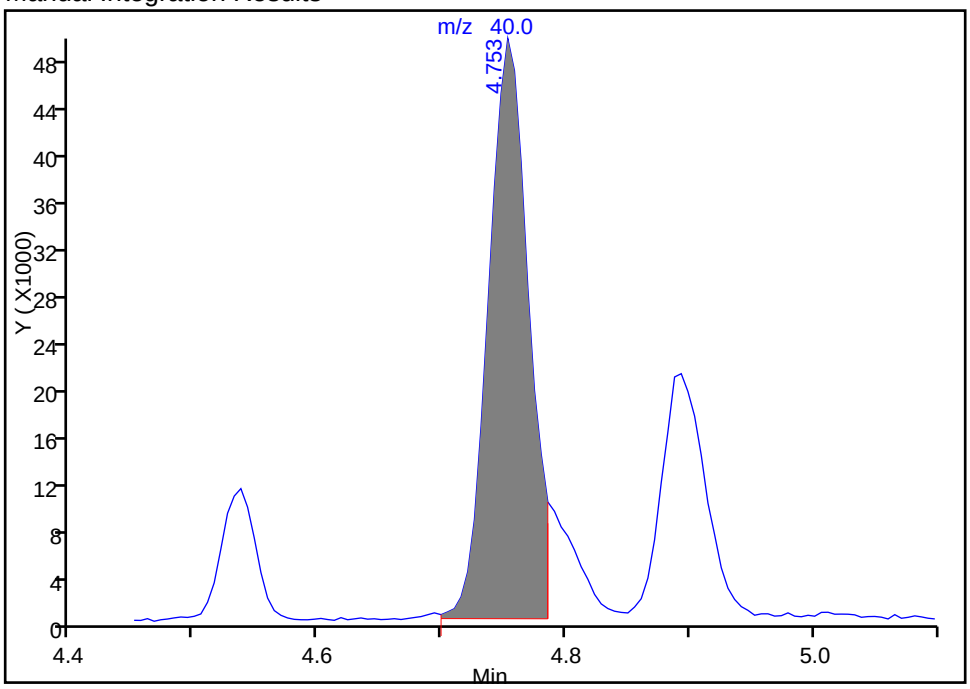
Processing Integration Results

RT: 4.75
Area: 125479
Amount: 4.278931
Amount Units: ppb v/v



Manual Integration Results

RT: 4.75
Area: 111432
Amount: 3.866056
Amount Units: ppb v/v



Reviewer: tajh, 26-Oct-2017 12:13:57
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC09.D
Lims ID: IC L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 25-Oct-2017 19:18:30 ALS Bottle#: 7 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-011
Misc. Info.: 123603
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 11:56:19 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 26-Oct-2017 12:16:35

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.794	7.779	0.015	82	450605	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.930	9.918	0.012	94	2591948	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.907	14.903	0.004	86	2258863	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.611	16.610	0.001	94	1563108	4.00	3.78	
6 Chlorodifluoromethane	67	3.507	3.505	0.002	96	399853	8.00	7.06	
7 Propene	41	3.518	3.509	0.009	97	884721	8.00	6.98	
8 Dichlorodifluoromethane	85	3.561	3.554	0.007	100	3324893	8.00	7.53	
9 Chloromethane	52	3.701	3.690	0.011	100	301993	8.00	7.13	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.723	3.713	0.010	91	2405230	8.00	7.44	
11 Vinyl chloride	62	3.836	3.827	0.009	99	888956	8.00	6.95	
13 Butadiene	54	3.912	3.900	0.012	90	599027	8.00	7.17	
12 Butane	43	3.917	3.904	0.013	90	999430	8.00	7.10	
14 Bromomethane	94	4.154	4.140	0.014	98	964057	8.00	7.36	
15 Chloroethane	64	4.268	4.254	0.014	98	421811	8.00	7.17	
16 Ethanol	31	4.386	4.368	0.018	94	1460090	40.0	35.5	
17 Vinyl bromide	106	4.505	4.488	0.017	98	983817	8.00	7.21	
18 2-Methylbutane	43	4.559	4.546	0.013	84	696681	8.00	7.25	
19 Acrolein	56	4.721	4.709	0.012	51	245571	8.00	6.72	
20 Trichlorofluoromethane	101	4.726	4.710	0.016	99	3168243	8.00	7.14	
21 Acetonitrile	40	4.775	4.770	0.005	97	255539	8.00	8.33	
22 Acetone	58	4.818	4.807	0.011	98	1043967	24.0	21.0	
24 Pentane	72	4.915	4.899	0.016	98	234577	8.00	7.63	
23 Isopropyl alcohol	45	4.920	4.906	0.014	97	4278764	24.0	22.3	
25 Ethyl ether	31	5.039	5.033	0.006	83	964411	8.00	7.31	
26 1,1-Dichloroethene	96	5.292	5.274	0.018	98	1337323	8.00	7.45	
27 Acrylonitrile	53	5.368	5.349	0.019	95	870731	8.00	7.78	
28 2-Methyl-2-propanol	59	5.400	5.393	0.007	93	2641518	8.00	7.79	
29 1,1,2-Trichloro-1,2,2-trif	101	5.459	5.446	0.013	97	2860127	8.00	7.41	
30 Methylene Chloride	84	5.573	5.552	0.021	88	1214064	8.00	6.62	
31 3-Chloro-1-propene	39	5.589	5.572	0.017	98	1096804	8.00	7.60	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.702	5.683	0.019	98	3728924	8.00	7.66	
33 trans-1,2-Dichloroethene	96	6.274	6.253	0.021	98	1412134	8.00	7.64	
34 Methyl tert-butyl ether	73	6.392	6.392	0.000	95	4095585	8.00	7.81	
36 1,1-Dichloroethane	63	6.629	6.609	0.020	100	2399193	8.00	7.34	
37 Vinyl acetate	43	6.737	6.727	0.010	99	2998874	8.00	8.43	
38 2-Butanone (MEK)	72	7.104	7.107	-0.003	98	648132	8.00	8.08	
39 Hexane	56	7.190	7.179	0.011	86	967848	8.00	7.55	
40 cis-1,2-Dichloroethene	96	7.508	7.492	0.016	92	1456970	8.00	7.72	
41 Ethyl acetate	43	7.686	7.688	-0.002	99	2476675	8.00	7.88	
42 Chloroform	83	7.827	7.811	0.016	97	3123300	8.00	7.34	
43 Tetrahydrofuran	42	8.172	8.178	-0.006	86	1176753	8.00	7.57	
44 1,1,1-Trichloroethane	97	8.781	8.769	0.012	95	3393282	8.00	7.66	
45 1,2-Dichloroethane	62	8.851	8.840	0.011	99	2085161	8.00	7.47	
47 Benzene	78	9.353	9.341	0.012	96	3909074	8.00	7.52	
48 Cyclohexane	69	9.369	9.362	0.007	94	608419	8.00	7.81	
46 n-Butanol	31	9.342	9.365	-0.023	66	369245	8.00	8.57	
50 Carbon tetrachloride	117	9.390	9.378	0.012	97	3498240	8.00	7.88	
52 Isooctane	57	10.210	10.206	0.004	98	5699452	8.00	7.68	
53 1,2-Dichloropropane	63	10.609	10.602	0.007	86	1342220	8.00	7.46	
54 n-Heptane	71	10.625	10.617	0.008	82	1381937	8.00	7.92	
55 Trichloroethene	130	10.674	10.667	0.007	97	1983769	8.00	7.92	
56 Dibromomethane	93	10.717	10.711	0.006	94	1685672	8.00	7.59	
57 Dichlorobromomethane	83	10.895	10.886	0.009	98	3280388	8.00	8.29	
58 1,4-Dioxane	88	10.900	10.912	-0.012	81	635939	8.00	7.94	
59 Methyl methacrylate	41	11.040	11.045	-0.005	98	1560531	8.00	8.88	
61 4-Methyl-2-pentanone (MIBK	43	11.925	11.931	-0.006	94	2547644	8.00	8.22	
62 cis-1,3-Dichloropropene	75	11.973	11.968	0.005	92	2495678	8.00	8.62	
63 trans-1,3-Dichloropropene	75	12.712	12.709	0.003	96	2418731	8.00	8.85	
64 Toluene	91	12.847	12.845	0.002	94	5000244	8.00	7.91	
65 1,1,2-Trichloroethane	83	12.906	12.904	0.002	98	1421474	8.00	7.82	
66 2-Hexanone	58	13.348	13.355	-0.007	97	1457582	8.00	9.11	
67 Chlorodibromomethane	129	13.634	13.628	0.006	97	3404955	8.00	9.09	
68 n-Octane	85	13.661	13.658	0.003	85	1619656	8.00	8.00	
69 Ethylene Dibromide	107	13.925	13.923	0.002	98	2777984	8.00	8.25	
70 Tetrachloroethene	129	14.049	14.048	0.001	97	1934461	8.00	7.81	
71 Chlorobenzene	112	14.955	14.952	0.003	94	3997886	8.00	7.54	
72 Ethylbenzene	91	15.279	15.278	0.001	98	6456253	8.00	7.80	
73 m-Xylene & p-Xylene	91	15.451	15.452	-0.001	0	9680607	16.0	15.2	
74 Bromoform	173	15.856	15.854	0.002	99	3245877	8.00	9.67	
75 Styrene	104	15.926	15.923	0.003	98	3870267	8.00	8.69	
76 n-Nonane	57	15.964	15.961	0.003	83	2584312	8.00	7.39	
77 o-Xylene	91	15.985	15.986	-0.001	98	5131084	8.00	7.56	
78 1,1,2,2-Tetrachloroethane	83	16.309	16.308	0.001	100	3446997	8.00	7.72	
79 1,2,3-Trichloropropane	110	16.465	16.464	0.001	97	1168938	8.00	7.46	
80 Isopropylbenzene	105	16.605	16.605	0.000	97	6996543	8.00	7.14	
81 N-Propylbenzene	120	17.182	17.182	0.000	98	2035261	8.00	7.75	
82 2-Chlorotoluene	126	17.204	17.203	0.001	97	1794004	8.00	7.38	
83 4-Ethyltoluene	105	17.350	17.351	-0.001	98	7418547	8.00	7.64	
84 1,3,5-Trimethylbenzene	120	17.436	17.436	0.000	93	3145506	8.00	7.90	
85 Alpha Methyl Styrene	118	17.689	17.691	-0.002	89	3163348	8.00	8.49	
86 n-Decane	57	17.829	17.826	0.003	94	3697959	8.00	7.51	
87 tert-Butylbenzene	119	17.905	17.906	-0.001	92	6958642	8.00	7.48	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.921	17.921	0.000	95	6104034	8.00	7.35	
89 1,3-Dichlorobenzene	146	18.191	18.189	0.002	99	4216783	8.00	7.45	
90 sec-Butylbenzene	105	18.207	18.206	0.001	99	8700337	8.00	7.30	
91 Benzyl chloride	91	18.272	18.273	-0.001	98	5648570	8.00	7.73	
92 1,4-Dichlorobenzene	146	18.288	18.287	0.001	94	4227916	8.00	7.40	
93 4-Isopropyltoluene	119	18.390	18.391	-0.001	96	8172682	8.00	7.64	
94 1,2,3-Trimethylbenzene	105	18.428	18.429	-0.001	98	6961070	8.00	7.49	
95 1,2-Dichlorobenzene	146	18.676	18.672	0.004	96	4093958	8.00	7.38	
98 n-Butylbenzene	91	18.865	18.865	0.000	99	7568750	8.00	7.74	
99 Undecane	57	19.258	19.259	-0.001	91	4523930	8.00	7.90	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	99	3591223	8.00	8.64	
101 1,2,4,5-Tetramethylbenzene	119	19.674	19.674	0.000	97	10496588	8.00	7.41	
104 Dodecane	57	20.369	20.366	0.003	96	4689410	8.00	8.17	
105 1,2,4-Trichlorobenzene	180	20.477	20.474	0.003	95	4331499	8.00	9.39	
106 Naphthalene	128	20.607	20.603	0.004	98	9478899	8.00	8.88	
107 Hexachlorobutadiene	225	20.860	20.859	0.001	96	4054563	8.00	8.54	
108 1,2,3-Trichlorobenzene	180	20.898	20.897	0.001	95	4075342	8.00	8.94	
109 2-Methylnaphthalene	142	21.707	21.702	0.005	99	6499587	18.4	23.2	
110 1-Methylnaphthalene	142	21.847	21.847	0.000	99	5249732	18.4	21.6	
S 111 Xylenes, Total	100				0		24.0	22.8	
S 112 1,2-Dichloroethene, Total	1				0		16.0	15.4	

Reagents:

40L8DNP_00015	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

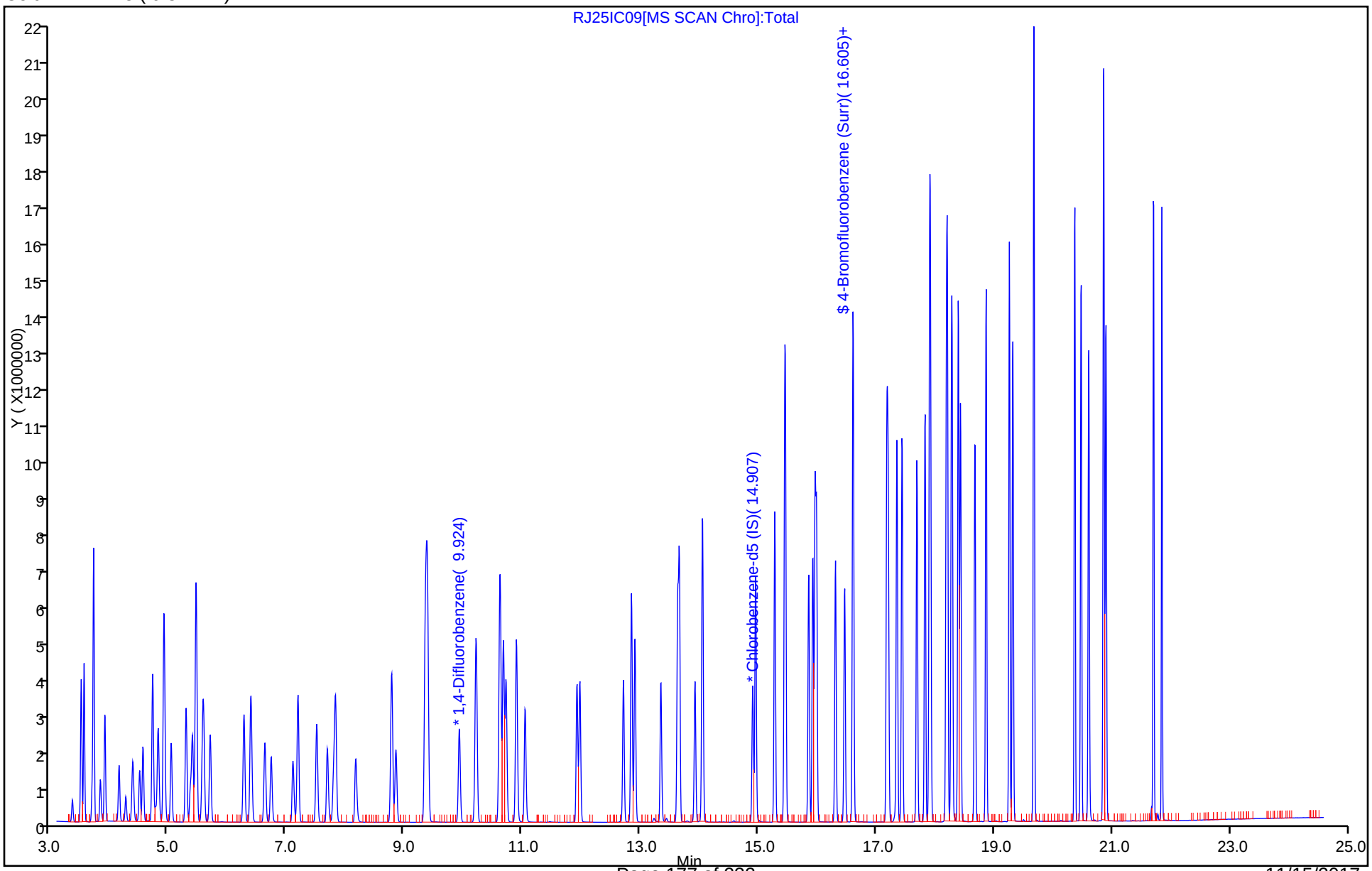
Report Date: 27-Oct-2017 11:56:20 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC09.D

Injection Date:	25-Oct-2017 19:18:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L9			Worklist Smp#:	11
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D
Lims ID: IC L10
Client ID:
Sample Type: IC Calib Level: 10
Inject. Date: 25-Oct-2017 20:06:30 ALS Bottle#: 8 Worklist Smp#: 12
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-012
Misc. Info.: 123602
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 11:56:23 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 26-Oct-2017 12:17:31

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.800	7.779	0.021	93	463451	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.930	9.918	0.012	94	2631400	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.907	14.903	0.004	86	2270324	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.616	16.610	0.006	95	1494682	4.00	3.59	
6 Chlorodifluoromethane	67	3.502	3.505	-0.003	96	803086	16.0	13.8	
7 Propene	41	3.507	3.509	-0.002	97	1695857	16.0	13.0	
8 Dichlorodifluoromethane	85	3.556	3.554	0.002	99	5963801	16.0	13.1	
9 Chloromethane	52	3.691	3.690	0.001	99	590896	16.0	13.6	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.718	3.713	0.005	91	4741073	16.0	14.3	
11 Vinyl chloride	62	3.831	3.827	0.004	99	1751141	16.0	13.3	
13 Butadiene	54	3.907	3.900	0.007	77	1162419	16.0	13.5	
12 Butane	43	3.907	3.904	0.003	80	1909389	16.0	13.2	
14 Bromomethane	94	4.149	4.140	0.009	99	1928308	16.0	14.3	
15 Chloroethane	64	4.262	4.254	0.008	98	831792	16.0	13.8	
16 Ethanol	31	4.392	4.368	0.024	94	2683051	80.0	63.4	
17 Vinyl bromide	106	4.500	4.488	0.012	98	1957010	16.0	13.9	
18 2-Methylbutane	43	4.554	4.546	0.008	83	1352243	16.0	13.7	
19 Acrolein	56	4.721	4.709	0.012	86	497887	16.0	13.3	
20 Trichlorofluoromethane	101	4.721	4.710	0.011	99	6022956	16.0	13.2	
21 Acetonitrile	40	4.775	4.770	0.005	97	496965	16.0	15.8	
22 Acetone	58	4.818	4.807	0.011	98	1999735	48.0	39.1	
24 Pentane	72	4.910	4.899	0.011	97	458645	16.0	14.5	
23 Isopropyl alcohol	45	4.926	4.906	0.020	98	7900031	48.0	40.0	
25 Ethyl ether	31	5.039	5.033	0.006	82	1911537	16.0	14.1	
26 1,1-Dichloroethene	96	5.287	5.274	0.013	99	2771817	16.0	15.0	
27 Acrylonitrile	53	5.368	5.349	0.019	94	1776662	16.0	15.4	
28 2-Methyl-2-propanol	59	5.406	5.393	0.013	93	5152924	16.0	14.8	
29 1,1,2-Trichloro-1,2,2-trif	101	5.460	5.446	0.014	96	5674605	16.0	14.3	
30 Methylene Chloride	84	5.573	5.552	0.021	87	2447809	16.0	13.0	
31 3-Chloro-1-propene	39	5.589	5.572	0.017	97	2172614	16.0	14.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.697	5.683	0.014	98	7538407	16.0	15.1	
33 trans-1,2-Dichloroethene	96	6.274	6.253	0.021	97	2897432	16.0	15.2	
34 Methyl tert-butyl ether	73	6.392	6.392	0.000	95	8173520	16.0	15.2	
36 1,1-Dichloroethane	63	6.630	6.609	0.021	100	4822750	16.0	14.3	
37 Vinyl acetate	43	6.738	6.727	0.011	99	6118655	16.0	16.7	
38 2-Butanone (MEK)	72	7.110	7.107	0.003	98	1326766	16.0	16.1	
39 Hexane	56	7.190	7.179	0.011	85	1914109	16.0	14.5	
40 cis-1,2-Dichloroethene	96	7.509	7.492	0.017	92	2990205	16.0	15.4	
41 Ethyl acetate	43	7.692	7.688	0.004	99	4979960	16.0	15.4	
42 Chloroform	83	7.827	7.811	0.016	97	6252680	16.0	14.3	
43 Tetrahydrofuran	42	8.172	8.178	-0.006	85	2361471	16.0	14.8	
44 1,1,1-Trichloroethane	97	8.781	8.769	0.012	95	6808210	16.0	14.9	
45 1,2-Dichloroethane	62	8.851	8.840	0.011	99	4238188	16.0	14.9	
47 Benzene	78	9.353	9.341	0.012	96	7444515	16.0	14.1	
48 Cyclohexane	69	9.374	9.362	0.012	92	1155065	16.0	14.6	
46 n-Butanol	31	9.342	9.365	-0.023	64	690517	16.0	15.8	
50 Carbon tetrachloride	117	9.391	9.378	0.013	97	6918118	16.0	15.4	
52 Isooctane	57	10.216	10.206	0.010	98	10894189	16.0	14.5	
53 1,2-Dichloropropane	63	10.609	10.602	0.007	86	2579606	16.0	14.1	
54 n-Heptane	71	10.625	10.617	0.008	81	2653569	16.0	15.0	
55 Trichloroethene	130	10.679	10.667	0.012	97	4015133	16.0	15.8	
56 Dibromomethane	93	10.722	10.711	0.011	93	3407808	16.0	15.1	
57 Dichlorobromomethane	83	10.895	10.886	0.009	99	6527638	16.0	16.3	
58 1,4-Dioxane	88	10.906	10.912	-0.006	82	1204443	16.0	14.8	
59 Methyl methacrylate	41	11.046	11.045	0.001	96	3144744	16.0	17.6	
61 4-Methyl-2-pentanone (MIBK	43	11.925	11.931	-0.006	93	4956312	16.0	15.8	
62 cis-1,3-Dichloropropene	75	11.974	11.968	0.006	91	5036601	16.0	17.1	
63 trans-1,3-Dichloropropene	75	12.712	12.709	0.003	96	4954997	16.0	18.0	
64 Toluene	91	12.852	12.845	0.007	95	9732782	16.0	15.3	
65 1,1,2-Trichloroethane	83	12.912	12.904	0.008	98	2818197	16.0	15.4	
66 2-Hexanone	58	13.349	13.355	-0.006	98	2849200	16.0	17.7	
67 Chlorodibromomethane	129	13.634	13.628	0.006	97	6733481	16.0	17.9	
68 n-Octane	85	13.661	13.658	0.003	82	3115693	16.0	15.3	
69 Ethylene Dibromide	107	13.931	13.923	0.008	99	5559926	16.0	16.4	
70 Tetrachloroethene	129	14.055	14.048	0.007	98	3841103	16.0	15.4	
71 Chlorobenzene	112	14.955	14.952	0.003	94	7825995	16.0	14.7	
72 Ethylbenzene	91	15.279	15.278	0.001	98	12015013	16.0	14.4	
73 m-Xylene & p-Xylene	91	15.457	15.452	0.005	0	17160895	32.0	26.9	
74 Bromoform	173	15.856	15.854	0.002	97	6558869	16.0	19.4	
75 Styrene	104	15.926	15.923	0.003	98	7560228	16.0	16.9	
76 n-Nonane	57	15.964	15.961	0.003	81	4652330	16.0	13.2	
77 o-Xylene	91	15.991	15.986	0.005	99	9535161	16.0	14.0	
78 1,1,2,2-Tetrachloroethane	83	16.309	16.308	0.001	99	6530374	16.0	14.6	
79 1,2,3-Trichloropropane	110	16.465	16.464	0.001	96	2302436	16.0	14.6	
80 Isopropylbenzene	105	16.606	16.605	0.001	97	12663589	16.0	12.9	
81 N-Propylbenzene	120	17.183	17.182	0.001	98	3819742	16.0	14.5	
82 2-Chlorotoluene	126	17.204	17.203	0.001	95	3423413	16.0	14.0	
83 4-Ethyltoluene	105	17.355	17.351	0.004	97	13244430	16.0	13.6	
84 1,3,5-Trimethylbenzene	120	17.441	17.436	0.005	94	5947640	16.0	14.9	
85 Alpha Methyl Styrene	118	17.695	17.691	0.004	89	6018724	16.0	16.1	
86 n-Decane	57	17.830	17.826	0.004	94	6320845	16.0	12.8	
87 tert-Butylbenzene	119	17.911	17.906	0.004	92	12330820	16.0	13.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.927	17.921	0.006	95	10587367	16.0	12.7	
89 1,3-Dichlorobenzene	146	18.191	18.189	0.002	99	7759848	16.0	13.6	
90 sec-Butylbenzene	105	18.212	18.206	0.006	98	14464983	16.0	12.1	
91 Benzyl chloride	91	18.277	18.273	0.004	99	9882812	16.0	13.5	
92 1,4-Dichlorobenzene	146	18.293	18.287	0.006	93	7788742	16.0	13.6	
93 4-Isopropyltoluene	119	18.396	18.391	0.005	94	13583476	16.0	12.6	
94 1,2,3-Trimethylbenzene	105	18.434	18.429	0.005	97	12212729	16.0	13.1	
95 1,2-Dichlorobenzene	146	18.676	18.672	0.004	94	7481468	16.0	13.4	
98 n-Butylbenzene	91	18.865	18.865	0.000	98	12271794	16.0	12.5	
99 Undecane	57	19.259	19.259	0.000	88	7559425	16.0	13.1	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	98	6432249	16.0	15.4	
104 Dodecane	57	20.369	20.366	0.003	93	7775809	16.0	13.5	
105 1,2,4-Trichlorobenzene	180	20.477	20.474	0.003	95	8252878	16.0	17.8	
107 Hexachlorobutadiene	225	20.860	20.859	0.001	96	7676608	16.0	16.1	
108 1,2,3-Trichlorobenzene	180	20.898	20.897	0.001	95	8089214	16.0	17.7	
109 2-Methylnaphthalene	142	21.707	21.702	0.005	98	11773396	36.8	41.8	e
110 1-Methylnaphthalene	142	21.847	21.847	0.000	97	9724344	36.8	39.7	
S 111 Xylenes, Total	100				0		48.0	40.9	
S 112 1,2-Dichloroethene, Total	1				0		32.0	30.6	

QC Flag Legend

Processing Flags

e - Potential Peak Saturated

Reagents:

40L9DNP_00018	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

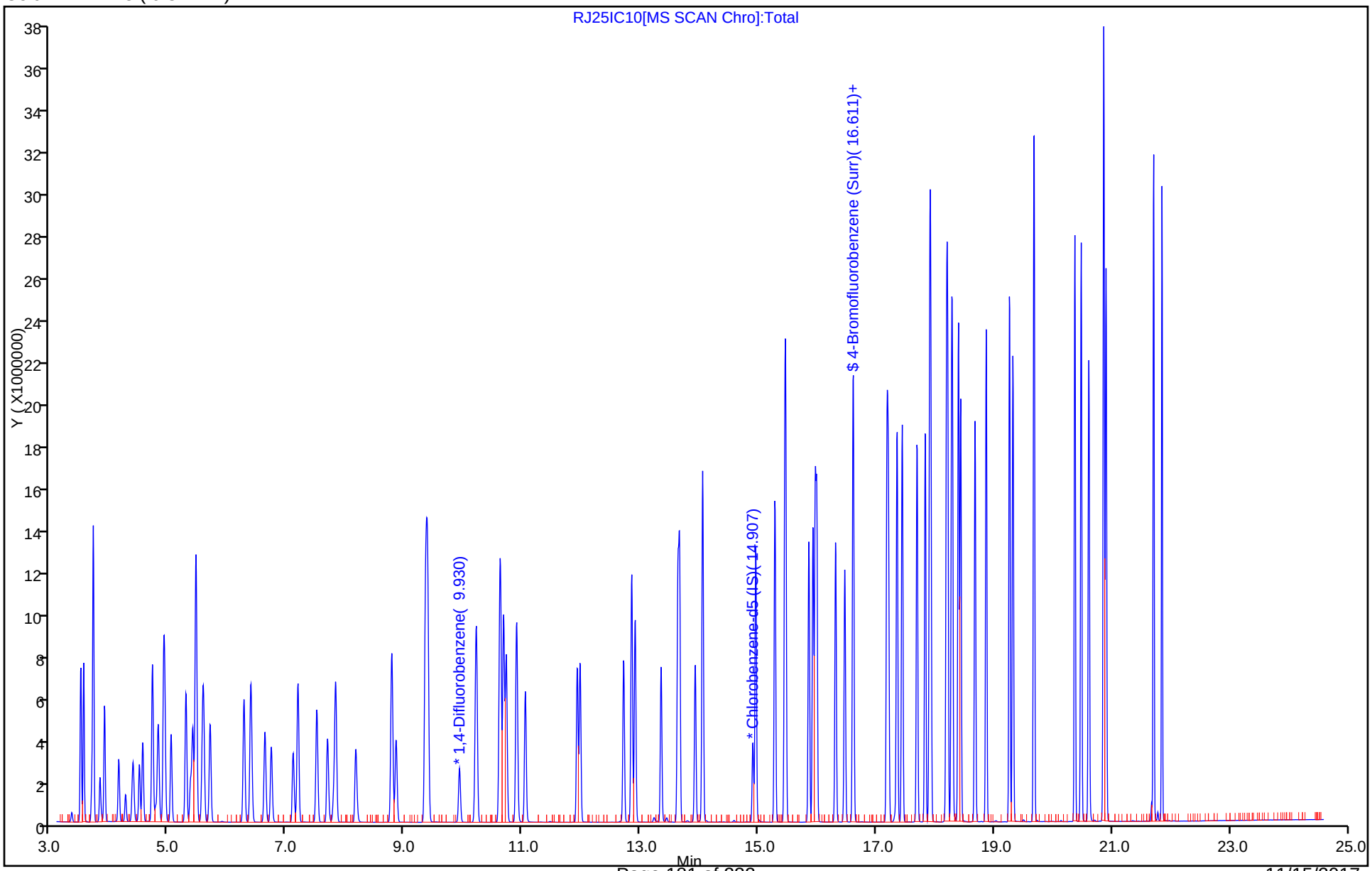
Report Date: 27-Oct-2017 11:56:24 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Injection Date:	25-Oct-2017 20:06:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L10			Worklist Smp#:	12
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1

SDG No.:

Lab Sample ID: ICV 140-15542/14 Calibration Date: 10/25/2017 21:40

Instrument ID: MR Calib Start Date: 10/25/2017 13:00

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/25/2017 20:06

Lab File ID: RJ25ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.5024	0.4937		1.97	2.00	-1.7	35.0
Propene	Ave	1.126	1.072		1.91	2.00	-4.7	35.0
Dichlorodifluoromethane	Ave	3.921	4.337		2.21	2.00	10.6	35.0
Chloromethane	Ave	0.3761	0.3556		1.89	2.00	-5.4	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.869	3.034		2.12	2.00	5.8	35.0
Vinyl chloride	Ave	1.136	1.115		1.96	2.00	-1.9	35.0
1,3-Butadiene	Ave	0.7416	0.7346		1.98	2.00	-1.0	35.0
Butane	Ave	1.249	1.270		2.03	2.00	1.6	35.0
Bromomethane	Ave	1.163	1.161		2.00	2.00	-0.2	35.0
Chloroethane	Ave	0.5221	0.5167		1.98	2.00	-1.0	35.0
Ethanol	Ave	0.3654	0.3418		9.35	10.0	-6.5	35.0
Vinyl bromide	Ave	1.211	1.259		2.08	2.00	4.0	35.0
2-Methylbutane	Ave	0.8530	0.8925		2.09	2.00	4.6	35.0
Acrolein	Ave	0.3243	0.3377		2.08	2.00	4.1	35.0
Trichlorofluoromethane	Ave	3.937	3.974		2.02	2.00	0.9	35.0
Acetonitrile	Ave	0.2722	0.2698		1.98	2.00	-0.9	35.0
Acetone	Ave	0.4409	0.4235		5.76	6.00	-4.0	35.0
Isopropyl alcohol	Ave	1.706	1.717		6.04	6.00	0.7	35.0
Pentane	Ave	0.2731	0.3034		2.22	2.00	11.1	35.0
Ethyl ether	Ave	1.171	1.204		2.06	2.00	2.8	35.0
1,1-Dichloroethene	Ave	1.594	1.652		2.07	2.00	3.7	35.0
Acrylonitrile	Ave	0.9935	1.076		2.17	2.00	8.3	35.0
tert-Butyl alcohol	Ave	3.009	3.177		2.11	2.00	5.6	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.426	3.609		2.11	2.00	5.3	35.0
Methylene Chloride	Ave	1.629	1.559		1.91	2.00	-4.3	35.0
3-Chloropropene	Ave	1.281	1.296		2.02	2.00	1.2	35.0
Carbon disulfide	Ave	4.321	4.473		2.07	2.00	3.5	35.0
trans-1,2-Dichloroethene	Ave	1.640	1.693		2.06	2.00	3.2	35.0
Methyl tert-butyl ether	Ave	4.654	5.005		2.15	2.00	7.6	35.0
1,1-Dichloroethane	Ave	2.901	2.966		2.04	2.00	2.2	35.0
Vinyl acetate	Ave	3.158	3.512		2.22	2.00	11.2	35.0
2-Butanone (MEK)	Ave	0.7119	0.7566		2.13	2.00	6.3	35.0
Hexane	Ave	1.139	1.188		2.09	2.00	4.3	35.0
cis-1,2-Dichloroethene	Ave	1.676	1.787		2.13	2.00	6.6	35.0
Ethyl acetate	Ave	2.792	2.766		1.98	2.00	-0.9	35.0
Chloroform	Ave	3.778	3.815		2.02	2.00	1.0	35.0
Tetrahydrofuran	Ave	1.380	1.400		2.03	2.00	1.4	35.0
1,1,1-Trichloroethane	Ave	3.935	4.084		2.08	2.00	3.8	35.0
1,2-Dichloroethane	Ave	0.4310	0.4469		2.07	2.00	3.7	35.0
1-Butanol	Ave	0.0665	0.0711		2.14	2.00	6.9	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1

SDG No.:

Lab Sample ID: ICV 140-15542/14 Calibration Date: 10/25/2017 21:40

Instrument ID: MR Calib Start Date: 10/25/2017 13:00

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/25/2017 20:06

Lab File ID: RJ25ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzene	Ave	0.8022	0.8707		2.17	2.00	8.5	35.0
Cyclohexane	Ave	0.1203	0.1349		2.24	2.00	12.1	35.0
Carbon tetrachloride	Ave	0.6847	0.7570		2.21	2.00	10.6	35.0
2,2,4-Trimethylpentane	Ave	1.145	1.245		2.18	2.00	8.8	35.0
1,2-Dichloropropane	Ave	0.2775	0.2923		2.11	2.00	5.3	35.0
Heptane	Ave	0.2692	0.2970		2.21	2.00	10.3	35.0
Trichloroethene	Ave	0.3866	0.4296		2.22	2.00	11.1	35.0
Dibromomethane	Ave	0.3429	0.3605		2.10	2.00	5.2	35.0
Bromodichloromethane	Ave	0.6106	0.6771		2.22	2.00	10.9	35.0
1,4-Dioxane	Ave	0.1235	0.1303		2.11	2.00	5.5	35.0
Methyl methacrylate	Ave	0.2712	0.3023		2.23	2.00	11.5	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4780	0.5199		2.18	2.00	8.8	35.0
cis-1,3-Dichloropropene	Ave	0.4468	0.5272		2.36	2.00	18.0	35.0
trans-1,3-Dichloropropene	Ave	0.4839	0.5824		2.41	2.00	20.3	35.0
Toluene	Ave	1.120	1.274		2.28	2.00	13.8	35.0
1,1,2-Trichloroethane	Ave	0.3219	0.3526		2.19	2.00	9.5	35.0
2-Hexanone	Ave	0.2834	0.3423		2.42	2.00	20.8	35.0
Dibromochloromethane	Ave	0.6633	0.8095		2.44	2.00	22.0	35.0
Octane	Ave	0.3585	0.4196		2.34	2.00	17.0	35.0
1,2-Dibromoethane (EDB)	Ave	0.5963	0.6724		2.26	2.00	12.8	35.0
Tetrachloroethene	Ave	0.4387	0.4921		2.24	2.00	12.2	35.0
Chlorobenzene	Ave	0.9392	1.039		2.21	2.00	10.6	35.0
Ethylbenzene	Ave	1.466	1.674		2.29	2.00	14.3	35.0
m-Xylene & p-Xylene	Ave	1.124	1.318		4.69	4.00	17.2	35.0
Bromoform	Ave	0.5943	0.7337		2.47	2.00	23.5	35.0
Styrene	Ave	0.7883	0.9806		2.49	2.00	24.4	35.0
Nonane	Ave	0.6196	0.7116		2.30	2.00	14.8	35.0
o-Xylene	Ave	1.201	1.334		2.22	2.00	11.1	35.0
1,1,2,2-Tetrachloroethane	Ave	0.7903	0.8918		2.26	2.00	12.8	35.0
1,2,3-Trichloropropane	Ave	0.2776	0.3071		2.21	2.00	10.6	35.0
Isopropylbenzene	Ave	1.734	1.949		2.25	2.00	12.4	35.0
Propylbenzene	Ave	0.4649	0.5737		2.47	2.00	23.4	35.0
2-Chlorotoluene	Ave	0.4305	0.5036		2.34	2.00	17.0	35.0
4-Ethyltoluene	Ave	1.720	2.009		2.34	2.00	16.8	35.0
1,3,5-Trimethylbenzene	Ave	0.7048	0.8695		2.47	2.00	23.4	35.0
Alpha Methyl Styrene	Ave	0.6597	0.8303		2.52	2.00	25.9	35.0
Decane	Ave	0.8720	1.042		2.39	2.00	19.5	35.0
tert-Butylbenzene	Ave	1.647	1.983		2.41	2.00	20.4	35.0
1,2,4-Trimethylbenzene	Ave	1.470	1.794		2.44	2.00	22.0	35.0
1,3-Dichlorobenzene	Ave	1.002	1.207		2.41	2.00	20.4	35.0
sec-Butylbenzene	Ave	2.109	2.605		2.47	2.00	23.5	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1

SDG No.:

Lab Sample ID: ICV 140-15542/14 Calibration Date: 10/25/2017 21:40

Instrument ID: MR Calib Start Date: 10/25/2017 13:00

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/25/2017 20:06

Lab File ID: RJ25ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzyl chloride	Ave	1.294	1.591		2.46	2.00	23.0	35.0
1,4-Dichlorobenzene	Ave	1.012	1.203		2.38	2.00	18.9	35.0
4-Isopropyltoluene	Ave	1.894	2.367		2.50	2.00	25.0	35.0
1,2,3-Trimethylbenzene	Ave	1.645	1.832		2.23	2.00	11.3	35.0
1,2-Dichlorobenzene	Ave	0.9822	1.171		2.38	2.00	19.2	35.0
Butylbenzene	Ave	1.731	2.150		2.48	2.00	24.2	35.0
Undecane	Ave	1.014	1.195		2.36	2.00	17.8	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.7356	0.5132		1.40	2.00	-30.2	35.0
1,2,4,5-Tetramethylbenzene	Ave	2.508	2.188		1.74	2.00	-12.8	35.0
Dodecane	Ave	1.016	1.155		2.27	2.00	13.7	35.0
1,2,4-Trichlorobenzene	Ave	0.8170	0.9785		2.40	2.00	19.8	35.0
Naphthalene	Ave	1.890	2.219		2.35	2.00	17.4	35.0
Hexachlorobutadiene	Ave	0.8407	0.9267		2.20	2.00	10.2	35.0
1,2,3-Trichlorobenzene	Ave	0.8074	0.9215		2.28	2.00	14.1	35.0
2-Methylnaphthalene	Ave	0.4957	0.2665		2.47	4.59	-46.2	50.0
1-Methylnaphthalene	Ave	0.4312	0.2477		2.64	4.60	-42.6	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7330	0.7231		3.95	4.00	-1.3	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25ICV.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 25-Oct-2017 21:40:30 ALS Bottle#: 9 Worklist Smp#: 14
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-014
Misc. Info.: 123596
Operator ID: Instrument ID: MR
Sublist:

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 14:02:36 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: liul Date: 27-Oct-2017 14:02:36

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.789	7.779	0.010	83	425799	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.924	9.918	0.006	94	2437587	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.907	14.903	0.004	86	2075967	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.611	16.610	0.001	94	1501202	4.00	3.95	
6 Chlorodifluoromethane	67	3.513	3.505	0.008	96	105098	2.00	1.97	
7 Propene	41	3.518	3.509	0.009	98	228332	2.00	1.91	
8 Dichlorodifluoromethane	85	3.561	3.554	0.007	100	923412	2.00	2.21	
9 Chloromethane	52	3.702	3.690	0.012	100	75707	2.00	1.89	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.723	3.713	0.010	93	645990	2.00	2.12	
11 Vinyl chloride	62	3.836	3.827	0.009	99	237402	2.00	1.96	
13 Butadiene	54	3.912	3.900	0.012	95	156385	2.00	1.98	
12 Butane	43	3.912	3.904	0.008	90	270321	2.00	2.03	
14 Bromomethane	94	4.149	4.140	0.009	98	247179	2.00	2.00	
15 Chloroethane	64	4.268	4.254	0.014	98	109999	2.00	1.98	
16 Ethanol	31	4.376	4.368	0.008	95	363822	10.0	9.35	
17 Vinyl bromide	106	4.500	4.488	0.012	98	268094	2.00	2.08	
18 2-Methylbutane	43	4.559	4.546	0.013	84	190003	2.00	2.09	
19 Acrolein	56	4.721	4.709	0.012	31	71895	2.00	2.08	
20 Trichlorofluoromethane	101	4.721	4.710	0.011	99	846071	2.00	2.02	
21 Acetonitrile	40	4.769	4.770	-0.001	93	57440	2.00	1.98	
22 Acetone	58	4.812	4.807	0.005	98	270478	6.00	5.76	
24 Pentane	72	4.910	4.899	0.011	74	64589	2.00	2.22	
23 Isopropyl alcohol	45	4.910	4.906	0.004	81	1096926	6.00	6.04	
25 Ethyl ether	31	5.039	5.033	0.006	84	256412	2.00	2.06	
26 1,1-Dichloroethene	96	5.287	5.274	0.013	98	351693	2.00	2.07	
27 Acrylonitrile	53	5.357	5.349	0.008	94	229018	2.00	2.17	
28 2-Methyl-2-propanol	59	5.389	5.393	-0.004	93	676352	2.00	2.11	
29 1,1,2-Trichloro-1,2,2-trif	101	5.460	5.446	0.014	97	768313	2.00	2.11	
30 Methylene Chloride	84	5.567	5.552	0.015	88	331870	2.00	1.91	
31 3-Chloro-1-propene	39	5.584	5.572	0.012	98	275975	2.00	2.02	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.697	5.683	0.014	98	952380	2.00	2.07	
33 trans-1,2-Dichloroethene	96	6.268	6.253	0.015	98	360482	2.00	2.06	
34 Methyl tert-butyl ether	73	6.392	6.392	0.000	95	1065614	2.00	2.15	
36 1,1-Dichloroethane	63	6.624	6.609	0.015	100	631412	2.00	2.04	
37 Vinyl acetate	43	6.732	6.727	0.005	99	747694	2.00	2.22	
38 2-Butanone (MEK)	72	7.104	7.107	-0.003	98	161074	2.00	2.13	
39 Hexane	56	7.191	7.179	0.011	86	252826	2.00	2.09	
40 cis-1,2-Dichloroethene	96	7.503	7.492	0.011	92	380495	2.00	2.13	
41 Ethyl acetate	43	7.687	7.688	-0.001	99	588852	2.00	1.98	
42 Chloroform	83	7.821	7.811	0.010	96	812263	2.00	2.02	
43 Tetrahydrofuran	42	8.172	8.178	-0.006	86	298009	2.00	2.03	
44 1,1,1-Trichloroethane	97	8.776	8.769	0.007	95	869460	2.00	2.08	
45 1,2-Dichloroethane	62	8.851	8.840	0.011	99	544654	2.00	2.07	
47 Benzene	78	9.347	9.341	0.006	96	1061203	2.00	2.17	
48 Cyclohexane	69	9.369	9.362	0.007	96	164393	2.00	2.24	
46 n-Butanol	31	9.347	9.365	-0.018	60	86652	2.00	2.14	
50 Carbon tetrachloride	117	9.385	9.378	0.007	96	922634	2.00	2.21	
52 Isooctane	57	10.210	10.206	0.004	98	1517905	2.00	2.18	
53 1,2-Dichloropropane	63	10.604	10.602	0.002	87	356206	2.00	2.11	
54 n-Heptane	71	10.620	10.617	0.003	83	362014	2.00	2.21	
55 Trichloroethene	130	10.674	10.667	0.007	97	523627	2.00	2.22	
56 Dibromomethane	93	10.717	10.711	0.006	94	439427	2.00	2.10	
57 Dichlorobromomethane	83	10.890	10.886	0.004	98	825211	2.00	2.22	
58 1,4-Dioxane	88	10.906	10.912	-0.006	82	158829	2.00	2.11	
59 Methyl methacrylate	41	11.041	11.045	-0.004	98	368468	2.00	2.23	
61 4-Methyl-2-pentanone (MIBK	43	11.925	11.931	-0.006	94	633670	2.00	2.18	
62 cis-1,3-Dichloropropene	75	11.974	11.968	0.006	91	642513	2.00	2.36	
63 trans-1,3-Dichloropropene	75	12.712	12.709	0.003	96	604527	2.00	2.41	
64 Toluene	91	12.847	12.845	0.002	94	1322493	2.00	2.28	
65 1,1,2-Trichloroethane	83	12.906	12.904	0.002	98	365978	2.00	2.19	
66 2-Hexanone	58	13.349	13.355	-0.006	97	355289	2.00	2.42	
67 Chlorodibromomethane	129	13.629	13.628	0.001	98	840212	2.00	2.44	
68 n-Octane	85	13.661	13.658	0.003	86	435481	2.00	2.34	
69 Ethylene Dibromide	107	13.926	13.923	0.003	99	697922	2.00	2.26	
70 Tetrachloroethene	129	14.050	14.048	0.002	97	510757	2.00	2.24	
71 Chlorobenzene	112	14.956	14.952	0.004	95	1078454	2.00	2.21	
72 Ethylbenzene	91	15.279	15.278	0.001	98	1738067	2.00	2.29	
73 m-Xylene & p-Xylene	91	15.452	15.452	0.000	0	2736075	4.00	4.69	
74 Bromoform	173	15.856	15.854	0.002	97	761612	2.00	2.47	
75 Styrene	104	15.921	15.923	-0.002	97	1017828	2.00	2.49	
76 n-Nonane	57	15.964	15.961	0.003	84	738650	2.00	2.30	
77 o-Xylene	91	15.985	15.986	-0.001	98	1384915	2.00	2.22	
78 1,1,2,2-Tetrachloroethane	83	16.309	16.308	0.001	100	925712	2.00	2.26	
79 1,2,3-Trichloropropane	110	16.465	16.464	0.001	97	318763	2.00	2.21	
80 Isopropylbenzene	105	16.606	16.605	0.001	96	2023051	2.00	2.25	
81 N-Propylbenzene	120	17.183	17.182	0.001	99	595507	2.00	2.47	
82 2-Chlorotoluene	126	17.204	17.203	0.001	95	522694	2.00	2.34	
83 4-Ethyltoluene	105	17.350	17.351	-0.001	99	2085318	2.00	2.34	
84 1,3,5-Trimethylbenzene	120	17.436	17.436	0.000	93	902524	2.00	2.47	
85 Alpha Methyl Styrene	118	17.689	17.691	-0.002	89	861835	2.00	2.52	
86 n-Decane	57	17.824	17.826	-0.002	93	1081688	2.00	2.39	
87 tert-Butylbenzene	119	17.905	17.906	-0.001	93	2057995	2.00	2.41	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.921	17.921	0.000	96	1862380	2.00	2.44	
89 1,3-Dichlorobenzene	146	18.191	18.189	0.002	98	1252673	2.00	2.41	
90 sec-Butylbenzene	105	18.207	18.206	0.001	98	2704036	2.00	2.47	
91 Benzyl chloride	91	18.272	18.273	-0.001	98	1651585	2.00	2.46	
92 1,4-Dichlorobenzene	146	18.288	18.287	0.001	95	1248974	2.00	2.38	
93 4-Isopropyltoluene	119	18.390	18.391	-0.001	97	2457226	2.00	2.50	
94 1,2,3-Trimethylbenzene	105	18.428	18.429	-0.001	99	1901252	2.00	2.23	
95 1,2-Dichlorobenzene	146	18.671	18.672	-0.001	95	1215165	2.00	2.38	
98 n-Butylbenzene	91	18.865	18.865	0.000	98	2231747	2.00	2.48	
99 Undecane	57	19.259	19.259	0.000	92	1240507	2.00	2.36	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	99	532660	2.00	1.40	
101 1,2,4,5-Tetramethylbenzene	119	19.674	19.674	0.000	97	2270927	2.00	1.74	
104 Dodecane	57	20.364	20.366	-0.002	98	1199296	2.00	2.27	
105 1,2,4-Trichlorobenzene	180	20.472	20.474	-0.002	94	1015706	2.00	2.40	
106 Naphthalene	128	20.601	20.603	-0.002	99	2302961	2.00	2.35	
107 Hexachlorobutadiene	225	20.855	20.859	-0.004	96	961869	2.00	2.20	
108 1,2,3-Trichlorobenzene	180	20.893	20.897	-0.004	96	956513	2.00	2.28	
109 2-Methylnaphthalene	142	21.701	21.702	-0.001	100	634900	4.59	2.47	
110 1-Methylnaphthalene	142	21.847	21.847	0.000	100	591277	4.60	2.64	
S 111 Xylenes, Total	100				0		6.00	6.91	
S 112 1,2-Dichloroethene, Total	1				0		4.00	4.20	

Reagents:

40CV101S_00051	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

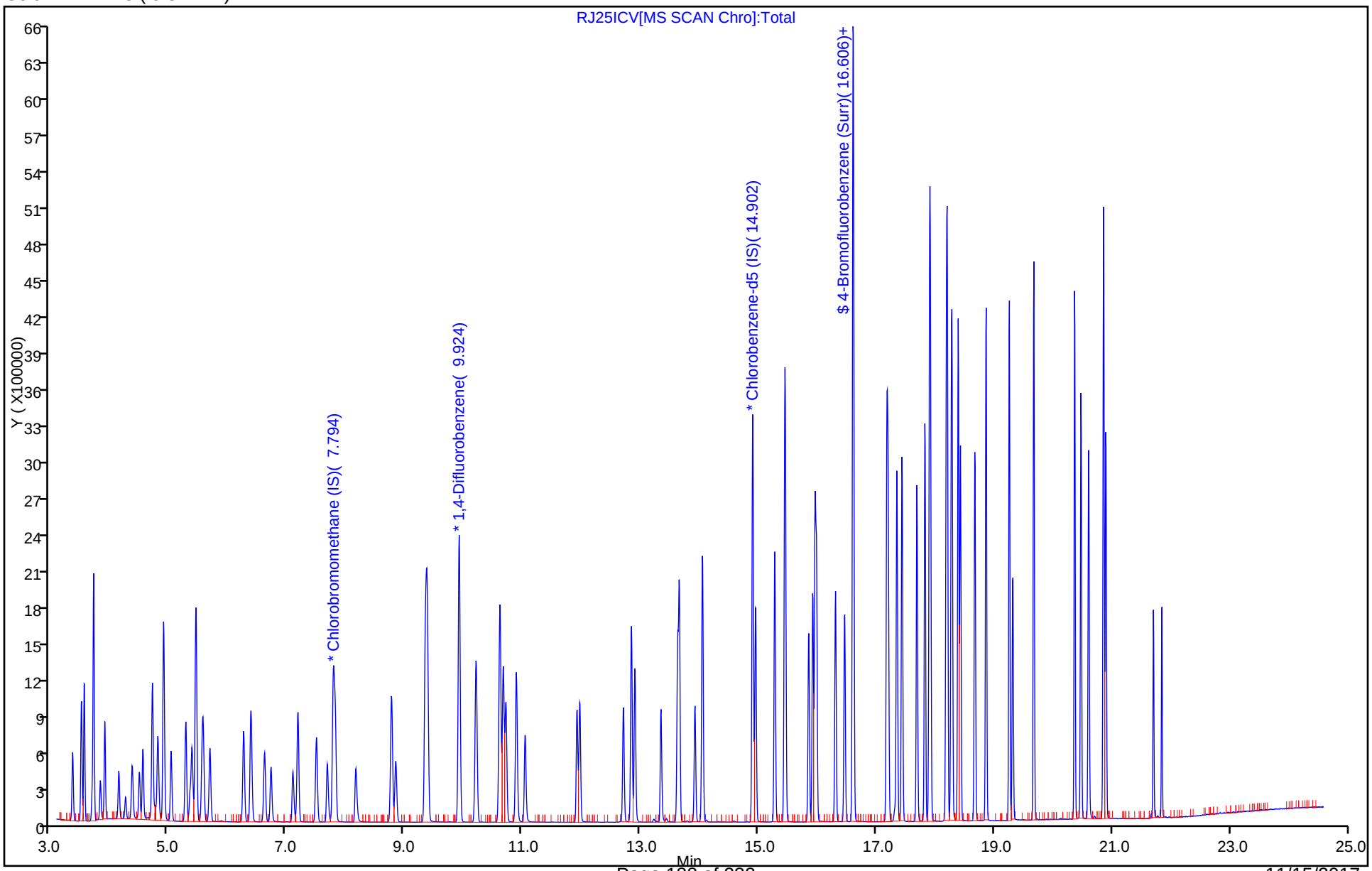
Report Date: 27-Oct-2017 14:02:44 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25ICV.D

Injection Date:	25-Oct-2017 21:40:30	Instrument ID:	MR	Operator ID:	
Lims ID:	ICV			Worklist Smp#:	14
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1

SDG No.:

Lab Sample ID: CCVIS 140-15956/2 Calibration Date: 11/13/2017 09:53

Instrument ID: MR Calib Start Date: 10/25/2017 13:00

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/25/2017 20:06

Lab File ID: RCCVK13.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.5024	0.5675		2.26	2.00	13.0	30.0
Propene	Ave	1.126	1.135		2.02	2.00	0.8	30.0
Dichlorodifluoromethane	Ave	3.921	4.800		2.45	2.00	22.4	30.0
Chloromethane	Ave	0.3761	0.3695		1.97	2.00	-1.8	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.869	3.160		2.20	2.00	10.1	30.0
Vinyl chloride	Ave	1.136	1.197		2.11	2.00	5.4	30.0
1,3-Butadiene	Ave	0.7416	0.8002		2.16	2.00	7.9	30.0
Butane	Ave	1.249	1.402		2.24	2.00	12.2	30.0
Bromomethane	Ave	1.163	1.284		2.21	2.00	10.4	30.0
Chloroethane	Ave	0.5221	0.5687		2.18	2.00	8.9	30.0
Ethanol	Ave	0.3654	0.3995		10.9	10.0	9.3	30.0
Vinyl bromide	Ave	1.211	1.394		2.30	2.00	15.1	30.0
2-Methylbutane	Ave	0.8530	1.005		2.36	2.00	17.8	30.0
Acrolein	Ave	0.3243	0.3703		2.28	2.00	14.2	30.0
Trichlorofluoromethane	Ave	3.937	4.523		2.30	2.00	14.9	30.0
Acetonitrile	Ave	0.2722	0.3241		2.38	2.00	19.1	30.0
Acetone	Ave	0.4409	0.4645		6.32	6.00	5.3	30.0
Isopropyl alcohol	Ave	1.706	1.767		6.22	6.00	3.6	30.0
Pentane	Ave	0.2731	0.2886		2.11	2.00	5.7	30.0
Ethyl ether	Ave	1.171	1.260		2.15	2.00	7.6	30.0
1,1-Dichloroethene	Ave	1.594	1.595		2.00	2.00	0.0	30.0
Acrylonitrile	Ave	0.9935	1.042		2.10	2.00	4.9	30.0
tert-Butyl alcohol	Ave	3.009	3.291		2.19	2.00	9.4	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.426	3.623		2.12	2.00	5.7	30.0
Methylene Chloride	Ave	1.629	1.492		1.83	2.00	-8.4	30.0
3-Chloropropene	Ave	1.281	1.426		2.23	2.00	11.3	30.0
Carbon disulfide	Ave	4.321	4.324		2.00	2.00	0.0	30.0
trans-1,2-Dichloroethene	Ave	1.640	1.612		1.97	2.00	-1.7	30.0
Methyl tert-butyl ether	Ave	4.654	5.054		2.17	2.00	8.6	30.0
1,1-Dichloroethane	Ave	2.901	2.958		2.04	2.00	1.9	30.0
Vinyl acetate	Ave	3.158	3.567		2.26	2.00	13.0	30.0
2-Butanone (MEK)	Ave	0.7119	0.7213		2.03	2.00	1.3	30.0
Hexane	Ave	1.139	1.158		2.04	2.00	1.7	30.0
cis-1,2-Dichloroethene	Ave	1.676	1.698		2.03	2.00	1.3	30.0
Ethyl acetate	Ave	2.792	2.807		2.01	2.00	0.6	30.0
Chloroform	Ave	3.778	3.927		2.08	2.00	4.0	30.0
Tetrahydrofuran	Ave	1.380	1.365		1.98	2.00	-1.1	30.0
1,1,1-Trichloroethane	Ave	3.935	4.295		2.18	2.00	9.2	30.0
1,2-Dichloroethane	Ave	0.4310	0.4838		2.25	2.00	12.2	30.0
1-Butanol	Ave	0.0665	0.0734		2.21	2.00	10.4	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1

SDG No.:

Lab Sample ID: CCVIS 140-15956/2 Calibration Date: 11/13/2017 09:53

Instrument ID: MR Calib Start Date: 10/25/2017 13:00

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/25/2017 20:06

Lab File ID: RCCVK13.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzene	Ave	0.8022	0.8272		2.06	2.00	3.1	30.0
Cyclohexane	Ave	0.1203	0.1283		2.13	2.00	6.6	30.0
Carbon tetrachloride	Ave	0.6847	0.8110		2.37	2.00	18.4	30.0
2,2,4-Trimethylpentane	Ave	1.145	1.185		2.07	2.00	3.6	30.0
1,2-Dichloropropane	Ave	0.2775	0.2775		2.00	2.00	-0.0	30.0
Heptane	Ave	0.2692	0.2788		2.07	2.00	3.6	30.0
Trichloroethene	Ave	0.3866	0.4072		2.11	2.00	5.3	30.0
Dibromomethane	Ave	0.3429	0.3579		2.09	2.00	4.4	30.0
Bromodichloromethane	Ave	0.6106	0.6950		2.28	2.00	13.8	30.0
1,4-Dioxane	Ave	0.1235	0.1265		2.05	2.00	2.4	30.0
Methyl methacrylate	Ave	0.2712	0.3099		2.29	2.00	14.3	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4780	0.5179		2.17	2.00	8.3	30.0
cis-1,3-Dichloropropene	Ave	0.4468	0.5095		2.28	2.00	14.0	30.0
trans-1,3-Dichloropropene	Ave	0.4839	0.5704		2.36	2.00	17.9	30.0
Toluene	Ave	1.120	1.198		2.14	2.00	7.0	30.0
1,1,2-Trichloroethane	Ave	0.3219	0.3369		2.09	2.00	4.7	30.0
2-Hexanone	Ave	0.2834	0.3181		2.25	2.00	12.2	30.0
Dibromochloromethane	Ave	0.6633	0.8073		2.44	2.00	21.7	30.0
Octane	Ave	0.3585	0.3927		2.19	2.00	9.5	30.0
1,2-Dibromoethane (EDB)	Ave	0.5963	0.6459		2.17	2.00	8.3	30.0
Tetrachloroethene	Ave	0.4387	0.4761		2.17	2.00	8.5	30.0
Chlorobenzene	Ave	0.9392	0.9801		2.09	2.00	4.4	30.0
Ethylbenzene	Ave	1.466	1.635		2.23	2.00	11.6	30.0
m-Xylene & p-Xylene	Ave	1.124	1.308		4.66	4.00	16.4	30.0
Bromoform	Ave	0.5943	0.7435		2.50	2.00	25.1	30.0
Styrene	Ave	0.7883	0.9300		2.36	2.00	18.0	30.0
Nonane	Ave	0.6196	0.6906		2.23	2.00	11.5	30.0
o-Xylene	Ave	1.201	1.351		2.25	2.00	12.4	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7903	0.8539		2.16	2.00	8.0	30.0
1,2,3-Trichloropropane	Ave	0.2776	0.3104		2.24	2.00	11.8	30.0
Isopropylbenzene	Ave	1.734	1.941		2.24	2.00	11.9	30.0
Propylbenzene	Ave	0.4649	0.5458		2.35	2.00	17.4	30.0
2-Chlorotoluene	Ave	0.4305	0.4881		2.27	2.00	13.4	30.0
4-Ethyltoluene	Ave	1.720	1.947		2.26	2.00	13.2	30.0
1,3,5-Trimethylbenzene	Ave	0.7048	0.8283		2.35	2.00	17.5	30.0
Alpha Methyl Styrene	Ave	0.6597	0.7805		2.37	2.00	18.3	30.0
Decane	Ave	0.8720	0.9918		2.28	2.00	13.7	30.0
tert-Butylbenzene	Ave	1.647	1.929		2.34	2.00	17.1	30.0
1,2,4-Trimethylbenzene	Ave	1.470	1.772		2.41	2.00	20.5	30.0
1,3-Dichlorobenzene	Ave	1.002	1.153		2.30	2.00	15.0	30.0
sec-Butylbenzene	Ave	2.109	2.527		2.40	2.00	19.8	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1

SDG No.:

Lab Sample ID: CCVIS 140-15956/2 Calibration Date: 11/13/2017 09:53

Instrument ID: MR Calib Start Date: 10/25/2017 13:00

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/25/2017 20:06

Lab File ID: RCCVK13.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzyl chloride	Ave	1.294	1.534		2.37	2.00	18.6	30.0
1,4-Dichlorobenzene	Ave	1.012	1.153		2.28	2.00	13.9	30.0
4-Isopropyltoluene	Ave	1.894	2.299		2.43	2.00	21.4	30.0
1,2,3-Trimethylbenzene	Ave	1.645	1.803		2.19	2.00	9.5	30.0
1,2-Dichlorobenzene	Ave	0.9822	1.129		2.30	2.00	14.9	30.0
Butylbenzene	Ave	1.731	2.110		2.44	2.00	21.9	30.0
Undecane	Ave	1.014	1.174		2.32	2.00	15.7	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.7356	0.4872		1.33	2.00	-33.8*	30.0
1,2,4,5-Tetramethylbenzene	Ave	2.508	2.170		1.73	2.00	-13.5	30.0
Dodecane	Ave	1.016	1.170		2.30	2.00	15.1	30.0
1,2,4-Trichlorobenzene	Ave	0.8170	0.9393		2.30	2.00	15.0	30.0
Naphthalene	Ave	1.890	2.148		2.27	2.00	13.6	30.0
Hexachlorobutadiene	Ave	0.8407	0.9643		2.30	2.00	14.7	30.0
1,2,3-Trichlorobenzene	Ave	0.8074	0.8997		2.23	2.00	11.4	30.0
2-Methylnaphthalene	Ave	0.4957	0.2411		2.23	4.59	-51.4*	50.0
1-Methylnaphthalene	Ave	0.4312	0.2281		2.43	4.60	-47.1	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7330	0.7682		4.19	4.00	4.8	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RCCVK13.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 13-Nov-2017 09:53:30 ALS Bottle#: 15 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006602-002
Misc. Info.: S49
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Nov-2017 11:45:23 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh Date: 14-Nov-2017 10:46:40

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.767	7.767	0.000	89	335847	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.903	9.903	0.000	95	1923368	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.891	14.891	0.000	88	1646620	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.600	16.600	0.000	90	1264923	4.00	4.19	
6 Chlorodifluoromethane	67	3.507	3.507	0.000	96	95351	2.00	2.26	
7 Propene	41	3.513	3.513	0.000	96	190643	2.00	2.02	
8 Dichlorodifluoromethane	85	3.556	3.556	0.000	100	806528	2.00	2.45	
9 Chloromethane	52	3.691	3.691	0.000	100	62072	2.00	1.97	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.712	3.712	0.000	92	530892	2.00	2.20	
11 Vinyl chloride	62	3.825	3.825	0.000	99	201179	2.00	2.11	
12 Butane	43	3.901	3.901	0.000	90	235470	2.00	2.24	
13 Butadiene	54	3.901	3.901	0.000	94	134436	2.00	2.16	
14 Bromomethane	94	4.138	4.138	0.000	98	215704	2.00	2.21	
15 Chloroethane	64	4.251	4.251	0.000	100	95553	2.00	2.18	
16 Ethanol	31	4.365	4.365	0.000	96	335620	10.0	10.9	
17 Vinyl bromide	106	4.483	4.483	0.000	99	234212	2.00	2.30	
18 2-Methylbutane	43	4.543	4.543	0.000	85	168850	2.00	2.36	
19 Acrolein	56	4.699	4.699	0.000	96	62211	2.00	2.28	
20 Trichlorofluoromethane	101	4.704	4.704	0.000	98	759862	2.00	2.30	
21 Acetonitrile	40	4.748	4.748	0.000	97	54459	2.00	2.38	M
22 Acetone	58	4.796	4.796	0.000	99	234116	6.00	6.32	
23 Isopropyl alcohol	45	4.893	4.893	0.000	93	890775	6.00	6.22	
24 Pentane	72	4.893	4.893	0.000	96	48494	2.00	2.11	
25 Ethyl ether	31	5.017	5.017	0.000	85	211725	2.00	2.15	
26 1,1-Dichloroethene	96	5.271	5.271	0.000	96	267934	2.00	2.00	
27 Acrylonitrile	53	5.341	5.341	0.000	93	175138	2.00	2.10	
28 2-Methyl-2-propanol	59	5.378	5.378	0.000	93	552900	2.00	2.19	
29 1,1,2-Trichloro-1,2,2-trif	101	5.438	5.438	0.000	97	608705	2.00	2.12	
30 Methylene Chloride	84	5.546	5.546	0.000	90	250737	2.00	1.83	
31 3-Chloro-1-propene	39	5.567	5.567	0.000	96	239506	2.00	2.23	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.675	5.675	0.000	99	726445	2.00	2.00	
33 trans-1,2-Dichloroethene	96	6.247	6.247	0.000	98	270907	2.00	1.97	
34 Methyl tert-butyl ether	73	6.371	6.371	0.000	95	849064	2.00	2.17	
36 1,1-Dichloroethane	63	6.603	6.603	0.000	100	496952	2.00	2.04	
37 Vinyl acetate	43	6.710	6.710	0.000	99	599276	2.00	2.26	
38 2-Butanone (MEK)	72	7.082	7.082	0.000	99	121194	2.00	2.03	
39 Hexane	56	7.169	7.169	0.000	85	194632	2.00	2.04	
40 cis-1,2-Dichloroethene	96	7.482	7.482	0.000	95	285283	2.00	2.03	
41 Ethyl acetate	43	7.665	7.665	0.000	99	471682	2.00	2.01	
42 Chloroform	83	7.800	7.800	0.000	97	659761	2.00	2.08	
43 Tetrahydrofuran	42	8.150	8.150	0.000	85	229360	2.00	1.98	
44 1,1,1-Trichloroethane	97	8.754	8.754	0.000	95	721682	2.00	2.18	
45 1,2-Dichloroethane	62	8.824	8.824	0.000	99	465467	2.00	2.25	
48 Benzene	78	9.326	9.326	0.000	97	795951	2.00	2.06	
47 n-Butanol	31	9.326	9.326	0.000	62	70648	2.00	2.21	
49 Cyclohexane	69	9.347	9.347	0.000	96	123427	2.00	2.13	
51 Carbon tetrachloride	117	9.363	9.363	0.000	97	780382	2.00	2.37	
52 Isooctane	57	10.188	10.188	0.000	97	1140539	2.00	2.07	
53 1,2-Dichloropropane	63	10.588	10.588	0.000	84	267012	2.00	2.00	
54 n-Heptane	71	10.604	10.604	0.000	83	268273	2.00	2.07	
55 Trichloroethene	130	10.652	10.652	0.000	97	391764	2.00	2.11	
56 Dibromomethane	93	10.695	10.695	0.000	95	344327	2.00	2.09	
57 Dichlorobromomethane	83	10.873	10.873	0.000	99	668674	2.00	2.28	
58 1,4-Dioxane	88	10.884	10.884	0.000	85	121724	2.00	2.05	
59 Methyl methacrylate	41	11.024	11.024	0.000	96	298185	2.00	2.29	
61 4-Methyl-2-pentanone (MIBK	43	11.909	11.909	0.000	94	498332	2.00	2.17	
62 cis-1,3-Dichloropropene	75	11.952	11.952	0.000	93	490265	2.00	2.28	
63 trans-1,3-Dichloropropene	75	12.696	12.696	0.000	97	469840	2.00	2.36	
64 Toluene	91	12.831	12.831	0.000	94	986746	2.00	2.14	
65 1,1,2-Trichloroethane	83	12.890	12.890	0.000	99	277508	2.00	2.09	
66 2-Hexanone	58	13.332	13.332	0.000	96	262059	2.00	2.25	
67 Chlorodibromomethane	129	13.618	13.618	0.000	98	664970	2.00	2.44	
68 n-Octane	85	13.645	13.645	0.000	86	323458	2.00	2.19	
69 Ethylene Dibromide	107	13.909	13.909	0.000	98	532049	2.00	2.17	
70 Tetrachloroethene	129	14.039	14.039	0.000	96	392196	2.00	2.17	
71 Chlorobenzene	112	14.939	14.939	0.000	93	807387	2.00	2.09	
72 Ethylbenzene	91	15.268	15.268	0.000	99	1347030	2.00	2.23	
73 m-Xylene & p-Xylene	91	15.441	15.441	0.000	0	2155007	4.00	4.66	
74 Bromoform	173	15.845	15.845	0.000	97	612437	2.00	2.50	
75 Styrene	104	15.910	15.910	0.000	98	766048	2.00	2.36	
76 n-Nonane	57	15.953	15.953	0.000	84	568900	2.00	2.23	
77 o-Xylene	91	15.975	15.975	0.000	98	1112649	2.00	2.25	
78 1,1,2,2-Tetrachloroethane	83	16.298	16.298	0.000	99	703412	2.00	2.16	
79 1,2,3-Trichloropropane	110	16.454	16.454	0.000	97	255718	2.00	2.24	
80 Isopropylbenzene	105	16.595	16.595	0.000	97	1598853	2.00	2.24	
81 N-Propylbenzene	120	17.172	17.172	0.000	99	449603	2.00	2.35	
82 2-Chlorotoluene	126	17.193	17.193	0.000	95	402058	2.00	2.27	
83 4-Ethyltoluene	105	17.339	17.339	0.000	99	1603608	2.00	2.26	
84 1,3,5-Trimethylbenzene	120	17.425	17.425	0.000	92	682268	2.00	2.35	
85 Alpha Methyl Styrene	118	17.678	17.678	0.000	87	642965	2.00	2.37	
86 n-Decane	57	17.819	17.819	0.000	94	816952	2.00	2.28	
87 tert-Butylbenzene	119	17.894	17.894	0.000	92	1588839	2.00	2.34	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.910	17.910	0.000	96	1459276	2.00	2.41	
89 1,3-Dichlorobenzene	146	18.180	18.180	0.000	99	949913	2.00	2.30	
90 sec-Butylbenzene	105	18.196	18.196	0.000	98	2081555	2.00	2.40	
91 Benzyl chloride	91	18.261	18.261	0.000	98	1263671	2.00	2.37	
92 1,4-Dichlorobenzene	146	18.277	18.277	0.000	95	949859	2.00	2.28	
93 4-Isopropyltoluene	119	18.380	18.380	0.000	96	1893448	2.00	2.43	
94 1,2,3-Trimethylbenzene	105	18.417	18.417	0.000	99	1484812	2.00	2.19	
95 1,2-Dichlorobenzene	146	18.665	18.665	0.000	95	930033	2.00	2.30	
98 n-Butylbenzene	91	18.854	18.854	0.000	98	1737772	2.00	2.44	
99 Undecane	57	19.248	19.248	0.000	93	966838	2.00	2.32	
100 1,2-Dibromo-3-Chloropropan	157	19.307	19.307	0.000	97	401307	2.00	1.33	
101 1,2,4,5-Tetramethylbenzene	119	19.663	19.663	0.000	96	1787292	2.00	1.73	
104 Dodecane	57	20.359	20.359	0.000	96	963533	2.00	2.30	
105 1,2,4-Trichlorobenzene	180	20.466	20.466	0.000	94	773772	2.00	2.30	
106 Naphthalene	128	20.596	20.596	0.000	99	1769193	2.00	2.27	
107 Hexachlorobutadiene	225	20.849	20.849	0.000	96	794317	2.00	2.30	
108 1,2,3-Trichlorobenzene	180	20.887	20.887	0.000	94	741126	2.00	2.23	
109 2-Methylnaphthalene	142	21.696	21.696	0.000	100	455840	4.59	2.23	
110 1-Methylnaphthalene	142	21.841	21.841	0.000	100	432121	4.60	2.43	
S 111 Xylenes, Total	100				0		6.00	6.91	
S 112 1,2-Dichloroethene, Total	1				0		4.00	3.99	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40CV101S_00049	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

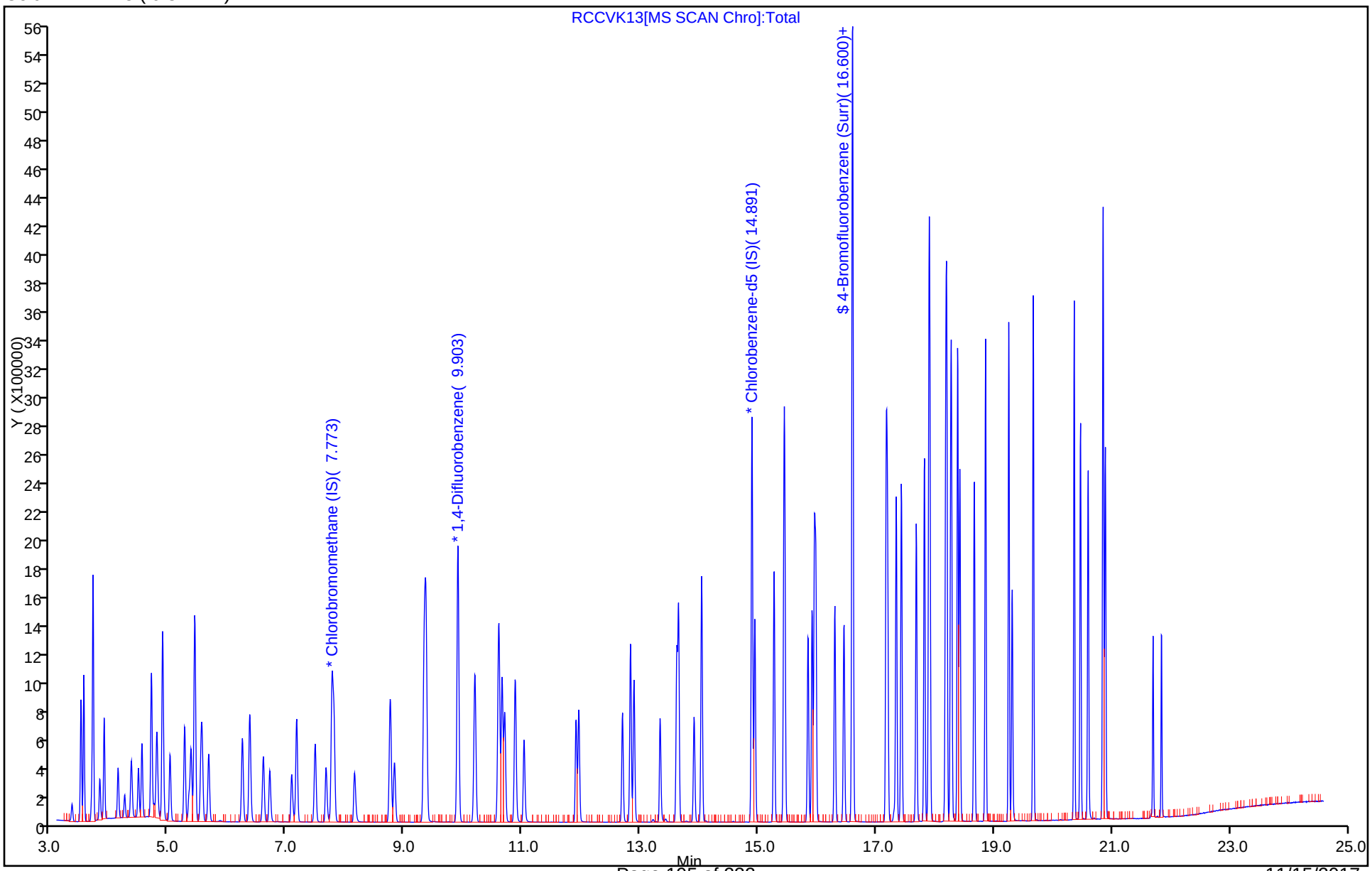
Report Date: 14-Nov-2017 11:45:24 Chrom Revision: 2.2 13-Nov-2017 17:19:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RCCVK13.D

Injection Date:	13-Nov-2017 09:53:30	Instrument ID:	MR	Operator ID:	
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

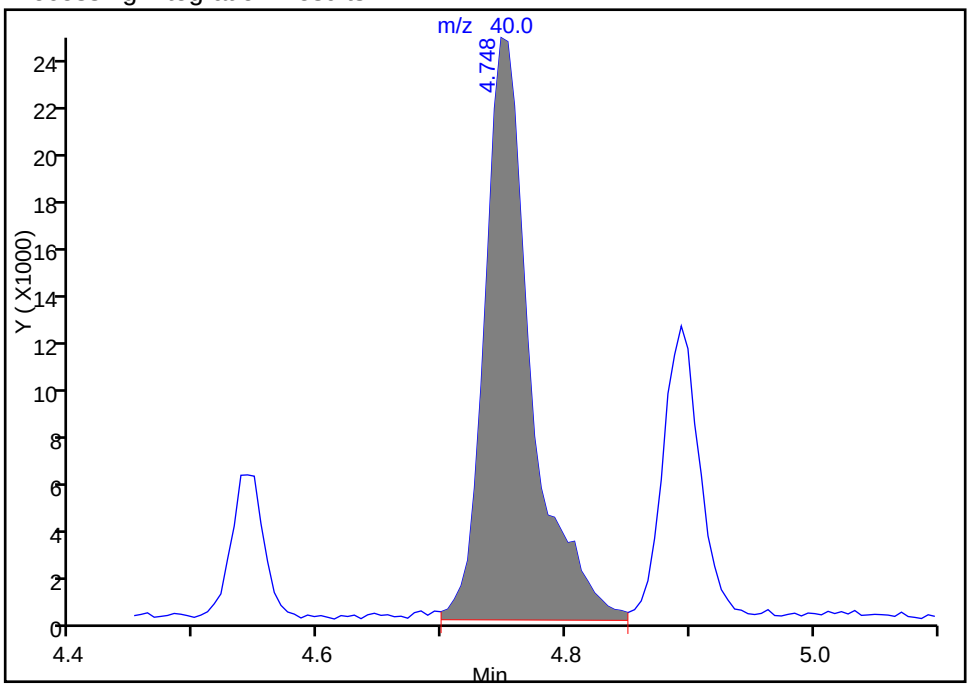
Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RCCVK13.D
Injection Date: 13-Nov-2017 09:53:30 Instrument ID: MR
Lims ID: CCVIS
Client ID:
Operator ID: ALS Bottle#: 15 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

21 Acetonitrile, CAS: 75-05-8

Signal: 1

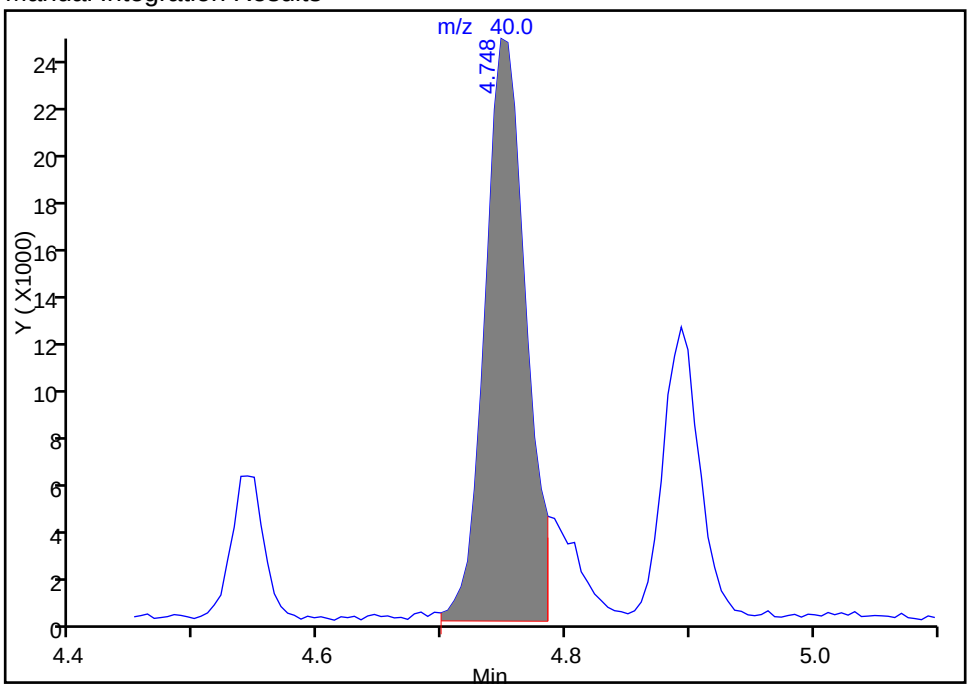
Processing Integration Results

RT: 4.75
Area: 61393
Amount: 2.686206
Amount Units: ppb v/v



Manual Integration Results

RT: 4.75
Area: 54459
Amount: 2.382814
Amount Units: ppb v/v



Reviewer: tajh, 14-Nov-2017 10:46:16
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RBFBJ25.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	25-Oct-2017 11:43:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006453-001				
Misc. Info.:	TUNE				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	27-Oct-2017 11:55:49	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				
First Level Reviewer: tajh		Date:	26-Oct-2017 09:16:17		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.340	4.340	0.000	0	1559366	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

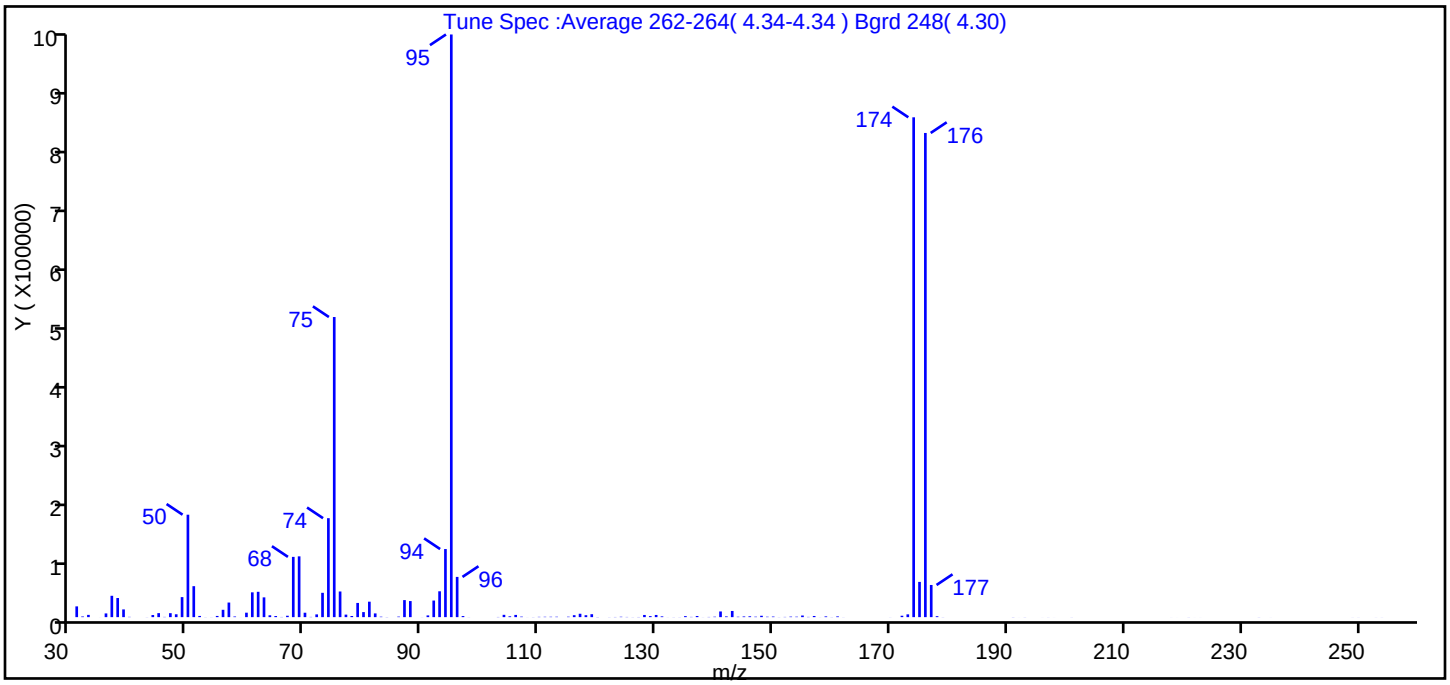
40MXSUR_00002 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RBFBJ25.D
Injection Date: 25-Oct-2017 11:43:30 Instrument ID: MR
Lims ID: BFB
Client ID:
Operator ID: ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	17.6
75	30 to 60% of m/z 95	51.5
96	5 to 9% of m/z 95	6.9
173	Less than 2% of m/z 174	0.5 (0.6)
174	50 to 120% of m/z 95	85.8
175	5 to 9% of m/z 174	6.0 (7.1)
176	Greater than 95% but less than 101% of m/z 174	83.1 (96.9)
177	5 to 9% of m/z 176	5.5 (6.6)

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RBFBJ25.D\MR_TO15.rslt\spectra.d
Injection Date: 25-Oct-2017 11:43:30
Spectrum: Tune Spec :Average 262-264(4.34-4.34) Bgrd 248(4.30)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 148

m/z	Y	m/z	Y	m/z	Y	m/z	Y
31.00	18480	71.00	383	115.00	753	153.00	902
32.00	1144	72.00	4718	116.00	3350	154.00	773
33.00	3880	73.00	41752	117.00	5823	155.00	2792
35.00	57	74.00	169856	118.00	3325	156.00	409
36.00	6392	75.00	515072	119.00	5054	157.00	1980
37.00	36648	76.00	44040	120.00	245	158.00	83
38.00	32824	77.00	4326	122.00	143	159.00	1286
39.00	13275	78.00	1962	123.00	287	160.00	164
40.00	467	79.00	24368	124.00	669	161.00	1263
43.00	130	80.00	8656	125.00	335	162.00	104
44.00	3621	81.00	26536	126.00	149	170.00	86
45.00	6874	82.00	6400	127.00	269	172.00	2407
46.00	391	83.00	771	128.00	3739	173.00	4794
47.00	6822	84.00	221	129.00	1727	174.00	857856
48.00	4926	86.00	909	130.00	3738	175.00	60496
49.00	34368	87.00	29232	131.00	1312	176.00	830976
50.00	175808	88.00	27576	132.00	79	177.00	55208
51.00	53160	90.00	91	133.00	141	178.00	1646
52.00	2069	91.00	2969	134.00	148	179.00	145
53.00	142	92.00	28480	135.00	1744	191.00	182
54.00	110	93.00	44376	136.00	404	192.00	36
55.00	2055	94.00	116872	137.00	1970	193.00	129
56.00	12613	95.00	1000000	138.00	94	196.00	44
57.00	25048	96.00	69048	139.00	335	197.00	89
58.00	1102	97.00	1859	140.00	741	198.00	38
59.00	53	98.00	119	141.00	9765	201.00	101
60.00	7638	103.00	310	142.00	1256	218.00	48
61.00	42584	104.00	3976	143.00	10604	219.00	23
62.00	43496	105.00	1381	144.00	694	221.00	122
63.00	33944	106.00	3817	145.00	1181	222.00	34
64.00	3177	107.00	886	146.00	1466	223.00	36
65.00	1919	108.00	61	147.00	786	233.00	132
66.00	302	109.00	161	148.00	2376	235.00	48

Report Date: 27-Oct-2017 11:55:49 Chrom Revision: 2.2 16-Aug-2017 16:24:46
Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RBFBJ25.D\MR_TO15.rslt\spectra.d
Injection Date: 25-Oct-2017 11:43:30
Spectrum: Tune Spec :Average 262-264(4.34-4.34) Bgrd 248(4.30)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 148

m/z	Y	m/z	Y	m/z	Y	m/z	Y
67.00	2410	110.00	490	149.00	702	249.00	70
68.00	103432	111.00	617	150.00	981	250.00	73
69.00	104336	112.00	655	151.00	147	253.00	72
70.00	7580	113.00	702	152.00	375	254.00	79

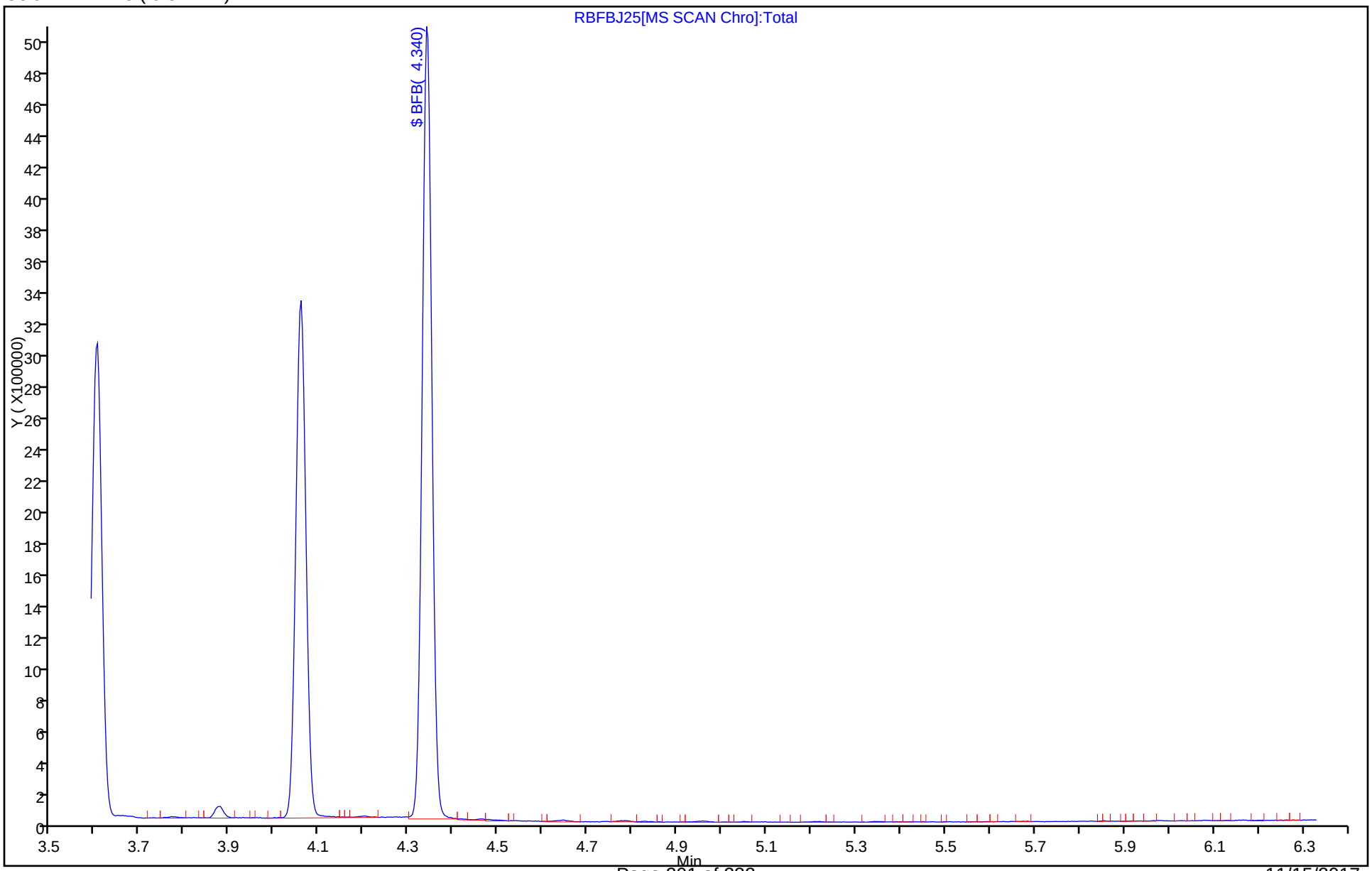
Report Date: 27-Oct-2017 11:55:49 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RBFBJ25.D

Injection Date:	25-Oct-2017 11:43:30	Instrument ID:	MR	Operator ID:	
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RBFBK13.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	13-Nov-2017 09:22:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006602-001				
Misc. Info.:	TUNE				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	14-Nov-2017 11:45:19	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK025				

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.328	4.328	0.000	0	1494872	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

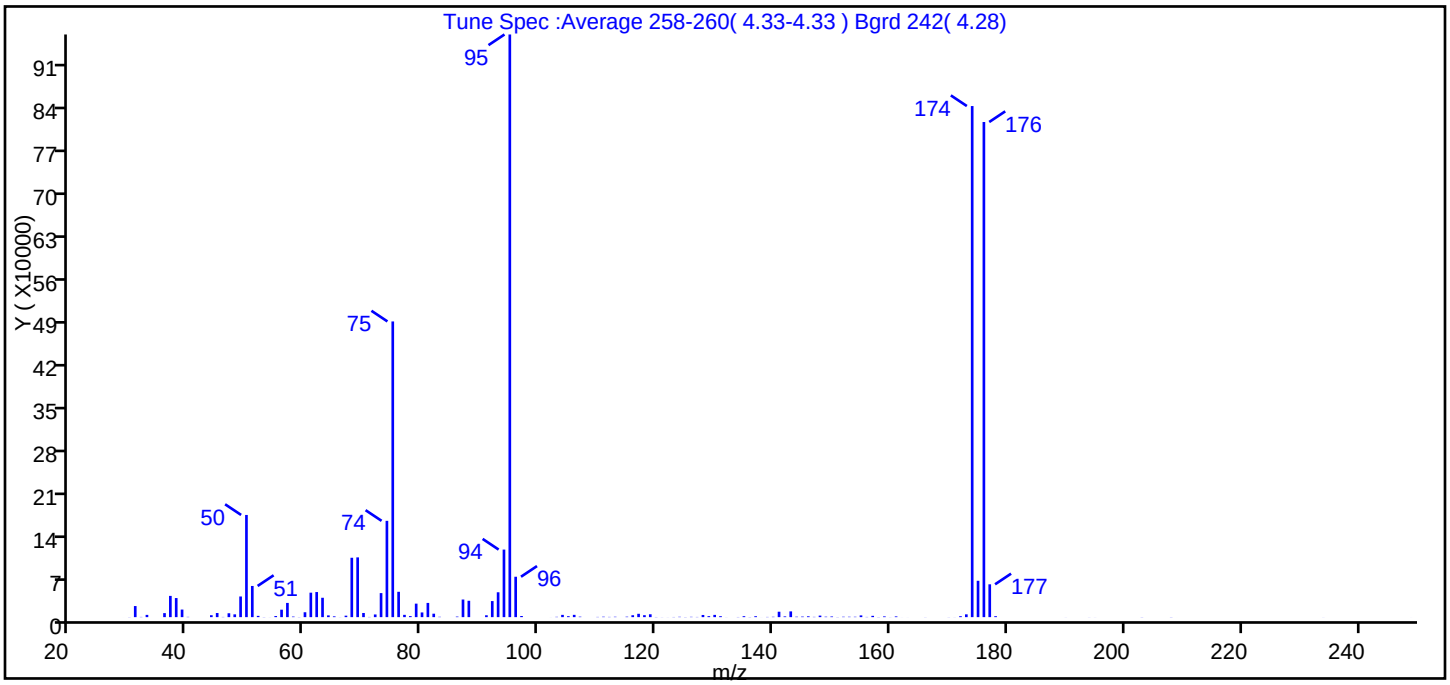
40MXSUR_00002 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RBFBK13.D
Injection Date: 13-Nov-2017 09:22:30 Instrument ID: MR
Lims ID: BFB
Client ID:
Operator ID: ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	17.5
75	30 to 60% of m/z 95	50.7
96	5 to 9% of m/z 95	6.9
173	Less than 2% of m/z 174	0.5 (0.5)
174	50 to 120% of m/z 95	87.7
175	5 to 9% of m/z 174	6.2 (7.1)
176	Greater than 95% but less than 101% of m/z 174	85.0 (96.9)
177	5 to 9% of m/z 176	5.6 (6.6)

Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RBFBK13.D\MR_TO15.rslt\spectra.d
Injection Date: 13-Nov-2017 09:22:30
Spectrum: Tune Spec :Average 258-260(4.33-4.33) Bgrd 242(4.28)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 138

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	18	69.00	98064	112.00	383	149.00	731
30.00	175	70.00	6818	113.00	633	150.00	1068
31.00	18192	71.00	322	115.00	755	151.00	207
32.00	345	72.00	4407	116.00	3146	152.00	658
33.00	3712	73.00	39456	117.00	5490	153.00	641
36.00	6598	74.00	158016	118.00	3219	154.00	617
37.00	34864	75.00	485184	119.00	4686	155.00	2858
38.00	31328	76.00	41592	120.00	251	156.00	329
39.00	12441	77.00	3762	121.00	112	157.00	2138
40.00	441	78.00	1681	122.00	82	158.00	223
44.00	3150	79.00	22160	123.00	271	159.00	1218
45.00	6767	80.00	7708	124.00	560	160.00	117
46.00	326	81.00	23328	125.00	237	161.00	1197
47.00	6375	82.00	5665	126.00	512	162.00	42
48.00	4594	83.00	540	127.00	321	163.00	42
49.00	33904	84.00	6	128.00	3559	166.00	124
50.00	167680	85.00	12	129.00	1622	170.00	141
51.00	51160	86.00	909	130.00	3693	171.00	91
52.00	2091	87.00	28920	131.00	1532	172.00	1528
53.00	214	88.00	26856	132.00	80	173.00	4610
54.00	78	91.00	3067	134.00	260	174.00	838592
55.00	1811	92.00	26352	135.00	1547	175.00	59664
56.00	12247	93.00	40816	136.00	228	176.00	812416
57.00	23320	94.00	110864	137.00	1521	177.00	53872
58.00	901	95.00	956032	138.00	41	178.00	1557
59.00	215	96.00	66288	139.00	340	190.00	70
60.00	8027	97.00	1858	140.00	587	194.00	100
61.00	40144	102.00	50	141.00	8899	195.00	68
62.00	41168	103.00	497	142.00	1223	203.00	193
63.00	31792	104.00	3723	143.00	9449	208.00	210
64.00	2874	105.00	1524	144.00	714	209.00	11
65.00	1288	106.00	3761	145.00	915	234.00	70
66.00	112	107.00	770	146.00	1371	249.00	33

Report Date: 14-Nov-2017 11:45:20 Chrom Revision: 2.2 13-Nov-2017 17:19:06
Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RBFBK13.D\MR_TO15.rslt\spectra.d
Injection Date: 13-Nov-2017 09:22:30
Spectrum: Tune Spec :Average 258-260(4.33-4.33) Bgrd 242(4.28)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 138

m/z	Y	m/z	Y	m/z	Y	m/z	Y
67.00	2420	110.00	364	147.00	433		
68.00	97440	111.00	703	148.00	2523		

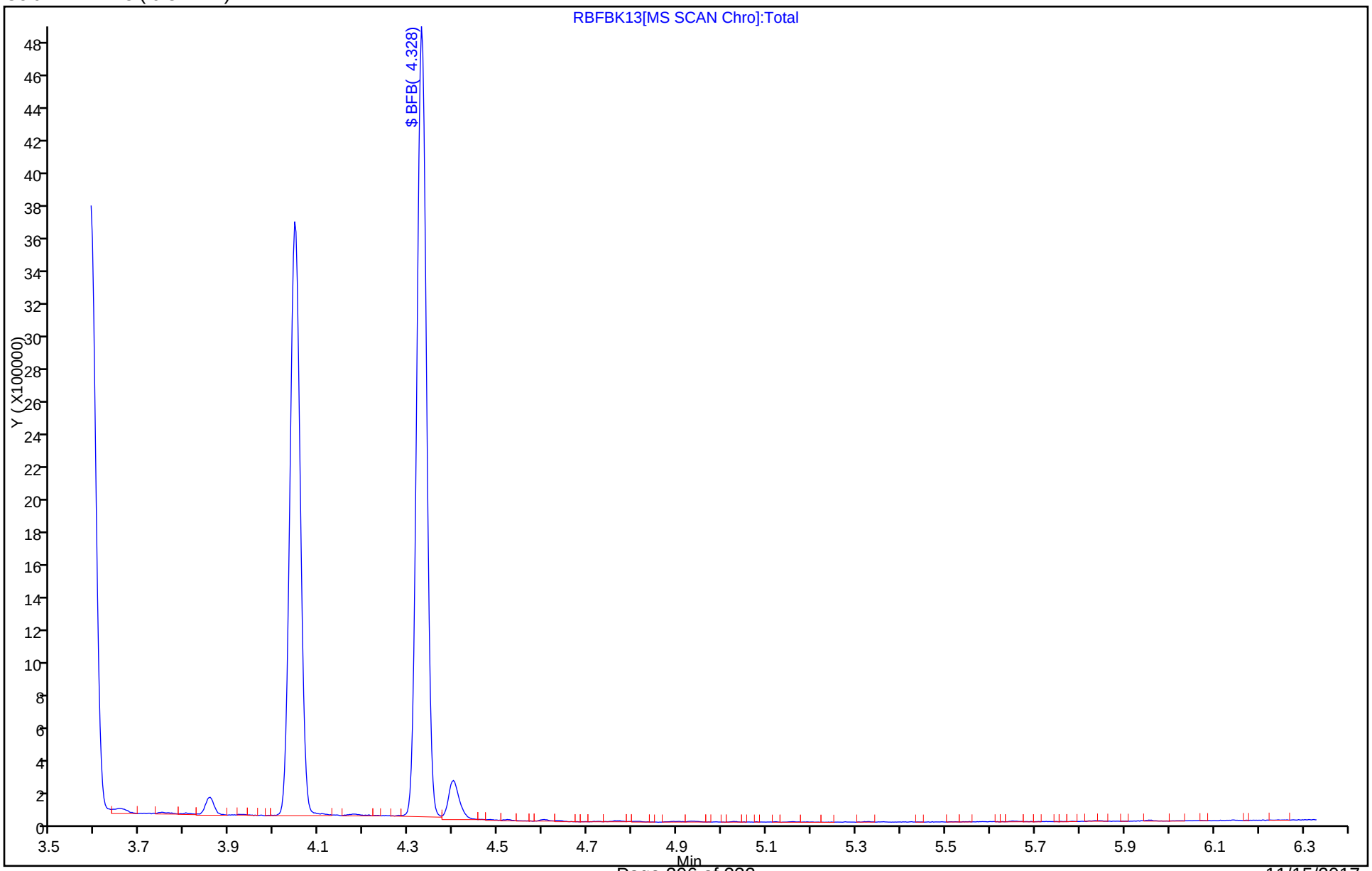
Report Date: 14-Nov-2017 11:45:21 Chrom Revision: 2.2 13-Nov-2017 17:19:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RBFBK13.D

Injection Date:	13-Nov-2017 09:22:30	Instrument ID:	MR	Operator ID:	
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-15956/4

Matrix: Air Lab File ID: R500BK13.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 11/13/2017 11:43

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 15956 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9854-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-15956/4

Matrix: Air | Lab File ID: R500BK13.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 11/13/2017 11:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15956 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\R500BK13.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 13-Nov-2017 11:43:30 ALS Bottle#: 16 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006602-004
Misc. Info.: 500ML BLK
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Nov-2017 11:45:23 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh Date: 13-Nov-2017 13:01:05

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.757	7.767	-0.010	79	332351	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.897	9.903	-0.006	95	1922553	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.891	14.891	0.000	88	1632580	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.600	16.600	0.000	88	1235870	4.00	4.13	
35 2-Methylpentane	43	6.360	6.382	-0.022	1	131		NC	
102 1,2,3,5-Tetramethylbenzene	119	19.722	19.728	-0.006	91	1188		NC	
103 1,2,3,4-Tetramethylbenzene	119	20.127	20.132	-0.005	80	783		NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

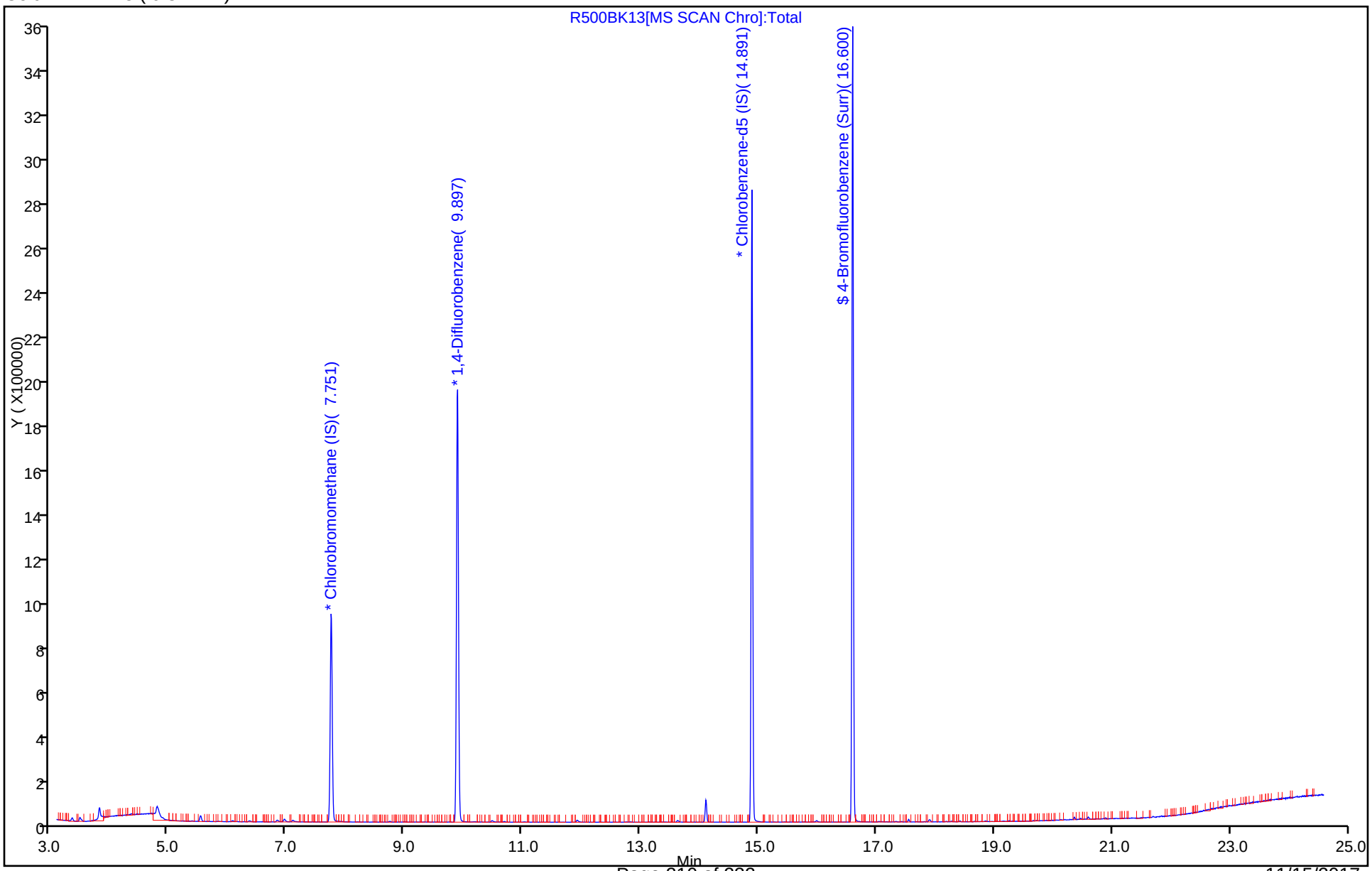
Report Date: 14-Nov-2017 11:45:30 Chrom Revision: 2.2 13-Nov-2017 17:19:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\R500BK13.D

Injection Date:	13-Nov-2017 11:43:30	Instrument ID:	MR	Operator ID:	
Lims ID:	MB			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\R500BK13.D				
Lims ID:	MB				
Client ID:					
Sample Type:	MB				
Inject. Date:	13-Nov-2017 11:43:30	ALS Bottle#:	16	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006602-004				
Misc. Info.:	500ML BLK				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	14-Nov-2017 11:45:23	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK025				

First Level Reviewer: tajh Date: 13-Nov-2017 13:01:05

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.13	103.28

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 140-15956/1002

Matrix: Air Lab File ID: RCCVK13-LCS.d

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 11/13/2017 09:53

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 15956 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.06		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.37		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.26		0.080	0.015
67-66-3	Chloroform	119.38	2.08		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	2.03		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.45		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	2.04		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	2.25		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	2.00		0.080	0.014
100-41-4	Ethylbenzene	106.17	2.23		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.83		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	2.17		0.40	0.068
91-20-3	Naphthalene	128.17	2.27		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.17		0.080	0.016
108-88-3	Toluene	92.14	2.14		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	1.97		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	2.30		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	2.18		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	2.09		0.080	0.021
79-01-6	Trichloroethene	131.39	2.11		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	2.19		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	2.41		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	2.35		0.080	0.026
75-01-4	Vinyl chloride	62.50	2.11		0.040	0.029
1330-20-7	Xylenes, Total	106.17	6.91		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RCCVK13-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 13-Nov-2017 09:53:30 ALS Bottle#: 15 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006602-002
Misc. Info.: S49
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Nov-2017 11:45:23 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh Date: 14-Nov-2017 10:46:40

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.767	7.767	0.000	89	335847	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.903	9.903	0.000	95	1923368	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.891	14.891	0.000	88	1646620	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.600	16.600	0.000	90	1264923	4.00	4.19	
6 Chlorodifluoromethane	67	3.507	3.507	0.000	96	95351	2.00	2.26	
7 Propene	41	3.513	3.513	0.000	96	190643	2.00	2.02	
8 Dichlorodifluoromethane	85	3.556	3.556	0.000	100	806528	2.00	2.45	
9 Chloromethane	52	3.691	3.691	0.000	100	62072	2.00	1.97	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.712	3.712	0.000	92	530892	2.00	2.20	
11 Vinyl chloride	62	3.825	3.825	0.000	99	201179	2.00	2.11	
12 Butane	43	3.901	3.901	0.000	90	235470	2.00	2.24	
13 Butadiene	54	3.901	3.901	0.000	94	134436	2.00	2.16	
14 Bromomethane	94	4.138	4.138	0.000	98	215704	2.00	2.21	
15 Chloroethane	64	4.251	4.251	0.000	100	95553	2.00	2.18	
16 Ethanol	31	4.365	4.365	0.000	96	335620	10.0	10.9	
17 Vinyl bromide	106	4.483	4.483	0.000	99	234212	2.00	2.30	
18 2-Methylbutane	43	4.543	4.543	0.000	85	168850	2.00	2.36	
19 Acrolein	56	4.699	4.699	0.000	96	62211	2.00	2.28	
20 Trichlorofluoromethane	101	4.704	4.704	0.000	98	759862	2.00	2.30	
21 Acetonitrile	40	4.748	4.748	0.000	97	54459	2.00	2.38	M
22 Acetone	58	4.796	4.796	0.000	99	234116	6.00	6.32	
23 Isopropyl alcohol	45	4.893	4.893	0.000	93	890775	6.00	6.22	
24 Pentane	72	4.893	4.893	0.000	96	48494	2.00	2.11	
25 Ethyl ether	31	5.017	5.017	0.000	85	211725	2.00	2.15	
26 1,1-Dichloroethene	96	5.271	5.271	0.000	96	267934	2.00	2.00	
27 Acrylonitrile	53	5.341	5.341	0.000	93	175138	2.00	2.10	
28 2-Methyl-2-propanol	59	5.378	5.378	0.000	93	552900	2.00	2.19	
29 1,1,2-Trichloro-1,2,2-trif	101	5.438	5.438	0.000	97	608705	2.00	2.12	
30 Methylene Chloride	84	5.546	5.546	0.000	90	250737	2.00	1.83	
31 3-Chloro-1-propene	39	5.567	5.567	0.000	96	239506	2.00	2.23	
32 Carbon disulfide	76	5.675	5.675	0.000	99	726445	2.00	2.00	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 trans-1,2-Dichloroethene	96	6.247	6.247	0.000	98	270907	2.00	1.97	
34 Methyl tert-butyl ether	73	6.371	6.371	0.000	95	849064	2.00	2.17	
36 1,1-Dichloroethane	63	6.603	6.603	0.000	100	496952	2.00	2.04	
37 Vinyl acetate	43	6.710	6.710	0.000	99	599276	2.00	2.26	
38 2-Butanone (MEK)	72	7.082	7.082	0.000	99	121194	2.00	2.03	
39 Hexane	56	7.169	7.169	0.000	85	194632	2.00	2.04	
40 cis-1,2-Dichloroethene	96	7.482	7.482	0.000	95	285283	2.00	2.03	
41 Ethyl acetate	43	7.665	7.665	0.000	99	471682	2.00	2.01	
42 Chloroform	83	7.800	7.800	0.000	97	659761	2.00	2.08	
43 Tetrahydrofuran	42	8.150	8.150	0.000	85	229360	2.00	1.98	
44 1,1,1-Trichloroethane	97	8.754	8.754	0.000	95	721682	2.00	2.18	
45 1,2-Dichloroethane	62	8.824	8.824	0.000	99	465467	2.00	2.25	
48 Benzene	78	9.326	9.326	0.000	97	795951	2.00	2.06	
47 n-Butanol	31	9.326	9.326	0.000	62	70648	2.00	2.21	
49 Cyclohexane	69	9.347	9.347	0.000	96	123427	2.00	2.13	
51 Carbon tetrachloride	117	9.363	9.363	0.000	97	780382	2.00	2.37	
52 Isooctane	57	10.188	10.188	0.000	97	1140539	2.00	2.07	
53 1,2-Dichloropropane	63	10.588	10.588	0.000	84	267012	2.00	2.00	
54 n-Heptane	71	10.604	10.604	0.000	83	268273	2.00	2.07	
55 Trichloroethene	130	10.652	10.652	0.000	97	391764	2.00	2.11	
56 Dibromomethane	93	10.695	10.695	0.000	95	344327	2.00	2.09	
57 Dichlorobromomethane	83	10.873	10.873	0.000	99	668674	2.00	2.28	
58 1,4-Dioxane	88	10.884	10.884	0.000	85	121724	2.00	2.05	
59 Methyl methacrylate	41	11.024	11.024	0.000	96	298185	2.00	2.29	
61 4-Methyl-2-pentanone (MIBK	43	11.909	11.909	0.000	94	498332	2.00	2.17	
62 cis-1,3-Dichloropropene	75	11.952	11.952	0.000	93	490265	2.00	2.28	
63 trans-1,3-Dichloropropene	75	12.696	12.696	0.000	97	469840	2.00	2.36	
64 Toluene	91	12.831	12.831	0.000	94	986746	2.00	2.14	
65 1,1,2-Trichloroethane	83	12.890	12.890	0.000	99	277508	2.00	2.09	
66 2-Hexanone	58	13.332	13.332	0.000	96	262059	2.00	2.25	
67 Chlorodibromomethane	129	13.618	13.618	0.000	98	664970	2.00	2.44	
68 n-Octane	85	13.645	13.645	0.000	86	323458	2.00	2.19	
69 Ethylene Dibromide	107	13.909	13.909	0.000	98	532049	2.00	2.17	
70 Tetrachloroethene	129	14.039	14.039	0.000	96	392196	2.00	2.17	
71 Chlorobenzene	112	14.939	14.939	0.000	93	807387	2.00	2.09	
72 Ethylbenzene	91	15.268	15.268	0.000	99	1347030	2.00	2.23	
73 m-Xylene & p-Xylene	91	15.441	15.441	0.000	0	2155007	4.00	4.66	
74 Bromoform	173	15.845	15.845	0.000	97	612437	2.00	2.50	
75 Styrene	104	15.910	15.910	0.000	98	766048	2.00	2.36	
76 n-Nonane	57	15.953	15.953	0.000	84	568900	2.00	2.23	
77 o-Xylene	91	15.975	15.975	0.000	98	1112649	2.00	2.25	
78 1,1,2,2-Tetrachloroethane	83	16.298	16.298	0.000	99	703412	2.00	2.16	
79 1,2,3-Trichloropropane	110	16.454	16.454	0.000	97	255718	2.00	2.24	
80 Isopropylbenzene	105	16.595	16.595	0.000	97	1598853	2.00	2.24	
81 N-Propylbenzene	120	17.172	17.172	0.000	99	449603	2.00	2.35	
82 2-Chlorotoluene	126	17.193	17.193	0.000	95	402058	2.00	2.27	
83 4-Ethyltoluene	105	17.339	17.339	0.000	99	1603608	2.00	2.26	
84 1,3,5-Trimethylbenzene	120	17.425	17.425	0.000	92	682268	2.00	2.35	
85 Alpha Methyl Styrene	118	17.678	17.678	0.000	87	642965	2.00	2.37	
86 n-Decane	57	17.819	17.819	0.000	94	816952	2.00	2.28	
87 tert-Butylbenzene	119	17.894	17.894	0.000	92	1588839	2.00	2.34	
88 1,2,4-Trimethylbenzene	105	17.910	17.910	0.000	96	1459276	2.00	2.41	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
89 1,3-Dichlorobenzene	146	18.180	18.180	0.000	99	949913	2.00	2.30	
90 sec-Butylbenzene	105	18.196	18.196	0.000	98	2081555	2.00	2.40	
91 Benzyl chloride	91	18.261	18.261	0.000	98	1263671	2.00	2.37	
92 1,4-Dichlorobenzene	146	18.277	18.277	0.000	95	949859	2.00	2.28	
93 4-Isopropyltoluene	119	18.380	18.380	0.000	96	1893448	2.00	2.43	
94 1,2,3-Trimethylbenzene	105	18.417	18.417	0.000	99	1484812	2.00	2.19	
95 1,2-Dichlorobenzene	146	18.665	18.665	0.000	95	930033	2.00	2.30	
98 n-Butylbenzene	91	18.854	18.854	0.000	98	1737772	2.00	2.44	
99 Undecane	57	19.248	19.248	0.000	93	966838	2.00	2.32	
100 1,2-Dibromo-3-Chloropropan	157	19.307	19.307	0.000	97	401307	2.00	1.33	
101 1,2,4,5-Tetramethylbenzene	119	19.663	19.663	0.000	96	1787292	2.00	1.73	
104 Dodecane	57	20.359	20.359	0.000	96	963533	2.00	2.30	
105 1,2,4-Trichlorobenzene	180	20.466	20.466	0.000	94	773772	2.00	2.30	
106 Naphthalene	128	20.596	20.596	0.000	99	1769193	2.00	2.27	
107 Hexachlorobutadiene	225	20.849	20.849	0.000	96	794317	2.00	2.30	
108 1,2,3-Trichlorobenzene	180	20.887	20.887	0.000	94	741126	2.00	2.23	
109 2-Methylnaphthalene	142	21.696	21.696	0.000	100	455840	4.59	2.23	
110 1-Methylnaphthalene	142	21.841	21.841	0.000	100	432121	4.60	2.43	
S 111 Xylenes, Total	100				0		6.00	6.91	
S 112 1,2-Dichloroethene, Total	1				0		4.00	3.99	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40CV101S_00049	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

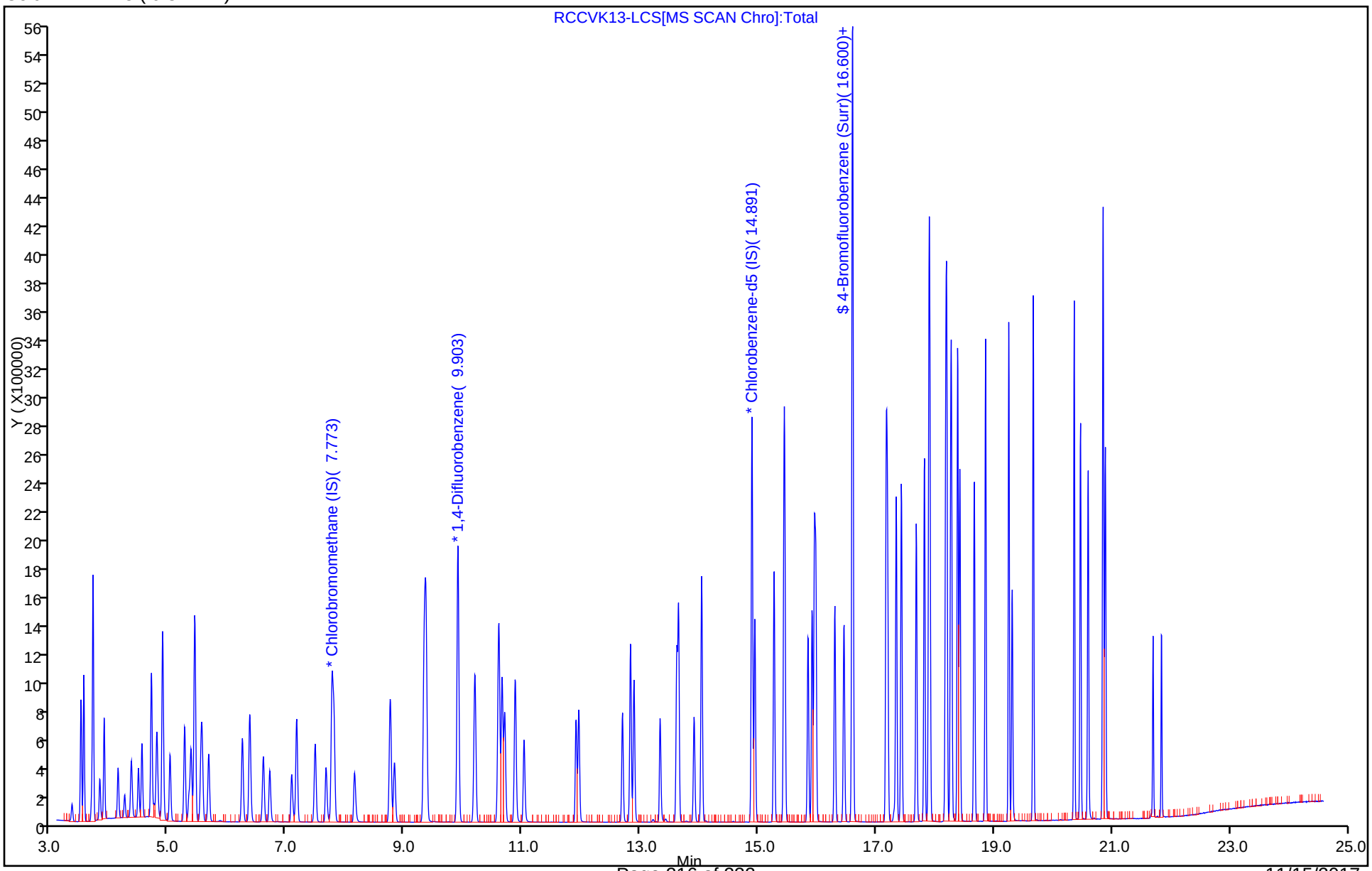
Report Date: 14-Nov-2017 11:45:27 Chrom Revision: 2.2 13-Nov-2017 17:19:06

TestAmerica Laboratories

Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RCCVK13-LCS.d

Injection Date:	13-Nov-2017 09:53:30	Instrument ID:	MR	Operator ID:	
Lims ID:	LCS			Worklist Smp#:	1002
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\RCCVK13-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 13-Nov-2017 09:53:30 ALS Bottle#: 15 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006602-002
Misc. Info.: S49
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20171109-6602.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Nov-2017 11:45:23 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh Date: 14-Nov-2017 10:46:40

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.19	104.81

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1

SDG No.:

Instrument ID: MR Start Date: 10/25/2017 11:43

Analysis Batch Number: 15542 End Date: 10/26/2017 00:08

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-15542/1		10/25/2017 11:43	1	RBFBJ25.D	RTX-5 0.32(mm)
IC 140-15542/3		10/25/2017 13:00	1	RJ25IC01.D	RTX-5 0.32(mm)
IC 140-15542/4		10/25/2017 13:46	1	RJ25IC02.D	RTX-5 0.32(mm)
140-9802-A-1 MDLV		10/25/2017 13:46	1		RTX-5 0.32(mm)
IC 140-15542/5		10/25/2017 14:33	1	RJ25IC03.D	RTX-5 0.32(mm)
140-9802-A-2 MDLV		10/25/2017 14:33	1		RTX-5 0.32(mm)
IC 140-15542/6		10/25/2017 15:20	1	RJ25IC04.D	RTX-5 0.32(mm)
140-9802-A-3 MDLV		10/25/2017 15:20	1		RTX-5 0.32(mm)
IC 140-15542/7		10/25/2017 16:08	1	RJ25IC05.D	RTX-5 0.32(mm)
140-9802-A-4 MDLV		10/25/2017 16:08	1		RTX-5 0.32(mm)
IC 140-15542/8		10/25/2017 16:56	1	RJ25IC06.D	RTX-5 0.32(mm)
140-9802-A-5 MDLV		10/25/2017 16:56	1		RTX-5 0.32(mm)
ICIS 140-15542/9		10/25/2017 17:43	1	RJ25IC07.D	RTX-5 0.32(mm)
IC 140-15542/10		10/25/2017 18:31	1	RJ25IC08.D	RTX-5 0.32(mm)
IC 140-15542/11		10/25/2017 19:18	1	RJ25IC09.D	RTX-5 0.32(mm)
IC 140-15542/12		10/25/2017 20:06	1	RJ25IC10.D	RTX-5 0.32(mm)
ICV 140-15542/14		10/25/2017 21:40	1	RJ25ICV.D	RTX-5 0.32(mm)
ZZZZZ		10/26/2017 00:08	1		RTX-5 0.32(mm)

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 18 & KNOX-MS-0023, Rev 2

Analysis Date:	10/25/17	Instrument:	UA	Chrom WL #:	6453	TALS Batch & Event #	TO14/15: 15542 - 1314
							DOD: 15544 1316 OHIO: 15543 1315

Chrom/Worklist Review		1st	Comments	2nd
1. Re-read each Limit Group	[method editor-limit groups]	✓		na
2. Verify LODV in Chrom	[method editor -> edit -> MDL]	✓		na
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level)	[WL Sample Reagents Tab vs. Entech]	✓		✓
4. Files linked properly to calibration levels?	[Sample List- Lab ID vs. Info]	✓		✓
5. Did BFB meet tune criteria?	[F8]	✓		✓
6. Were all standards injected within 24 hr of BFB?	[F7]	✓		✓
7. High point checked for saturation and point removed if so?	[Chrom]	✓	(5) Naph. 1245 TMBF	✓
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given?	[Chrom]	✓	acetonitrile lvl 7.8	✓ 10/26/17
9. RT for each IS ±20 sec avg. RT?	[F6 IstdRec]	✓		✓
10. Area for each IS ± 40% avg. area?	[F6 IstdRec]	✓		✓
11. Each analyte ± 0.06 RRT of avg. RRT?	[F6 - RRT]	✓		✓
12. Elution order checked on isomeric pairs?	[Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane		✓		✓
• 2-methyl butane / acrolein		✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane		✓		✓
• vinyl acetate / hexane		✓		✓
• cis- and trans- isomers		✓		✓
• ethyl benzene / m/p-xylene / o-xylene		✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/ sec-butylbenzene/1,2,3-trimethylbenzene		✓		✓
• tert-butylbenzene/4-isopropyltoluene		✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene		✓		✓
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes		ND 1285, 1234		✓
• 1,2,4- and 1,2,3-trichlorobenzenes		✓		✓
• 2-, and 1-methylnaphthalene		✓		✓
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?		✓		✓

MLG Review		TO	DOD	OH	Comments	TO-	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1& 2 methylnaphthalene ≤ 50%	[F6 Σ]	✓	✓	✓		✓	✓	✓
15. Were at least 5 levels of each compound analyzed?	[F6]	✓	✓	✓		✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.?	[F6]	✓	✓	✓		✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? (Note: Ohio does not allow quad)	[F6]	NA ✓	→	→		NA	→	→
18. If curves were used, is correlation coefficient ≥0.990?	[F6]	nl	→	→		NA	→	→
19. Is the intercept less than the RL for each curve?	[F6]	nl	→	→		NA	→	→
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous.	[Cntrl-C, details]	nl	nl	na		NA	→	na
21. Is low point RSE ≤ 50 %?	[F6]	✓	✓	✓		✓	✓	✓
22. Is the second source analysis within limits?	[F8 - icv]	✓	✓	✓				

Analyst/Date: 10/26/17 **2nd Level Reviewer/Date:** ✓ 10/26/17

TALS Review		TO	DOD	OH	Comments	TO	DOD	OH
23. Upload ICAL		✓				na	na	na
24. Graphics uploaded?	[paperclip]	✓	✓	✓		✓	✓	✓
25. All points are in the most recent active calibration event?	[Calibration Events --'Fix ICAL linkage' if needed]	✓	✓	✓		✓	✓	✓
26. Runs linked to BFB?	[QC Links]	✓	✓	✓		✓	✓	✓
27. Run Checklist and acknowledge findings	[F6]	✓	✓	✓		✓	✓	✓
28. If criteria not met, was a NCM generated?		nl	→	→		NA	→	→
29. After review in TALS, approve the method in TALS.		na	na	na		✓	✓	✓
30. After verifying TALS is correct, lock method in Chrom	<resolve any error issues>		na	na		✓	✓	✓
31. Checklist & Entech report scanned, attached & assigned properly?			na	na		✓	✓	✓

Analyst/date: 10/27/17 **2nd Level Reviewer/date:** ✓ 10/27/17

Comments: **Comments:**

MS017r42, 08/30/2017

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-9854-1

SDG No.:

Instrument ID: MR Start Date: 11/13/2017 09:22

Analysis Batch Number: 15956 End Date: 11/14/2017 05:02

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-15956/1		11/13/2017 09:22	1	RBFBK13.D	RTX-5 0.32(mm)
CCVIS 140-15956/2		11/13/2017 09:53	1	RCCVK13.D	RTX-5 0.32(mm)
LCS 140-15956/1002		11/13/2017 09:53	1	RCCVK13-LCS.d	RTX-5 0.32(mm)
MB 140-15956/4		11/13/2017 11:43	1	R500BK13.D	RTX-5 0.32(mm)
ZZZZZ		11/13/2017 12:31	1		RTX-5 0.32(mm)
ZZZZZ		11/13/2017 13:18	1		RTX-5 0.32(mm)
ZZZZZ		11/13/2017 16:07	661.22		RTX-5 0.32(mm)
ZZZZZ		11/13/2017 16:54	1		RTX-5 0.32(mm)
ZZZZZ		11/13/2017 17:41	1		RTX-5 0.32(mm)
140-9854-1		11/13/2017 18:27	1	RK13P104.D	RTX-5 0.32(mm)
140-9854-2		11/13/2017 19:14	1	RK13P105.D	RTX-5 0.32(mm)
140-9854-3		11/13/2017 20:01	1	RK13P106.D	RTX-5 0.32(mm)
140-9854-4		11/13/2017 20:48	1	RK13P107.D	RTX-5 0.32(mm)
140-9854-5		11/13/2017 21:34	1	RK13P108.D	RTX-5 0.32(mm)
140-9854-6		11/13/2017 22:21	1	RK13P109.D	RTX-5 0.32(mm)
ZZZZZ		11/13/2017 23:08	1		RTX-5 0.32(mm)
ZZZZZ		11/13/2017 23:57	1		RTX-5 0.32(mm)
ZZZZZ		11/14/2017 00:45	1		RTX-5 0.32(mm)
ZZZZZ		11/14/2017 01:36	1		RTX-5 0.32(mm)
ZZZZZ		11/14/2017 02:28	1		RTX-5 0.32(mm)
ZZZZZ		11/14/2017 03:19	1		RTX-5 0.32(mm)
ZZZZZ		11/14/2017 04:11	1		RTX-5 0.32(mm)
ZZZZZ		11/14/2017 05:02	1		RTX-5 0.32(mm)

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 18 & KNOX-MS-0023, Rev 2

Instrument/Date	MK 11/3/17		Routine	DOD	OHIO
CCAL Chrom WL #	6602	CCAL Batch #	15956		
ICAL Chrom WL #	6453	ICAL Batch # / Event #	15542 / 1314	/	/

Chrom Review	1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	✓		na
2. Did BFB meet tune criteria? [F8]	✓	□ [Failed TO-14A, but passes TO-15] (NCM#_____)	✓
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICal File batch #/start/end Cal date/time)? [F9]	✓		✓
4. Is the %D ≤ 30% for all target analytes? [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab]	✓	□ CCV - %D - LCS criteria met (NCM#_____) □ CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM#_____)	✓
5. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene/1,2,3-trimethylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	N		NA
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
6. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	N		NA
7. Has the RT been updated to the method?			✓
Analyst/date 11/3/17		**2nd Level Reviewer/date** 11/14/17	
8. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]	✓	Checked on screen	NA
9. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]	✓		✓
10. Were all samples/QC analyzed within 24 hr of BFB? [F7]	✓		✓
11. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). *If no, list blank ID:*	✓	□ Method Blank – Report, ND (NCM#_____) □ Method Blank – Report, 10X (NCM#_____)	✓
12. All runs - peaks ID'd correctly and false positives removed?	✓		✓
13. If manual integrations performed, are they properly performed, correctly ID'd, baseline clearly identified, and reason given?	✓		✓
14. IS/Surr within limits? *List samples and reason (e.g., 1 thru 5):* [Batch Results IS & SUR Tab] Sample / Reason / Sample / Reason	✓	□ (1) Surrogate – Matrix (NCM#_____) □ (2) Surrogate – High, ND (NCM#_____) □ (3) ISTD – RA/RA Concurs (NCM#_____) □ (4) Surrogate –RX concur, Report both (NCM#_____) □ (5) ISTD – Matrix, DL required (NCM#_____)	✓
15. Samples outside calibration range scheduled for dilution?	✓	□ ICAL – Range Exceeded; Minimum Dilution	✓

Chrom Review	1st	If No, why is data reportable?	2nd
16. For first analysis that is at a dilution, is highest target analyte >20% cal range? *List samples and reason:* Sample / Reason / Sample / Reason	✓	□ (1) Reporting Limit – Dilution, Matrix (NCM#_____) □ (2) Reporting Limit – Dilution, Non-Target (NCM#_____) □ (3) Issues with initial collection volume; see DRC.	✓
17. RIC inspected for proper integration for TPH?	N		NA
18. Obvious non-TPH peaks excluded?	✓		↓
19. Individual TPH peak area < octane high point area?	✓		↓

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 18 & KNOX-MS-0023, Rev 2

TALS Review	1st	If No, why is data reportable?	2nd
20. Graphics uploaded? [paperclip]			✓
21. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	✓		na
22. Sample special instructions verified?	✓		✓
23. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	✓	□ Marginal Exceedances - Within ME Limits and Random; Report (NCM# ___) □ LCS/LCSD - %R High (NCM#_____)	✓
24. Suffixes assigned properly (DL/RE)? [Sample List Tab]	✓		✓
25. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	✓		✓
26. Analytes over calibration range set to secondary [Conditions Review Tab]	✓		✓
27. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	✓		✓
28. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) *(If DUP not reported - set to 'Acceptable' for each job)*	✓		✓
29. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	✓	**500 mL blank ID:** 4 **200 mL blank ID:** 5	✓
30. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	✓		✓
31. Correct ICV linked to each MB? [QC Links]	✓		✓
32. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	✓		NA
33. Run Checklist and acknowledge findings [F8]	✓		✓
34. Runs set to 1st level review?	✓	Runs set to 2nd level review?	✓
35. QC checker run and items addressed?	-na-		✓
36. Checklist & Entech report scanned, attached & assigned properly?	-na-		✓

Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed
≥90	5
71 - 90	4
51 - 70	3
31 - 50	2
11 - 30	1
≤11	0

Analyst:	Date: 11/14/17	2nd Level Reviewer: CLS	Date: 11/14/17
Comments:		Comments:	

Example Calculation: 9869-1 TLE

On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF

4.6613 x 800 x 661.22 = 19263.40

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9408-1

SDG No.:

Client Sample ID: 11572 | Lab Sample ID: 140-9408-15

Matrix: Air | Lab File ID: I29L9408.D

Analysis Method: TO-15 | Date Collected: 09/28/2017 00:09

Sample wt/vol: 200(mL) | Date Analyzed: 09/29/2017 13:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 14671 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	*	0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	NC		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND	*	0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND	*	0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND	*	0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND	*	0.20	
106-46-7	1,4-Dichlorobenzene	ND	*	0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9408-1

SDG No.:

Client Sample ID: 11572 | Lab Sample ID: 140-9408-15

Matrix: Air | Lab File ID: I29L9408.D

Analysis Method: TO-15 | Date Collected: 09/28/2017 00:09

Sample wt/vol: 200(mL) | Date Analyzed: 09/29/2017 13:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 14671 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9408-1

SDG No.:

Client Sample ID: 11572 | Lab Sample ID: 140-9408-15

Matrix: Air | Lab File ID: I29L9408.D

Analysis Method: TO-15 | Date Collected: 09/28/2017 00:09

Sample wt/vol: 200(mL) | Date Analyzed: 09/29/2017 13:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 14671 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND	*	0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND	*	0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND	*	0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170925-6152.b\I29L9408.D				
Lims ID:	140-9408-A-15				
Client ID:	11572				
Sample Type:	Client				
Inject. Date:	29-Sep-2017 13:06:30	ALS Bottle#:	1	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006152-008				
Misc. Info.:	11572				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20170925-6152.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	02-Oct-2017 09:58:27	Calib Date:	24-Aug-2017 23:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20170818-5819.b\RICH24L9.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK010				
First Level Reviewer: tajh		Date:	29-Sep-2017 13:50:08		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.778	7.784	-0.006	82	381822	4.00	
* 2 1,4-Difluorobenzene	114	9.924	9.924	0.000	94	2164252	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.912	14.912	0.000	86	1843261	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.616	16.616	0.000	90	1342143	4.08	
31 Methylene Chloride	84	5.551	5.546	0.005	90	15631	0.1205	
112 1,2,3,5-Tetramethylbenzene	119	19.679	19.749	-0.070	1	307	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

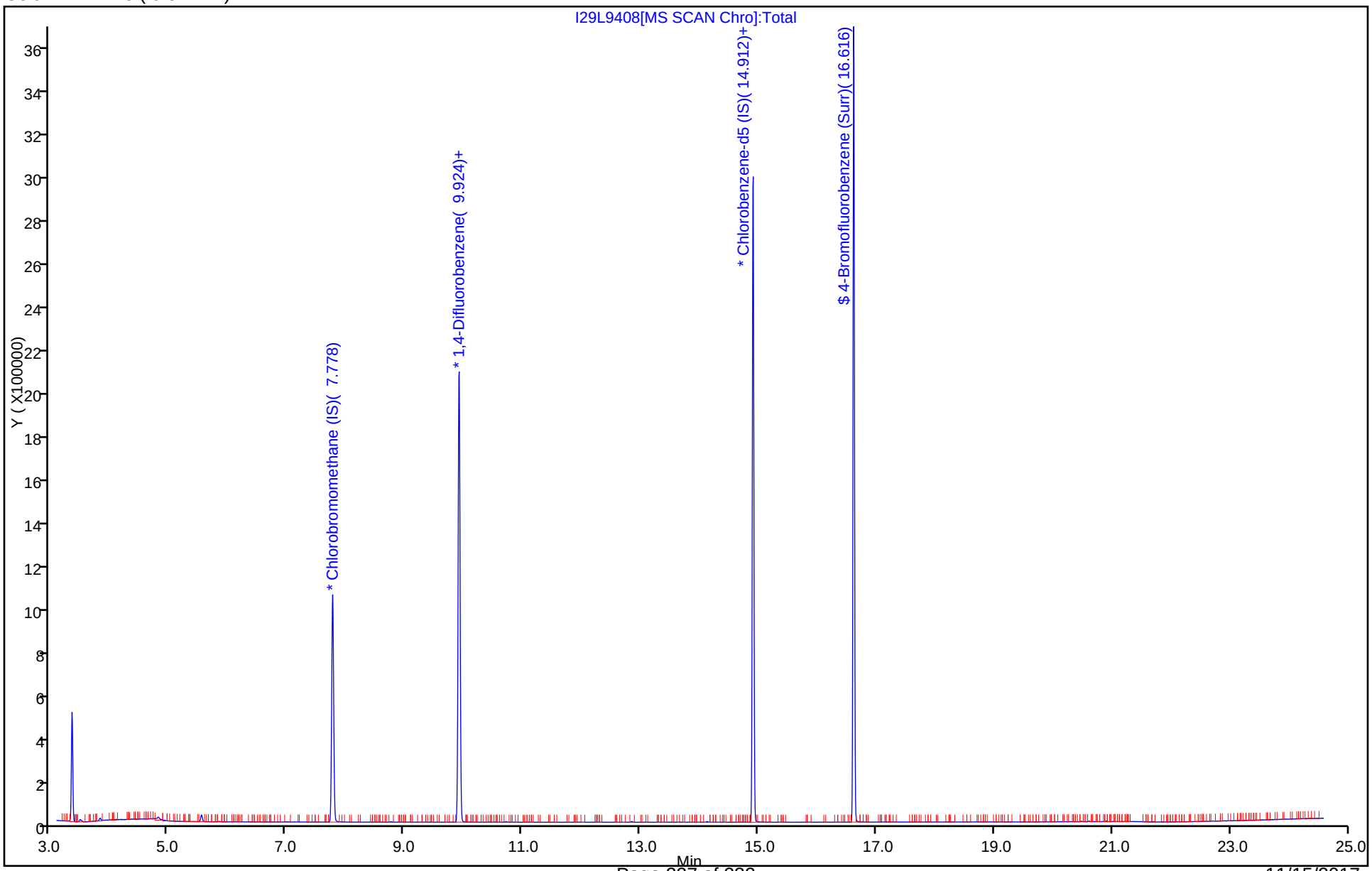
Report Date: 02-Oct-2017 09:58:31 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170925-6152.b\I29L9408.D

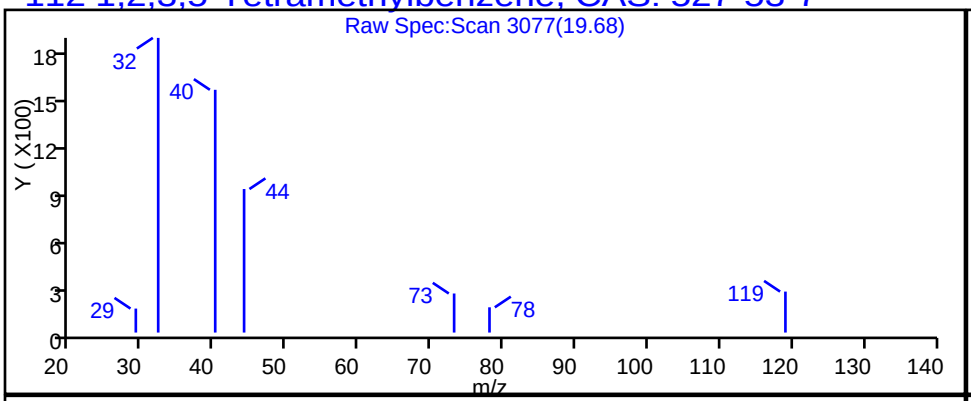
Injection Date:	29-Sep-2017 13:06:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-9408-A-15	Lab Sample ID:	140-9408-15	Worklist Smp#:	8
Client ID:	11572				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

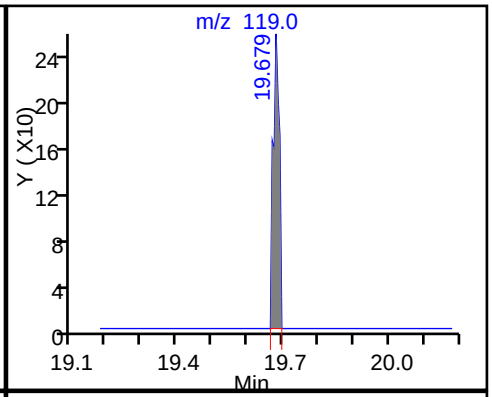
Column: RTX-5 (0.32 mm)

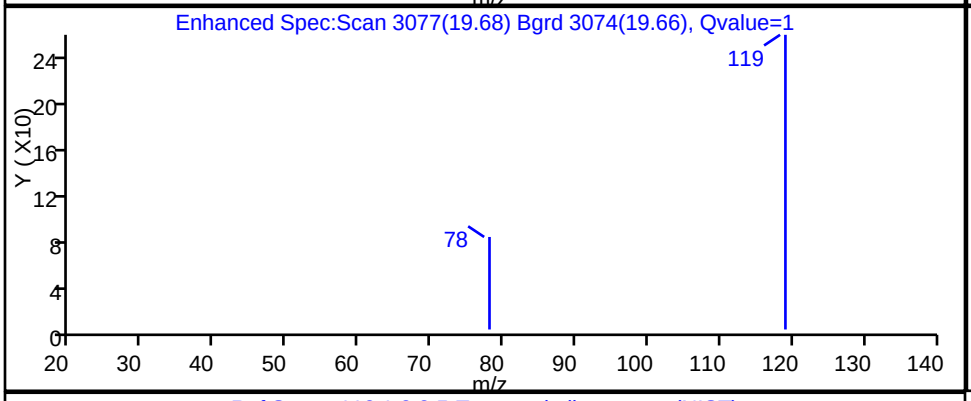


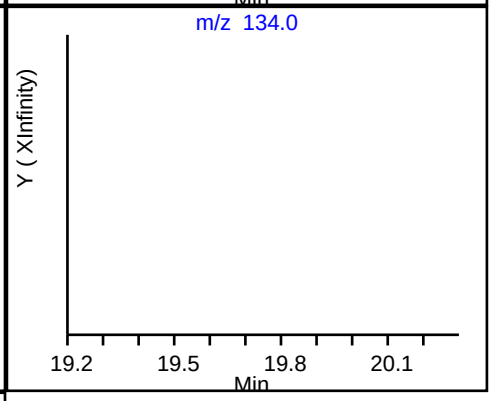
Data File: \\ChromNA\Knoxville\ChromData\MR\20170925-6152.b\I29L9408.D
Injection Date: 29-Sep-2017 13:06:30 Instrument ID: MR
Lims ID: 140-9408-A-15 Lab Sample ID: 140-9408-15
Client ID: 11572
Operator ID: ALS Bottle#: 1 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

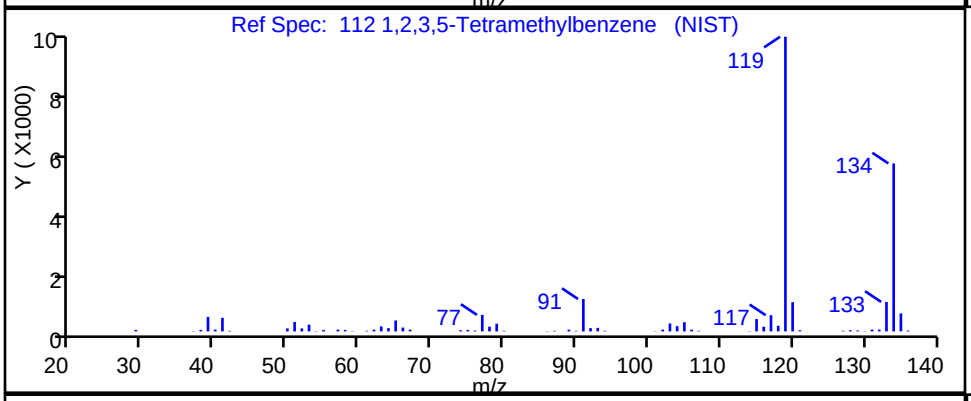
112 1,2,3,5-Tetramethylbenzene, CAS: 527-53-7

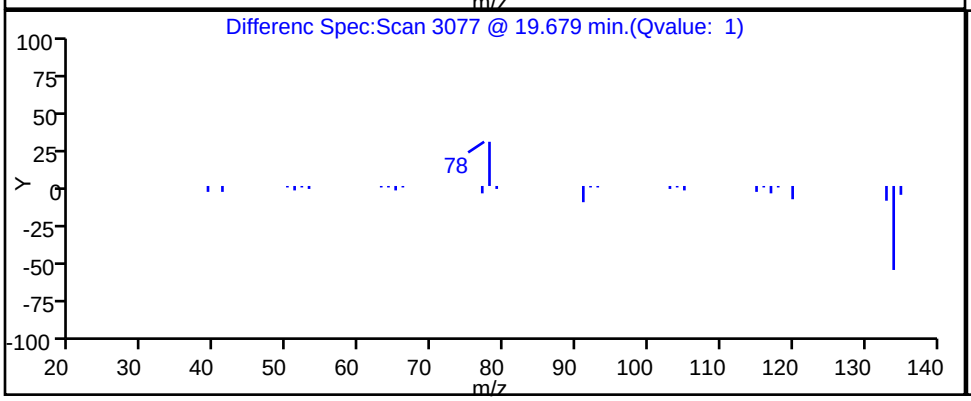


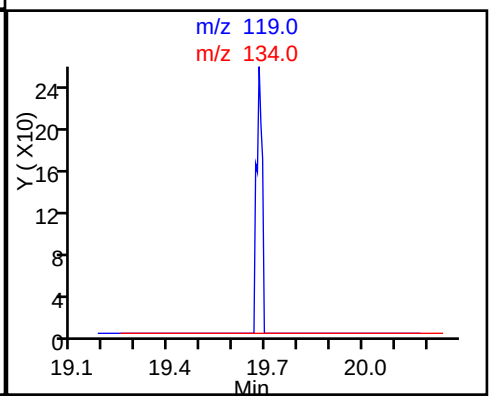












Shipping and Receiving Documents

180325

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

BALTIMORE

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	Project Manager: Peter Rich	Sampled By: M Wilkey/A Edmunds
Company: Tetra Tech	Phone: 410-990-4607	of COCs
Address: 51 Franklin St	Site Contact:	
City/State/Zip Annapolis/MD/21401	TAL Contact:	
Phone: 410-990-4607		
FAX:		
Project Name: LMC - Middle Branch	Analysis Turnaround Time	
Site/location: BLDG A + C / Middle River	Standard (Specify)	
PO # 117-05 12124	Rush (Specify)	

140-9854 Chain of Custody

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
BLDG-A EFFLUENT	11-8-17	1054	1056	-28	-4	10930	09803	✓											
BLDG-A MID	"	1059	1101	-29	-5	10966	09569	"											
BLDG-A INFLUENT	"	1105	1107	-29	-5	10614	09751	"											
BLDG-C EFFLUENT	"	1122	1123	-30	-5	11594	10341	"											
BLDG-C MID	"	1129	1130	-29	-4	10104	09641	"											
BLDG-C INFLUENT	✓	1135	1136	-30	-4	09958	11495	✓											

Sampled by :

Temperature (Fahrenheit)	Interior	Ambient
Start		
Stop		

Pressure (inches of Hg)	Interior	Ambient
Start		
Stop		

Received @ ambient
1 box FedEx SO
tr# 7707 0829 0857
No custody seal
KW 11/9/17

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by:	Date/Time: 11-8-2017/1230	Received by:
Relinquished by:	Date/Time: 11-8-2017/1445	Received by: 11/9/17 1000

6 Cans
6 KR

11/15/2017

Loc: 140
9854

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST **Log In Number:**

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	✓			☐ **Containers, Broken**	
2. Were ambient air containers received intact?			✓	☑ Checked in lab	
3. The coolers/containers custody seal if present, is it intact?			✓	☐ Yes ☐ NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			✓	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**	
5. Were all of the sample containers received intact?	✓			☐ **Containers, Broken**	
6. Were samples received in appropriate containers?	✓			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**	
7. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**	
8. Were all of the samples listed on the COC received?	✓			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**	
9. Is the date/time of sample collection noted?	✓			☐ **COC; No Date/Time; Client Contacted**	
10. Was the sampler identified on the COC?	✓			☐ **Sampler Not Listed on COC**	**Labeling Verified by:** **Date:**
11. Is the client and project name/# identified?	✓			☐ **COC Incorrect/Incomplete**	
12. Are tests/parameters listed for each sample?	✓			☐ **COC No tests on COC**	**pH test strip lot number:**
13. Is the matrix of the samples noted?	✓			☐ **COC Incorrect/Incomplete**	
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ **COC Incorrect/Incomplete**	
15. Were samples received within holding time?	✓			☐ **Holding Time - Receipt**	
16. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**	
17. Were VOA samples received without headspace?			✓	☐ **Headspace (VOA only)**	
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:_____			✓	☐ **Residual Chlorine**	
19. For 1613B water samples is pH<9?			✓	☐ If no, lab will adjust	
20. For rad samples was sample activity info. Provided?			✓	☐ Project missing info	

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: 140029 21 PM Instructions: _____

Sample Receiving Associate: KeU Date: 11/9/17

QA026R30.doc, 080916

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 11/9/2017

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
BKK	140-9854-a-1	09803	9408	B	1	0.0	1527	
BKK	140-9854-a-2	10966	9408	B	1	-2.6	1528	
BKK	140-9854-a-3	09751	9408	B	1	-3.0	1529	
BKK	140-9854-a-4	10341	9408	B	1	-2.3	1530	
BKK	140-9854-a-5	09641	9408	B	1	-1.7	1531	
BKK	140-9854-a-6	11495	9408	B	1	-1.0	1532	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

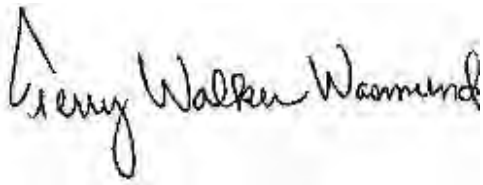
ANALYTICAL REPORT

Job Number: 140-10079-1

Job Description: LMC MRC, MRAS/BLDG-A

For:
Tetra Tech GEO
51 Franklin Street
Suite 400
Annapolis, MD 21401

Attention: Peter Rich



Approved for release.
Terry Walker Wasmund
Project Manager II
12/15/2017 10:23 AM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
12/15/2017

cc: Belssi Chang
Amy Thomson
Michael Wilks

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Definitions/Glossary

Client: Tetra Tech GEO
Project/Site: LMC MRC, MRAS/BLDG-A

TestAmerica Job ID: 140-10079-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-10079-1

Receipt
The samples were received on 12/5/2017 at 10:40 AM. The samples arrived in good condition and properly preserved.

Air - GC/MS VOA - Method TO-15 LL
Can Certification Comments:
Due to the large number of analytes in the CCV, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for several analytes to recover outside criteria for this method when analyzing for a full list. The CCV associated with the can cleaning batches had analytes outside control limits. These results have been reported and qualified.

This report includes canister certification data for the batch certified and/or individually certified canisters used to collect samples as well as for any canisters used for dilution of those samples. All of the canisters used for sample collection or sample dilution for this job were certified to be clean to the levels listed on the results page. Please note that results for individually certified canisters that were not used for sample collection or sample dilution may also be included in the report because these canisters were in the same cleaning batch as the canisters used for this project. Since these canisters were not used for this job, the results have no bearing on the sample results.

EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

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

Comments
No additional comments.

Detection Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC, MRAS/BLDG-A

TestAmerica Job ID: 140-10079-1

Client Sample ID: BLDG-A INFLUENT — Lab Sample ID: 140-10079-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	5.0		2.0	0.58	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.43	J	2.0	0.38	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	19		2.0	0.60	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.69	J	2.0	0.68	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	3.8		2.0	0.25	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	23		2.0	0.35	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	91	B	2.0	0.30	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	180		1.0	0.35	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	16		6.4	1.8	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.5	J	7.1	1.3	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	75		7.9	2.4	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	3.4	J	9.9	3.3	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	15		8.1	1.0	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	92		7.9	1.4	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	500	B	11	1.6	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	990		5.4	1.9	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-A MIDGAC — Lab Sample ID: 140-10079-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	14		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.40		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.79		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	24		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.37	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	6.9		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,2-Dichloroethane	0.14	J	0.40	0.095	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	26		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.21	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.78	J	1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.1		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.40		0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	140	E B	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.50	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane - DL	150	B	1.3	0.20	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	46		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.4		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	3.9		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	95		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.8	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	28		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,2-Dichloroethane	0.57	J	1.6	0.38	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	100		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.89	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.7	J	3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	4.1		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	1.6		1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	740	E B	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BLDG-A MIDGAC (Continued) — Lab Sample ID: 140-10079-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total	2.2	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane - DL	810	B	7.3	1.1	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-A EFFLUENT — Lab Sample ID: 140-10079-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	3.4		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.53		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.23	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	11		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.51		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	1.6		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	6.4		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.20	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.73	J	1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.16	J	0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	25	B	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	5.5		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Vinyl chloride	0.15	J	0.20	0.15	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.28	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	11		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.9		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.1	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	42		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.5		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	6.6		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	25		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.85	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.5	J	3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.65	J	1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	140	B	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	29		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Vinyl chloride	0.38	J	0.51	0.37	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	1.2	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BLDG-A INFLUENT

Lab Sample ID: 140-10079-1

Date Collected: 12/04/17 13:34

Matrix: Air

Date Received: 12/05/17 10:40

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**5.0**		2.0	0.58	ppb v/v			12/06/17 20:07	1
Carbon tetrachloride	ND		2.0	0.38	ppb v/v			12/06/17 20:07	1
Chlorodifluoromethane	**0.43**	**J**	2.0	0.38	ppb v/v			12/06/17 20:07	1
Chloroform	ND		2.0	0.38	ppb v/v			12/06/17 20:07	1
cis-1,2-Dichloroethene	**19**		2.0	0.60	ppb v/v			12/06/17 20:07	1
Dichlorodifluoromethane	**0.69**	**J**	2.0	0.68	ppb v/v			12/06/17 20:07	1
1,1-Dichloroethane	**3.8**		2.0	0.25	ppb v/v			12/06/17 20:07	1
1,2-Dichloroethane	ND		2.0	0.48	ppb v/v			12/06/17 20:07	1
1,1-Dichloroethene	**23**		2.0	0.35	ppb v/v			12/06/17 20:07	1
Ethylbenzene	ND		2.0	0.68	ppb v/v			12/06/17 20:07	1
Methylene Chloride	ND		5.0	3.3	ppb v/v			12/06/17 20:07	1
Methyl tert-butyl ether	ND		10	1.7	ppb v/v			12/06/17 20:07	1
Naphthalene	ND		1.0	1.0	ppb v/v			12/06/17 20:07	1
Tetrachloroethene	ND		2.0	0.40	ppb v/v			12/06/17 20:07	1
Toluene	ND		3.0	3.0	ppb v/v			12/06/17 20:07	1
trans-1,2-Dichloroethene	ND		2.0	0.50	ppb v/v			12/06/17 20:07	1
1,2,4-Trichlorobenzene	ND		2.0	0.98	ppb v/v			12/06/17 20:07	1
1,1,1-Trichloroethane	**91**	**B**	2.0	0.30	ppb v/v			12/06/17 20:07	1
1,1,2-Trichloroethane	ND		2.0	0.53	ppb v/v			12/06/17 20:07	1
Trichloroethene	**180**		1.0	0.35	ppb v/v			12/06/17 20:07	1
1,2,3-Trimethylbenzene	ND		2.0	0.85	ppb v/v			12/06/17 20:07	1
1,2,4-Trimethylbenzene	ND		2.0	0.63	ppb v/v			12/06/17 20:07	1
1,3,5-Trimethylbenzene	ND		2.0	0.65	ppb v/v			12/06/17 20:07	1
Vinyl chloride	ND		1.0	0.73	ppb v/v			12/06/17 20:07	1
Xylenes, Total	ND		4.0	0.60	ppb v/v			12/06/17 20:07	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**16**		6.4	1.8	ug/m3			12/06/17 20:07	1
Carbon tetrachloride	ND		13	2.4	ug/m3			12/06/17 20:07	1
Chlorodifluoromethane	**1.5**	**J**	7.1	1.3	ug/m3			12/06/17 20:07	1
Chloroform	ND		9.8	1.8	ug/m3			12/06/17 20:07	1
cis-1,2-Dichloroethene	**75**		7.9	2.4	ug/m3			12/06/17 20:07	1
Dichlorodifluoromethane	**3.4**	**J**	9.9	3.3	ug/m3			12/06/17 20:07	1
1,1-Dichloroethane	**15**		8.1	1.0	ug/m3			12/06/17 20:07	1
1,2-Dichloroethane	ND		8.1	1.9	ug/m3			12/06/17 20:07	1
1,1-Dichloroethene	**92**		7.9	1.4	ug/m3			12/06/17 20:07	1
Ethylbenzene	ND		8.7	2.9	ug/m3			12/06/17 20:07	1
Methylene Chloride	ND		17	11	ug/m3			12/06/17 20:07	1
Methyl tert-butyl ether	ND		36	6.1	ug/m3			12/06/17 20:07	1
Naphthalene	ND		5.2	5.2	ug/m3			12/06/17 20:07	1
Tetrachloroethene	ND		14	2.7	ug/m3			12/06/17 20:07	1
Toluene	ND		11	11	ug/m3			12/06/17 20:07	1
trans-1,2-Dichloroethene	ND		7.9	2.0	ug/m3			12/06/17 20:07	1
1,2,4-Trichlorobenzene	ND		15	7.2	ug/m3			12/06/17 20:07	1
1,1,1-Trichloroethane	**500**	**B**	11	1.6	ug/m3			12/06/17 20:07	1
1,1,2-Trichloroethane	ND		11	2.9	ug/m3			12/06/17 20:07	1
Trichloroethene	**990**		5.4	1.9	ug/m3			12/06/17 20:07	1
1,2,3-Trimethylbenzene	ND		9.8	4.2	ug/m3			12/06/17 20:07	1
1,2,4-Trimethylbenzene	ND		9.8	3.1	ug/m3			12/06/17 20:07	1

Client Sample ID: BLDG-A INFLUENT

Lab Sample ID: 140-10079-1

Date Collected: 12/04/17 13:34
Matrix: Air
Date Received: 12/05/17 10:40
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		9.8	3.2	ug/m3			12/06/17 20:07	1
Vinyl chloride	ND		2.6	1.9	ug/m3			12/06/17 20:07	1
Xylenes, Total	ND		17	2.6	ug/m3			12/06/17 20:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*60 - 140*		*12/06/17 20:07*	*1*

Client Sample ID: BLDG-A MIDGAC

Lab Sample ID: 140-10079-2

Date Collected: 12/04/17 13:38

Matrix: Air

Date Received: 12/05/17 10:40

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**14**		0.40	0.12	ppb v/v			12/06/17 17:47	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			12/06/17 17:47	1
Chlorodifluoromethane	**0.40**		0.40	0.075	ppb v/v			12/06/17 17:47	1
Chloroform	**0.79**		0.40	0.075	ppb v/v			12/06/17 17:47	1
cis-1,2-Dichloroethene	**24**		0.40	0.12	ppb v/v			12/06/17 17:47	1
Dichlorodifluoromethane	**0.37**	**J**	0.40	0.14	ppb v/v			12/06/17 17:47	1
1,1-Dichloroethane	**6.9**		0.40	0.050	ppb v/v			12/06/17 17:47	1
1,2-Dichloroethane	**0.14**	**J**	0.40	0.095	ppb v/v			12/06/17 17:47	1
1,1-Dichloroethene	**26**		0.40	0.070	ppb v/v			12/06/17 17:47	1
Ethylbenzene	**0.21**	**J**	0.40	0.14	ppb v/v			12/06/17 17:47	1
Methylene Chloride	**0.78**	**J**	1.0	0.65	ppb v/v			12/06/17 17:47	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			12/06/17 17:47	1
Naphthalene	ND		0.20	0.20	ppb v/v			12/06/17 17:47	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			12/06/17 17:47	1
Toluene	**1.1**		0.60	0.60	ppb v/v			12/06/17 17:47	1
trans-1,2-Dichloroethene	**0.40**		0.40	0.10	ppb v/v			12/06/17 17:47	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			12/06/17 17:47	1
1,1,1-Trichloroethane	**140**	**E B**	0.40	0.060	ppb v/v			12/06/17 17:47	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			12/06/17 17:47	1
Trichloroethene	ND		0.20	0.070	ppb v/v			12/06/17 17:47	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			12/06/17 17:47	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			12/06/17 17:47	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			12/06/17 17:47	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			12/06/17 17:47	1
Xylenes, Total	**0.50**	**J**	0.80	0.12	ppb v/v			12/06/17 17:47	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**46**		1.3	0.37	ug/m3			12/06/17 17:47	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			12/06/17 17:47	1
Chlorodifluoromethane	**1.4**		1.4	0.27	ug/m3			12/06/17 17:47	1
Chloroform	**3.9**		2.0	0.37	ug/m3			12/06/17 17:47	1
cis-1,2-Dichloroethene	**95**		1.6	0.48	ug/m3			12/06/17 17:47	1
Dichlorodifluoromethane	**1.8**	**J**	2.0	0.67	ug/m3			12/06/17 17:47	1
1,1-Dichloroethane	**28**		1.6	0.20	ug/m3			12/06/17 17:47	1
1,2-Dichloroethane	**0.57**	**J**	1.6	0.38	ug/m3			12/06/17 17:47	1
1,1-Dichloroethene	**100**		1.6	0.28	ug/m3			12/06/17 17:47	1
Ethylbenzene	**0.89**	**J**	1.7	0.59	ug/m3			12/06/17 17:47	1
Methylene Chloride	**2.7**	**J**	3.5	2.3	ug/m3			12/06/17 17:47	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			12/06/17 17:47	1
Naphthalene	ND		1.0	1.0	ug/m3			12/06/17 17:47	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			12/06/17 17:47	1
Toluene	**4.1**		2.3	2.3	ug/m3			12/06/17 17:47	1
trans-1,2-Dichloroethene	**1.6**		1.6	0.40	ug/m3			12/06/17 17:47	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			12/06/17 17:47	1
1,1,1-Trichloroethane	**740**	**E B**	2.2	0.33	ug/m3			12/06/17 17:47	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			12/06/17 17:47	1
Trichloroethene	ND		1.1	0.38	ug/m3			12/06/17 17:47	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			12/06/17 17:47	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			12/06/17 17:47	1

Client Sample ID: BLDG-A MIDGAC

Date Collected: 12/04/17 13:38
Date Received: 12/05/17 10:40
Sample Container: Summa Canister 1L

Lab Sample ID: 140-10079-2

Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			12/06/17 17:47	1
Vinyl chloride	ND		0.51	0.37	ug/m3			12/06/17 17:47	1
Xylenes, Total	**2.2**	**J**	3.5	0.52	ug/m3			12/06/17 17:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*60 - 140*		*12/06/17 17:47*	*1*

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**150**	**B**	1.3	0.20	ppb v/v			12/06/17 20:55	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**810**	**B**	7.3	1.1	ug/m3			12/06/17 20:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*60 - 140*		*12/06/17 20:55*	*1*

Client Sample ID: BLDG-A EFFLUENT

Lab Sample ID: 140-10079-3

Date Collected: 12/04/17 13:45
Matrix: Air
Date Received: 12/05/17 10:40
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**3.4**		0.40	0.12	ppb v/v			12/06/17 19:21	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			12/06/17 19:21	1
Chlorodifluoromethane	**0.53**		0.40	0.075	ppb v/v			12/06/17 19:21	1
Chloroform	**0.23**	**J**	0.40	0.075	ppb v/v			12/06/17 19:21	1
cis-1,2-Dichloroethene	**11**		0.40	0.12	ppb v/v			12/06/17 19:21	1
Dichlorodifluoromethane	**0.51**		0.40	0.14	ppb v/v			12/06/17 19:21	1
1,1-Dichloroethane	**1.6**		0.40	0.050	ppb v/v			12/06/17 19:21	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			12/06/17 19:21	1
1,1-Dichloroethene	**6.4**		0.40	0.070	ppb v/v			12/06/17 19:21	1
Ethylbenzene	**0.20**	**J**	0.40	0.14	ppb v/v			12/06/17 19:21	1
Methylene Chloride	**0.73**	**J**	1.0	0.65	ppb v/v			12/06/17 19:21	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			12/06/17 19:21	1
Naphthalene	ND		0.20	0.20	ppb v/v			12/06/17 19:21	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			12/06/17 19:21	1
Toluene	ND		0.60	0.60	ppb v/v			12/06/17 19:21	1
trans-1,2-Dichloroethene	**0.16**	**J**	0.40	0.10	ppb v/v			12/06/17 19:21	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			12/06/17 19:21	1
1,1,1-Trichloroethane	**25**	**B**	0.40	0.060	ppb v/v			12/06/17 19:21	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			12/06/17 19:21	1
Trichloroethene	**5.5**		0.20	0.070	ppb v/v			12/06/17 19:21	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			12/06/17 19:21	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			12/06/17 19:21	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			12/06/17 19:21	1
Vinyl chloride	**0.15**	**J**	0.20	0.15	ppb v/v			12/06/17 19:21	1
Xylenes, Total	**0.28**	**J**	0.80	0.12	ppb v/v			12/06/17 19:21	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**11**		1.3	0.37	ug/m3			12/06/17 19:21	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			12/06/17 19:21	1
Chlorodifluoromethane	**1.9**		1.4	0.27	ug/m3			12/06/17 19:21	1
Chloroform	**1.1**	**J**	2.0	0.37	ug/m3			12/06/17 19:21	1
cis-1,2-Dichloroethene	**42**		1.6	0.48	ug/m3			12/06/17 19:21	1
Dichlorodifluoromethane	**2.5**		2.0	0.67	ug/m3			12/06/17 19:21	1
1,1-Dichloroethane	**6.6**		1.6	0.20	ug/m3			12/06/17 19:21	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			12/06/17 19:21	1
1,1-Dichloroethene	**25**		1.6	0.28	ug/m3			12/06/17 19:21	1
Ethylbenzene	**0.85**	**J**	1.7	0.59	ug/m3			12/06/17 19:21	1
Methylene Chloride	**2.5**	**J**	3.5	2.3	ug/m3			12/06/17 19:21	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			12/06/17 19:21	1
Naphthalene	ND		1.0	1.0	ug/m3			12/06/17 19:21	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			12/06/17 19:21	1
Toluene	ND		2.3	2.3	ug/m3			12/06/17 19:21	1
trans-1,2-Dichloroethene	**0.65**	**J**	1.6	0.40	ug/m3			12/06/17 19:21	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			12/06/17 19:21	1
1,1,1-Trichloroethane	**140**	**B**	2.2	0.33	ug/m3			12/06/17 19:21	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			12/06/17 19:21	1
Trichloroethene	**29**		1.1	0.38	ug/m3			12/06/17 19:21	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			12/06/17 19:21	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			12/06/17 19:21	1

Client Sample ID: BLDG-A EFFLUENT

Lab Sample ID: 140-10079-3

Date Collected: 12/04/17 13:45
Matrix: Air
Date Received: 12/05/17 10:40
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			12/06/17 19:21	1
Vinyl chloride	**0.38**	**J**	0.51	0.37	ug/m3			12/06/17 19:21	1
Xylenes, Total	**1.2**	**J**	3.5	0.52	ug/m3			12/06/17 19:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*60 - 140*		*12/06/17 19:21*	*1*

Default Detection Limits

Client: Tetra Tech GEO
Project/Site: LMC MRC, MRAS/BLDG-A

TestAmerica Job ID: 140-10079-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.20	0.13	ppb v/v	TO 15 LL
Methylene Chloride	0.69	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC, MRAS/BLDG-A

TestAmerica Job ID: 140-10079-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		BFB
Lab Sample ID	Client Sample ID	(60-140)
140-10079-1	BLDG-A INFLUENT	107
140-10079-2	BLDG-A MIDGAC	109
140-10079-2 - DL	BLDG-A MIDGAC	108
140-10079-3	BLDG-A EFFLUENT	109
LCS 140-16560/1008	Lab Control Sample	105
MB 140-16560/16	Method Blank	104

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-16560/16
Matrix: Air
Analysis Batch: 16560

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			12/06/17 14:35	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			12/06/17 14:35	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			12/06/17 14:35	1
Chloroform	ND		0.080	0.015	ppb v/v			12/06/17 14:35	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			12/06/17 14:35	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			12/06/17 14:35	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			12/06/17 14:35	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			12/06/17 14:35	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			12/06/17 14:35	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			12/06/17 14:35	1
Methylene Chloride	ND		0.20	0.13	ppb v/v			12/06/17 14:35	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			12/06/17 14:35	1
Naphthalene	ND		0.040	0.040	ppb v/v			12/06/17 14:35	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			12/06/17 14:35	1
Toluene	ND		0.12	0.12	ppb v/v			12/06/17 14:35	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			12/06/17 14:35	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			12/06/17 14:35	1
1,1,1-Trichloroethane	0.0200	J	0.080	0.012	ppb v/v			12/06/17 14:35	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			12/06/17 14:35	1
Trichloroethene	ND		0.040	0.014	ppb v/v			12/06/17 14:35	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			12/06/17 14:35	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			12/06/17 14:35	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			12/06/17 14:35	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			12/06/17 14:35	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			12/06/17 14:35	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.26	0.073	ug/m3			12/06/17 14:35	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			12/06/17 14:35	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			12/06/17 14:35	1
Chloroform	ND		0.39	0.073	ug/m3			12/06/17 14:35	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			12/06/17 14:35	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			12/06/17 14:35	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			12/06/17 14:35	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			12/06/17 14:35	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			12/06/17 14:35	1
Ethylbenzene	ND		0.35	0.12	ug/m3			12/06/17 14:35	1
Methylene Chloride	ND		0.69	0.45	ug/m3			12/06/17 14:35	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			12/06/17 14:35	1
Naphthalene	ND		0.21	0.21	ug/m3			12/06/17 14:35	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			12/06/17 14:35	1
Toluene	ND		0.45	0.45	ug/m3			12/06/17 14:35	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			12/06/17 14:35	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			12/06/17 14:35	1
1,1,1-Trichloroethane	0.109	J	0.44	0.065	ug/m3			12/06/17 14:35	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			12/06/17 14:35	1
Trichloroethene	ND		0.21	0.075	ug/m3			12/06/17 14:35	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			12/06/17 14:35	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-16560/16
Matrix: Air
Analysis Batch: 16560

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			12/06/17 14:35	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			12/06/17 14:35	1
Vinyl chloride	ND		0.10	0.074	ug/m3			12/06/17 14:35	1
Xylenes, Total	ND		0.69	0.10	ug/m3			12/06/17 14:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*60 - 140*		*12/06/17 14:35*	*1*

Lab Sample ID: LCS 140-16560/1008
Matrix: Air
Analysis Batch: 16560

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2.00	2.07		ppb v/v		103	70 - 130
Carbon tetrachloride	2.00	2.20		ppb v/v		110	70 - 130
Chlorodifluoromethane	2.00	2.23		ppb v/v		111	60 - 140
Chloroform	2.00	2.13		ppb v/v		106	70 - 130
cis-1,2-Dichloroethene	2.00	2.05		ppb v/v		102	70 - 130
Dichlorodifluoromethane	2.00	2.27		ppb v/v		113	60 - 140
1,1-Dichloroethane	2.00	2.11		ppb v/v		105	70 - 130
1,2-Dichloroethane	2.00	2.24		ppb v/v		112	70 - 130
1,1-Dichloroethene	2.00	2.05		ppb v/v		102	70 - 130
Ethylbenzene	2.00	2.20		ppb v/v		110	70 - 130
Methylene Chloride	2.00	1.90		ppb v/v		95	70 - 130
Methyl tert-butyl ether	2.00	2.22		ppb v/v		111	60 - 140
Naphthalene	2.00	2.26		ppb v/v		113	60 - 140
Tetrachloroethene	2.00	2.11		ppb v/v		106	70 - 130
Toluene	2.00	2.18		ppb v/v		109	70 - 130
trans-1,2-Dichloroethene	2.00	2.04		ppb v/v		102	70 - 130
1,2,4-Trichlorobenzene	2.00	2.22		ppb v/v		111	60 - 140
1,1,1-Trichloroethane	2.00	2.19		ppb v/v		110	70 - 130
1,1,2-Trichloroethane	2.00	2.17		ppb v/v		108	70 - 130
Trichloroethene	2.00	2.09		ppb v/v		104	70 - 130
1,2,3-Trimethylbenzene	2.00	2.40		ppb v/v		120	70 - 130
1,2,4-Trimethylbenzene	2.00	2.37		ppb v/v		119	70 - 130
1,3,5-Trimethylbenzene	2.00	2.30		ppb v/v		115	70 - 130
Vinyl chloride	2.00	1.98		ppb v/v		99	70 - 130
Xylenes, Total	6.00	6.80		ppb v/v		113	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	6.62		ug/m3		103	70 - 130
Carbon tetrachloride	13	13.8		ug/m3		110	70 - 130
Chlorodifluoromethane	7.1	7.87		ug/m3		111	60 - 140
Chloroform	9.8	10.4		ug/m3		106	70 - 130
cis-1,2-Dichloroethene	7.9	8.11		ug/m3		102	70 - 130
Dichlorodifluoromethane	9.9	11.2		ug/m3		113	60 - 140
1,1-Dichloroethane	8.1	8.54		ug/m3		105	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-16560/1008
Matrix: Air
Analysis Batch: 16560

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2-Dichloroethane			8.1	9.07		ug/m3		112	70 - 130		
1,1-Dichloroethene			7.9	8.13		ug/m3		102	70 - 130		
Ethylbenzene			8.7	9.57		ug/m3		110	70 - 130		
Methylene Chloride			7.0	6.60		ug/m3		95	70 - 130		
Methyl tert-butyl ether			7.2	8.00		ug/m3		111	60 - 140		
Naphthalene			10	11.8		ug/m3		113	60 - 140		
Tetrachloroethene			14	14.3		ug/m3		106	70 - 130		
Toluene			7.5	8.20		ug/m3		109	70 - 130		
trans-1,2-Dichloroethene			7.9	8.09		ug/m3		102	70 - 130		
1,2,4-Trichlorobenzene			15	16.5		ug/m3		111	60 - 140		
1,1,1-Trichloroethane			11	12.0		ug/m3		110	70 - 130		
1,1,2-Trichloroethane			11	11.8		ug/m3		108	70 - 130		
Trichloroethene			11	11.2		ug/m3		104	70 - 130		
1,2,3-Trimethylbenzene			9.8	11.8		ug/m3		120	70 - 130		
1,2,4-Trimethylbenzene			9.8	11.7		ug/m3		119	70 - 130		
1,3,5-Trimethylbenzene			9.8	11.3		ug/m3		115	70 - 130		
Vinyl chloride			5.1	5.07		ug/m3		99	70 - 130		
Xylenes, Total			26	29.5		ug/m3		113	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*60 - 140*

QC Association Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC, MRAS/BLDG-A

TestAmerica Job ID: 140-10079-1

Air - GC/MS VOA

Analysis Batch: 16560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-10079-1	BLDG-A INFLUENT	Total/NA	Air	TO 15 LL	
140-10079-2	BLDG-A MIDGAC	Total/NA	Air	TO 15 LL	
140-10079-2 - DL	BLDG-A MIDGAC	Total/NA	Air	TO 15 LL	
140-10079-3	BLDG-A EFFLUENT	Total/NA	Air	TO 15 LL	
MB 140-16560/16	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-16560/1008	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: Tetra Tech GEO
Project/Site: LMC MRC, MRAS/BLDG-A

TestAmerica Job ID: 140-10079-1

Client Sample ID: BLDG-A INFLUENT
Lab Sample ID: 140-10079-1
Date Collected: 12/04/17 13:34
Matrix: Air
Date Received: 12/05/17 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	20 mL	500 mL	16560	12/06/17 20:07	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: BLDG-A MIDGAC
Lab Sample ID: 140-10079-2
Date Collected: 12/04/17 13:38
Matrix: Air
Date Received: 12/05/17 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	16560	12/06/17 17:47	HMT	TAL KNX
	Instrument ID: MR									
Total/NA	Analysis	TO 15 LL	DL	1	30 mL	500 mL	16560	12/06/17 20:55	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: BLDG-A EFFLUENT
Lab Sample ID: 140-10079-3
Date Collected: 12/04/17 13:45
Matrix: Air
Date Received: 12/05/17 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	16560	12/06/17 19:21	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-16560/16
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	16560	12/06/17 14:35	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-16560/1008
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	16560	12/06/17 12:14	HMT	TAL KNX
	Instrument ID: MR									

Laboratory References:
TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC, MRAS/BLDG-A

TestAmerica Job ID: 140-10079-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC, MRAS/BLDG-A

TestAmerica Job ID: 140-10079-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-10079-1	BLDG-A INFLUENT	Air	12/04/17 13:34	12/05/17 10:40
140-10079-2	BLDG-A MIDGAC	Air	12/04/17 13:38	12/05/17 10:40
140-10079-3	BLDG-A EFFLUENT	Air	12/04/17 13:45	12/05/17 10:40

Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
BLDG-A INFLUENT	140-10079-1	107
BLDG-A MIDGAC	140-10079-2	109
BLDG-A MIDGAC DL	140-10079-2 DL	108
BLDG-A EFFLUENT	140-10079-3	109
	MB 140-16560/16	104
	LCS 140-16560/1008	105

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1

SDG No.:

Matrix: Air Level: Low Lab File ID: RCCVL06A-LCS.d

Lab ID: LCS 140-16560/1008 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.07	103	70-130	
Carbon tetrachloride	2.00	2.20	110	70-130	
Chlorodifluoromethane	2.00	2.23	111	60-140	
Chloroform	2.00	2.13	106	70-130	
cis-1,2-Dichloroethene	2.00	2.05	102	70-130	
Dichlorodifluoromethane	2.00	2.27	113	60-140	
1,1-Dichloroethane	2.00	2.11	105	70-130	
1,2-Dichloroethane	2.00	2.24	112	70-130	
1,1-Dichloroethene	2.00	2.05	102	70-130	
Ethylbenzene	2.00	2.20	110	70-130	
Methylene Chloride	2.00	1.90	95	70-130	
Methyl tert-butyl ether	2.00	2.22	111	60-140	
Naphthalene	2.00	2.26	113	60-140	
Tetrachloroethene	2.00	2.11	106	70-130	
Toluene	2.00	2.18	109	70-130	
trans-1,2-Dichloroethene	2.00	2.04	102	70-130	
1,2,4-Trichlorobenzene	2.00	2.22	111	60-140	
1,1,1-Trichloroethane	2.00	2.19	110	70-130	
1,1,2-Trichloroethane	2.00	2.17	108	70-130	
Trichloroethene	2.00	2.09	104	70-130	
1,2,3-Trimethylbenzene	2.00	2.40	120	70-130	
1,2,4-Trimethylbenzene	2.00	2.37	119	70-130	
1,3,5-Trimethylbenzene	2.00	2.30	115	70-130	
Vinyl chloride	2.00	1.98	99	70-130	
Xylenes, Total	6.00	6.80	113	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1

SDG No.:

Lab File ID: BLKL10086.D Lab Sample ID: MB 140-16560/16

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MR Date Analyzed: 12/06/2017 14:35

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-16560/1008	RCCVL06A-LCS.d	12/06/2017 12:14
BLDG-A MIDGAC	140-10079-2	RL06P105.D	12/06/2017 17:47
BLDG-A EFFLUENT	140-10079-3	RL06P106DU.D	12/06/2017 19:21
BLDG-A INFLUENT	140-10079-1	RL06P104R.D	12/06/2017 20:07
BLDG-A MIDGAC DL	140-10079-2 DL	RL06P105DL.D	12/06/2017 20:55

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1

SDG No.:

Lab File ID: RBFBJ25.D BFB Injection Date: 10/25/2017

Instrument ID: MR BFB Injection Time: 11:43

Analysis Batch No.: 15542

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.6	
75	30.0 - 60.0 % of mass 95	51.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.5	(0.6) 1
174	50.0 - 120.00 % of mass 95	85.8	
175	5.0 - 9.0 % of mass 174	6.0	(7.1) 1
176	95.0 - 101.0 % of mass 174	83.1	(96.9) 1
177	5.0 - 9.0 % of mass 176	5.5	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-15542/3	RJ25IC01.D	10/25/2017	13:00
	IC 140-15542/4	RJ25IC02.D	10/25/2017	13:46
	IC 140-15542/5	RJ25IC03.D	10/25/2017	14:33
	IC 140-15542/6	RJ25IC04.D	10/25/2017	15:20
	IC 140-15542/7	RJ25IC05.D	10/25/2017	16:08
	IC 140-15542/8	RJ25IC06.D	10/25/2017	16:56
	ICIS 140-15542/9	RJ25IC07.D	10/25/2017	17:43
	IC 140-15542/10	RJ25IC08.D	10/25/2017	18:31
	IC 140-15542/11	RJ25IC09.D	10/25/2017	19:18
	IC 140-15542/12	RJ25IC10.D	10/25/2017	20:06
	ICV 140-15542/14	RJ25ICV.D	10/25/2017	21:40

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1

SDG No.:

Lab File ID: RBFBL06A.D BFB Injection Date: 12/06/2017

Instrument ID: MR BFB Injection Time: 11:43

Analysis Batch No.: 16560

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	53.8	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.5	(0.6) 1
174	50.0 - 120.00 % of mass 95	80.8	
175	5.0 - 9.0 % of mass 174	5.8	(7.2) 1
176	95.0 - 101.0 % of mass 174	78.2	(96.8) 1
177	5.0 - 9.0 % of mass 176	5.3	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-16560/8	RCCVL06A.D	12/06/2017	12:14
	LCS 140-16560/1008	RCCVL06A-LCS .d	12/06/2017	12:14
	MB 140-16560/16	BLKL10086.D	12/06/2017	14:35
BLDG-A MIDGAC	140-10079-2	RL06P105.D	12/06/2017	17:47
BLDG-A EFFLUENT	140-10079-3	RL06P106DU.D	12/06/2017	19:21
BLDG-A INFLUENT	140-10079-1	RL06P104R.D	12/06/2017	20:07
BLDG-A MIDGAC DL	140-10079-2 DL	RL06P105DL.D	12/06/2017	20:55

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1

SDG No.:

Sample No.: ICIS 140-15542/9 Date Analyzed: 10/25/2017 17:43

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RJ25IC07.D Heated Purge: (Y/N) N

Calibration ID: 1314

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		418613	7.79	2428422	9.92	2105490	14.90
UPPER LIMIT		586058	8.12	3399791	10.25	2947686	15.23
LOWER LIMIT		251168	7.46	1457053	9.59	1263294	14.57
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-15542/14		425799	7.79	2437587	9.92	2075967	14.91

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1

SDG No.:

Sample No.: CCVIS 140-16560/8 Date Analyzed: 12/06/2017 12:14

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RCCVL06A.D Heated Purge: (Y/N) N

Calibration ID: 1314

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		256602	7.77	1521494	9.90	1316691	14.89
UPPER LIMIT		359243	8.10	2130092	10.23	1843367	15.22
LOWER LIMIT		153961	7.44	912896	9.57	790015	14.56
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-16560/1008		256602	7.77	1521494	9.90	1316691	14.89
MB 140-16560/16		260517	7.76	1532514	9.89	1278293	14.88
140-10079-2	BLDG-A MIDGAC	242011	7.77	1427914	9.90	1219380	14.88
140-10079-3	BLDG-A EFFLUENT	235110	7.76	1378011	9.89	1187070	14.88
140-10079-1	BLDG-A INFLUENT	239419	7.75	1418383	9.89	1219319	14.88
140-10079-2 DL	BLDG-A MIDGAC DL	232616	7.76	1376924	9.89	1184536	14.88

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10079-1

SDG No.:

Client Sample ID: BLDG-A INFLUENT | Lab Sample ID: 140-10079-1

Matrix: Air | Lab File ID: RL06P104R.D

Analysis Method: TO 15 LL | Date Collected: 12/04/2017 13:34

Sample wt/vol: 20(mL) | Date Analyzed: 12/06/2017 20:07

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 16560 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	5.0		2.0	0.58
56-23-5	Carbon tetrachloride	153.81	ND		2.0	0.38
75-45-6	Chlorodifluoromethane	86.47	0.43	J	2.0	0.38
67-66-3	Chloroform	119.38	ND		2.0	0.38
156-59-2	cis-1,2-Dichloroethene	96.94	19		2.0	0.60
75-71-8	Dichlorodifluoromethane	120.91	0.69	J	2.0	0.68
75-34-3	1,1-Dichloroethane	98.96	3.8		2.0	0.25
107-06-2	1,2-Dichloroethane	98.96	ND		2.0	0.48
75-35-4	1,1-Dichloroethene	96.94	23		2.0	0.35
100-41-4	Ethylbenzene	106.17	ND		2.0	0.68
75-09-2	Methylene Chloride	84.93	ND		5.0	3.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		10	1.7
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.0	0.40
108-88-3	Toluene	92.14	ND		3.0	3.0
156-60-5	trans-1,2-Dichloroethene	96.94	ND		2.0	0.50
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		2.0	0.98
71-55-6	1,1,1-Trichloroethane	133.41	91	B	2.0	0.30
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.0	0.53
79-01-6	Trichloroethene	131.39	180		1.0	0.35
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.85
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.63
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.65
75-01-4	Vinyl chloride	62.50	ND		1.0	0.73
1330-20-7	Xylenes, Total	106.17	ND		4.0	0.60

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1

SDG No.:

Client Sample ID: BLDG-A INFLUENT Lab Sample ID: 140-10079-1

Matrix: Air Lab File ID: RL06P104R.D

Analysis Method: TO 15 LL Date Collected: 12/04/2017 13:34

Sample wt/vol: 20(mL) Date Analyzed: 12/06/2017 20:07

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 16560 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	16		6.4	1.8
56-23-5	Carbon tetrachloride	153.81	ND		13	2.4
75-45-6	Chlorodifluoromethane	86.47	1.5	J	7.1	1.3
67-66-3	Chloroform	119.38	ND		9.8	1.8
156-59-2	cis-1,2-Dichloroethene	96.94	75		7.9	2.4
75-71-8	Dichlorodifluoromethane	120.91	3.4	J	9.9	3.3
75-34-3	1,1-Dichloroethane	98.96	15		8.1	1.0
107-06-2	1,2-Dichloroethane	98.96	ND		8.1	1.9
75-35-4	1,1-Dichloroethene	96.94	92		7.9	1.4
100-41-4	Ethylbenzene	106.17	ND		8.7	2.9
75-09-2	Methylene Chloride	84.93	ND		17	11
1634-04-4	Methyl tert-butyl ether	88.15	ND		36	6.1
91-20-3	Naphthalene	128.17	ND		5.2	5.2
127-18-4	Tetrachloroethene	165.83	ND		14	2.7
108-88-3	Toluene	92.14	ND		11	11
156-60-5	trans-1,2-Dichloroethene	96.94	ND		7.9	2.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		15	7.2
71-55-6	1,1,1-Trichloroethane	133.41	500	B	11	1.6
79-00-5	1,1,2-Trichloroethane	133.41	ND		11	2.9
79-01-6	Trichloroethene	131.39	990		5.4	1.9
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		9.8	4.2
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		9.8	3.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		9.8	3.2
75-01-4	Vinyl chloride	62.50	ND		2.6	1.9
1330-20-7	Xylenes, Total	106.17	ND		17	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P104R.D
Lims ID: 140-10079-A-1
Client ID: BLDG-A INFLUENT
Sample Type: Client
Inject. Date: 06-Dec-2017 20:07:30 ALS Bottle#: 4 Worklist Smp#: 18
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006818-013
Misc. Info.: 140-10079-a-1
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 07-Dec-2017 10:16:08 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: barlozhetskayaa Date: 07-Dec-2017 10:04:29

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.751	7.768	-0.017	83	239419	4.00	
* 2 1,4-Difluorobenzene	114	9.892	9.897	-0.005	95	1418383	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.880	14.885	-0.005	89	1219319	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.589	16.589	0.000	86	952833	4.26	
6 Chlorodifluoromethane	67	3.518	3.518	0.000	70	519	0.0173	
8 Dichlorodifluoromethane	85	3.561	3.567	-0.006	99	6485	0.0276	
26 1,1-Dichloroethene	96	5.254	5.276	-0.022	96	88213	0.9248	
36 1,1-Dichloroethane	63	6.586	6.603	-0.017	100	26102	0.1503	
40 cis-1,2-Dichloroethene	96	7.465	7.482	-0.017	96	76339	0.7608	
44 1,1,1-Trichloroethane	97	8.743	8.749	-0.006	95	858793	3.65	
48 Benzene	78	9.315	9.321	-0.005	97	56346	0.1981	
55 Trichloroethene	130	10.641	10.647	-0.006	97	1009913	7.37	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

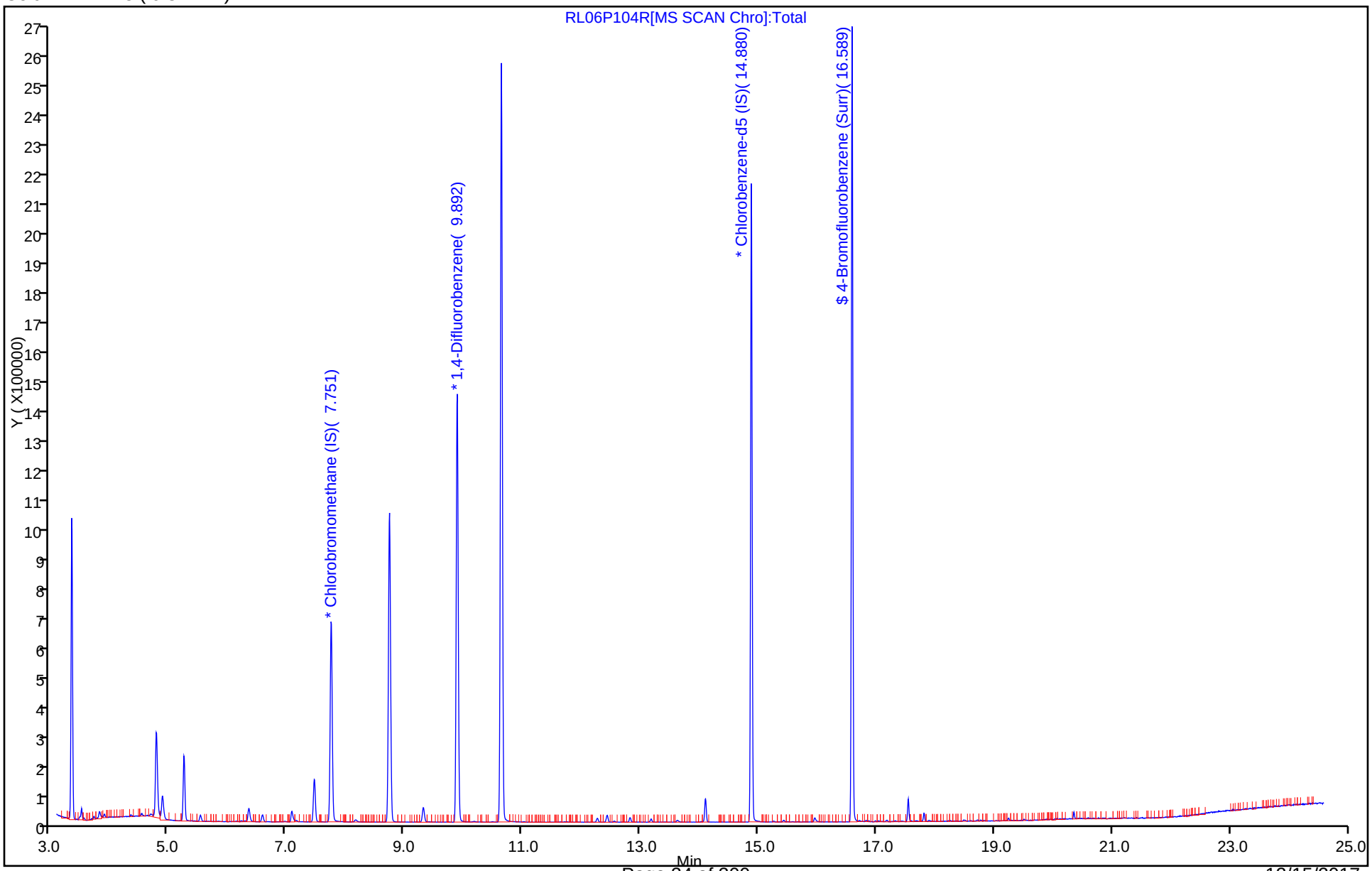
Report Date: 07-Dec-2017 10:16:37 Chrom Revision: 2.2 05-Dec-2017 07:36:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P104R.D

Injection Date:	06-Dec-2017 20:07:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10079-A-1	Lab Sample ID:		Worklist Smp#:	18
Client ID:	BLDG-A INFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P104R.D				
Lims ID:	140-10079-A-1				
Client ID:	BLDG-A INFLUENT				
Sample Type:	Client				
Inject. Date:	06-Dec-2017 20:07:30	ALS Bottle#:	4	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006818-013				
Misc. Info.:	140-10079-a-1				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	07-Dec-2017 10:16:08	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK028				
First Level Reviewer: barlozhetskayaa		Date:	07-Dec-2017 10:04:29		

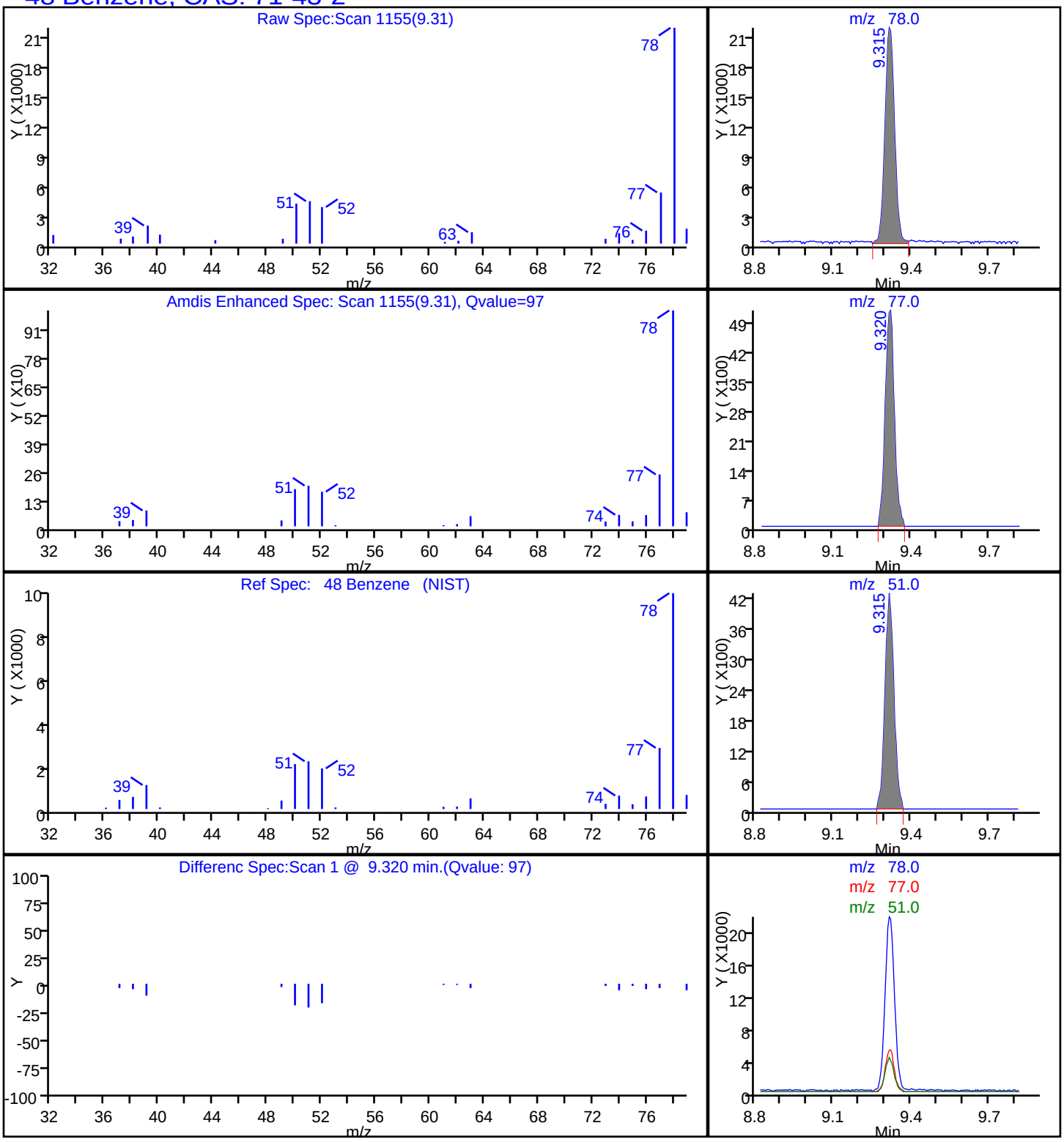
Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.26	106.62

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P104R.D

Injection Date:	06-Dec-2017 20:07:30	Instrument ID:	MR
Lims ID:	140-10079-A-1	Lab Sample ID:	
Client ID:	BLDG-A INFLUENT		
Operator ID:		ALS Bottle#:	4 Worklist Smp#: 18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

48 Benzene, CAS: 71-43-2

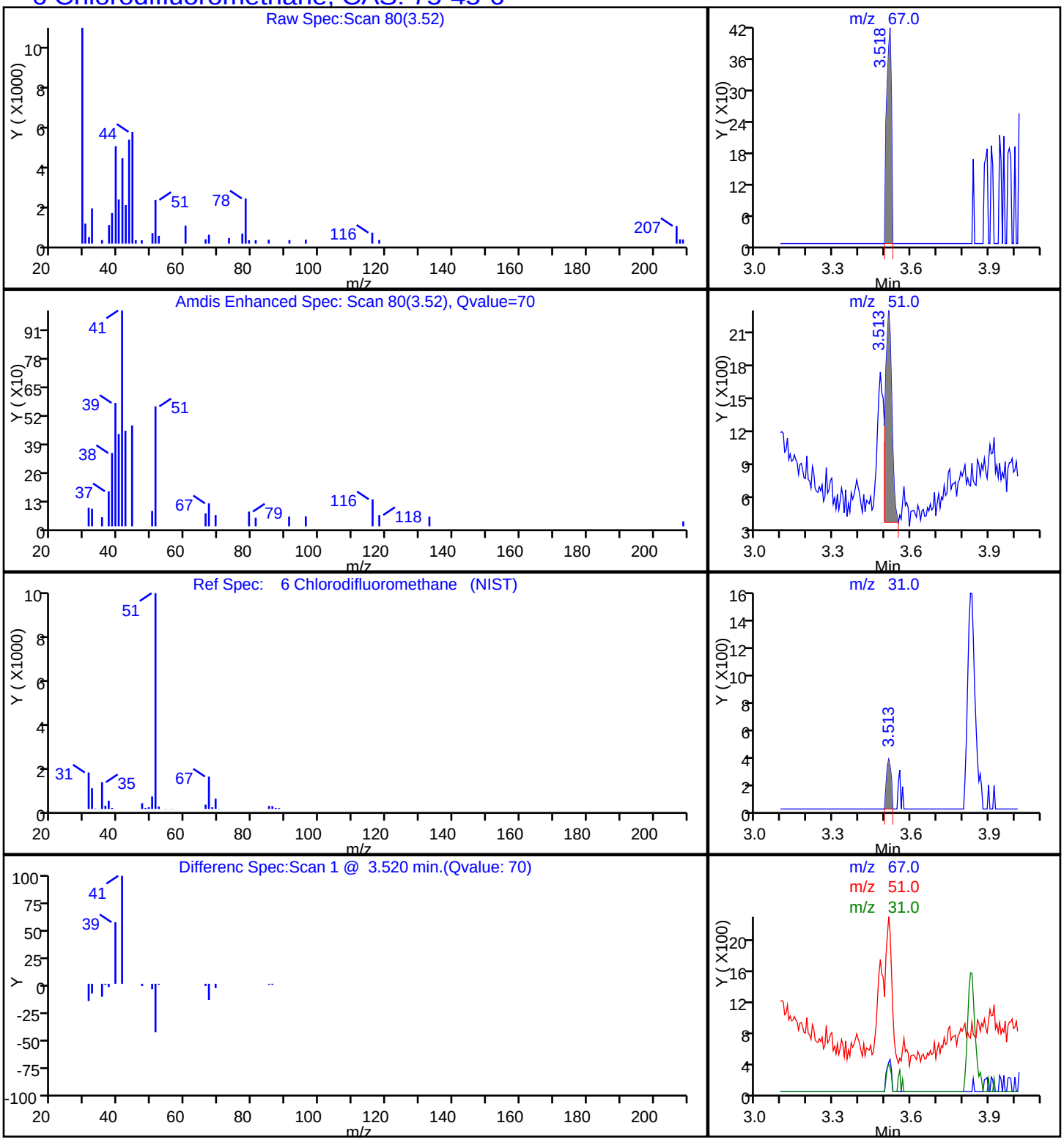


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P104R.D

Injection Date:	06-Dec-2017 20:07:30	Instrument ID:	MR		
Lims ID:	140-10079-A-1	Lab Sample ID:			
Client ID:	BLDG-A INFLUENT				
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

6 Chlorodifluoromethane, CAS: 75-45-6



Report Date: 07-Dec-2017 10:16:37 Chrom Revision: 2.2 05-Dec-2017 07:36:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P104R.D

Injection Date: 06-Dec-2017 20:07:30 Instrument ID: MR

Lims ID: 140-10079-A-1 Lab Sample ID:

Client ID: BLDG-A INFLUENT

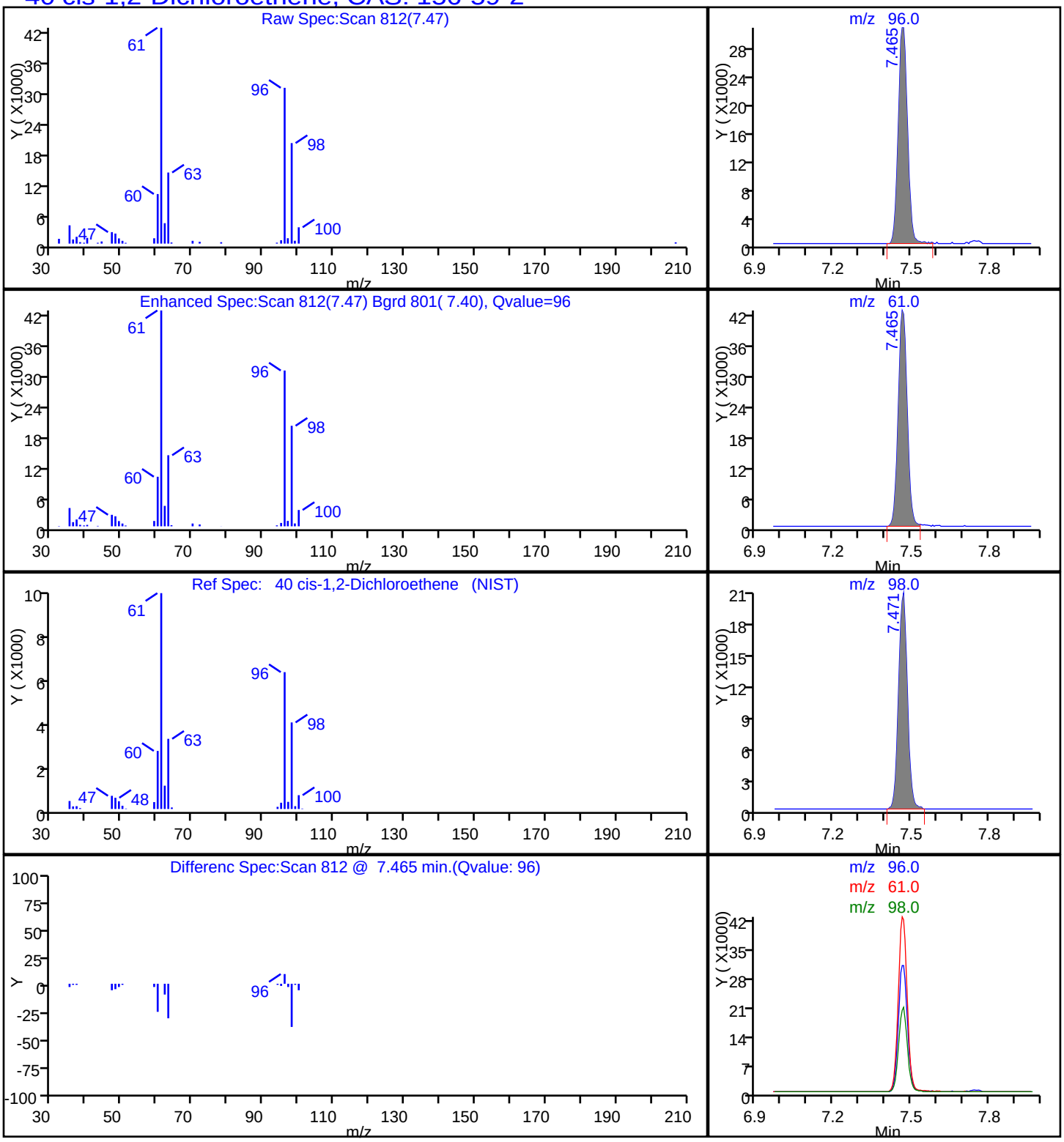
Operator ID: ALS Bottle#: 4 Worklist Smp#: 18

Purge Vol: 500.000 mL Dil. Factor: 1.0000

Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm) Detector MS SCAN

40 cis-1,2-Dichloroethene, CAS: 156-59-2

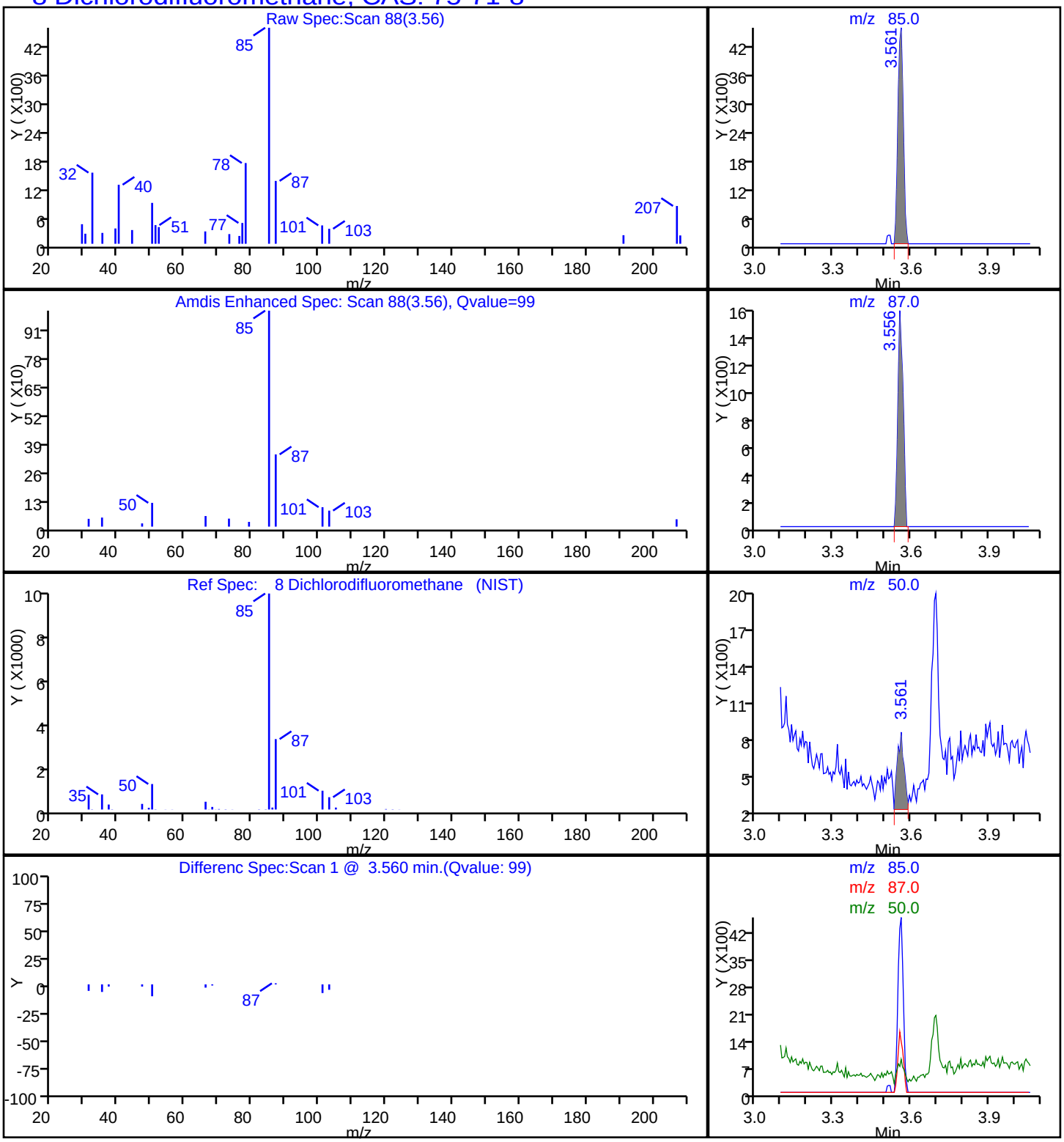


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P104R.D

Injection Date:	06-Dec-2017 20:07:30	Instrument ID:	MR		
Lims ID:	140-10079-A-1	Lab Sample ID:			
Client ID:	BLDG-A INFLUENT				
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

8 Dichlorodifluoromethane, CAS: 75-71-8



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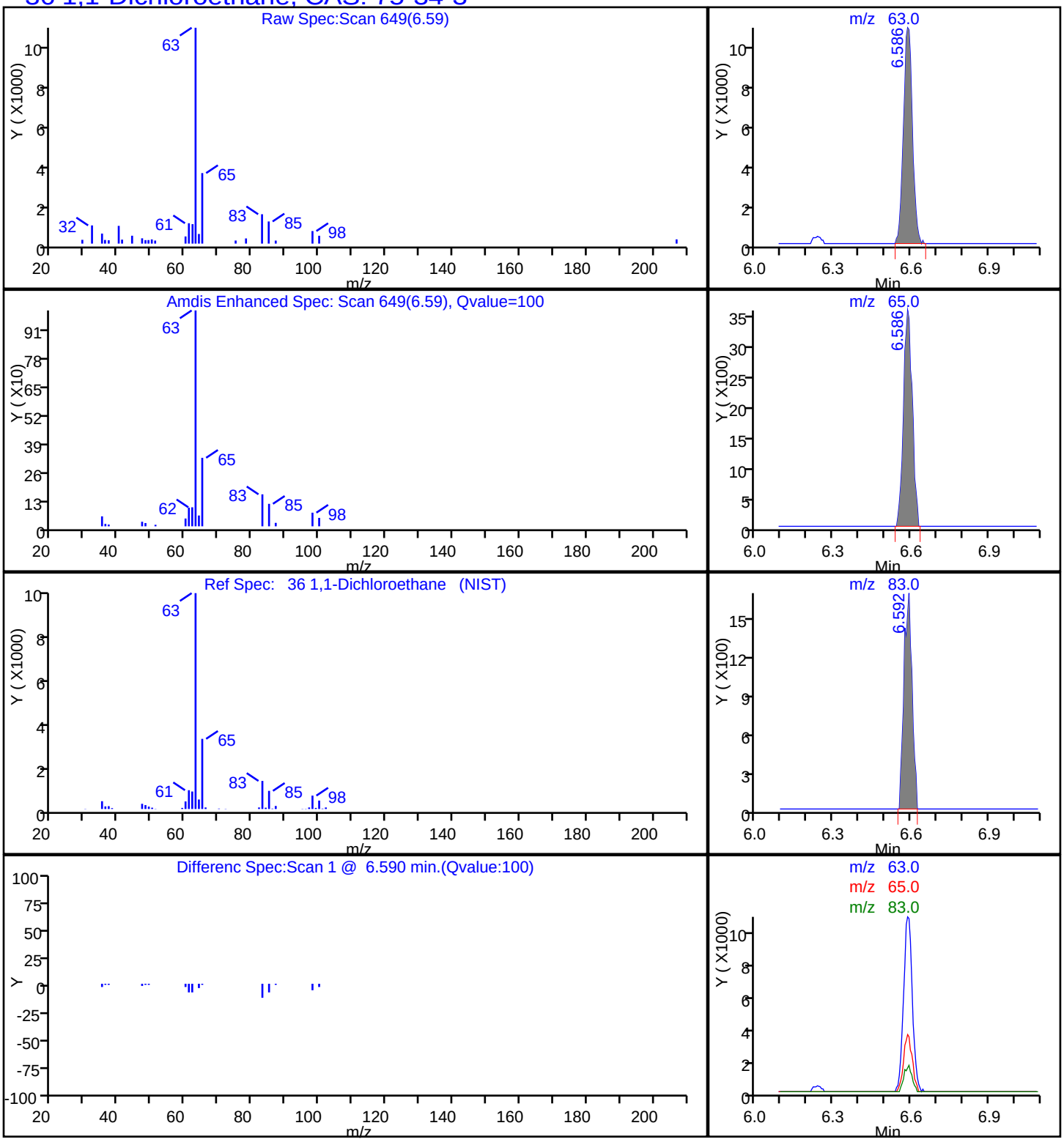
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P104R.D

Injection Date:	06-Dec-2017 20:07:30	Instrument ID:	MR		
Lims ID:	140-10079-A-1	Lab Sample ID:			
Client ID:	BLDG-A INFLUENT				
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

36 1,1-Dichloroethane, CAS: 75-34-3



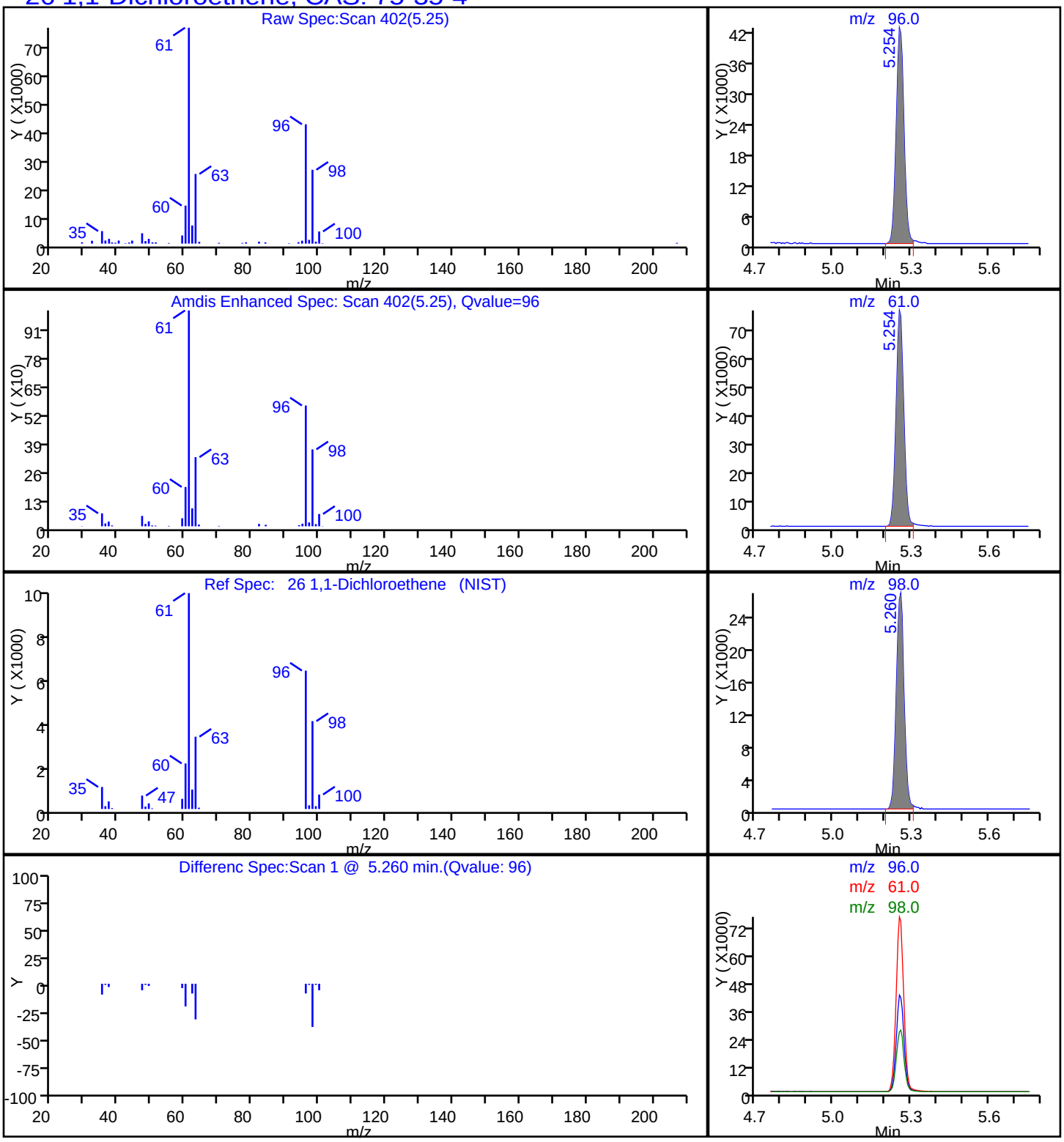
Report Date: 07-Dec-2017 10:16:37 Chrom Revision: 2.2 05-Dec-2017 07:36:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P104R.D

Injection Date:	06-Dec-2017 20:07:30	Instrument ID:	MR
Lims ID:	140-10079-A-1	Lab Sample ID:	
Client ID:	BLDG-A INFLUENT		
Operator ID:		ALS Bottle#:	4 Worklist Smp#: 18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

26 1,1-Dichloroethene, CAS: 75-35-4



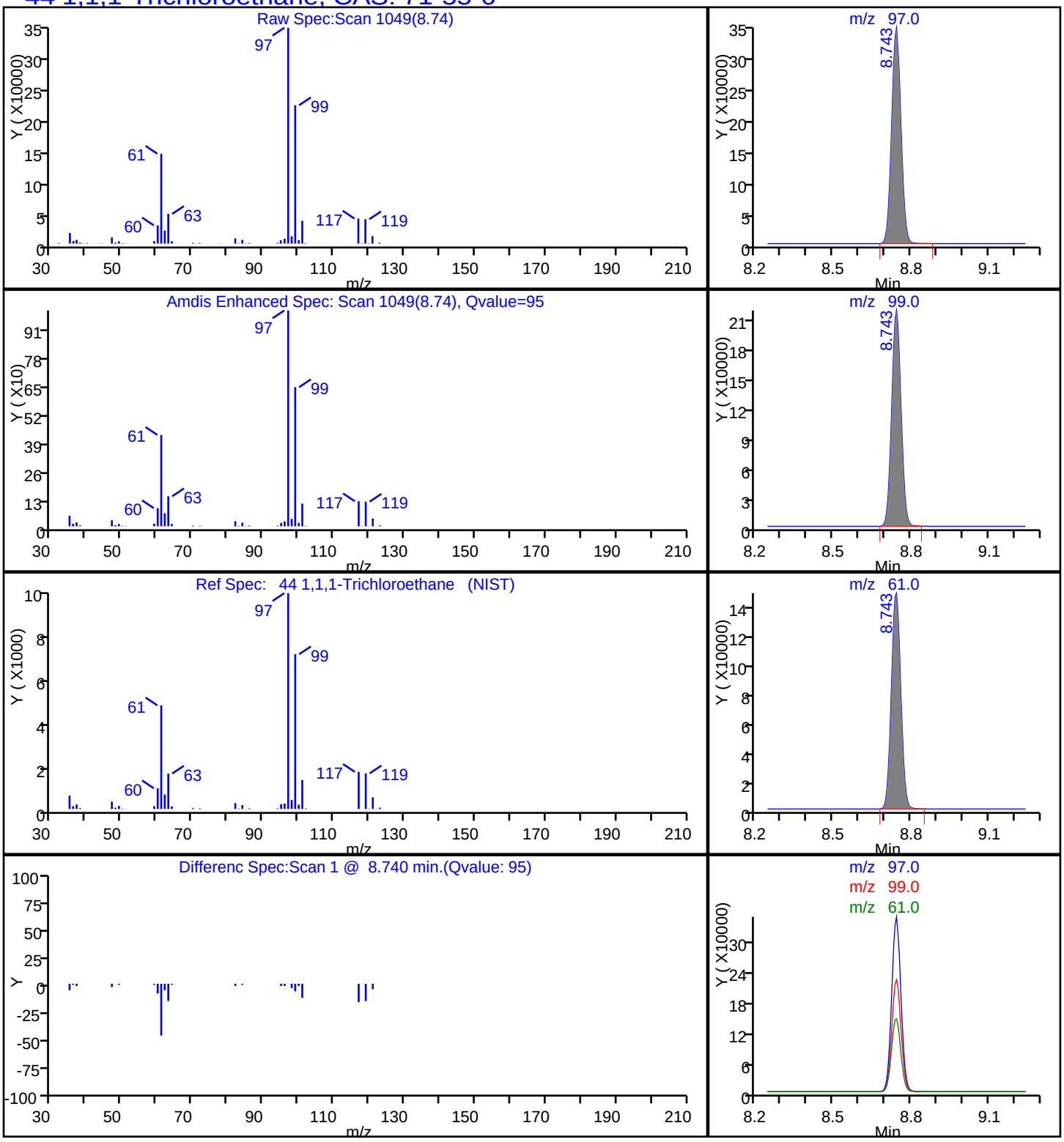
Report Date: 07-Dec-2017 10:16:37 Chrom Revision: 2.2 05-Dec-2017 07:36:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P104R.D

Injection Date:	06-Dec-2017 20:07:30	Instrument ID:	MR		
Lims ID:	140-10079-A-1	Lab Sample ID:			
Client ID:	BLDG-A INFLUENT				
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

44 1,1,1-Trichloroethane, CAS: 71-55-6



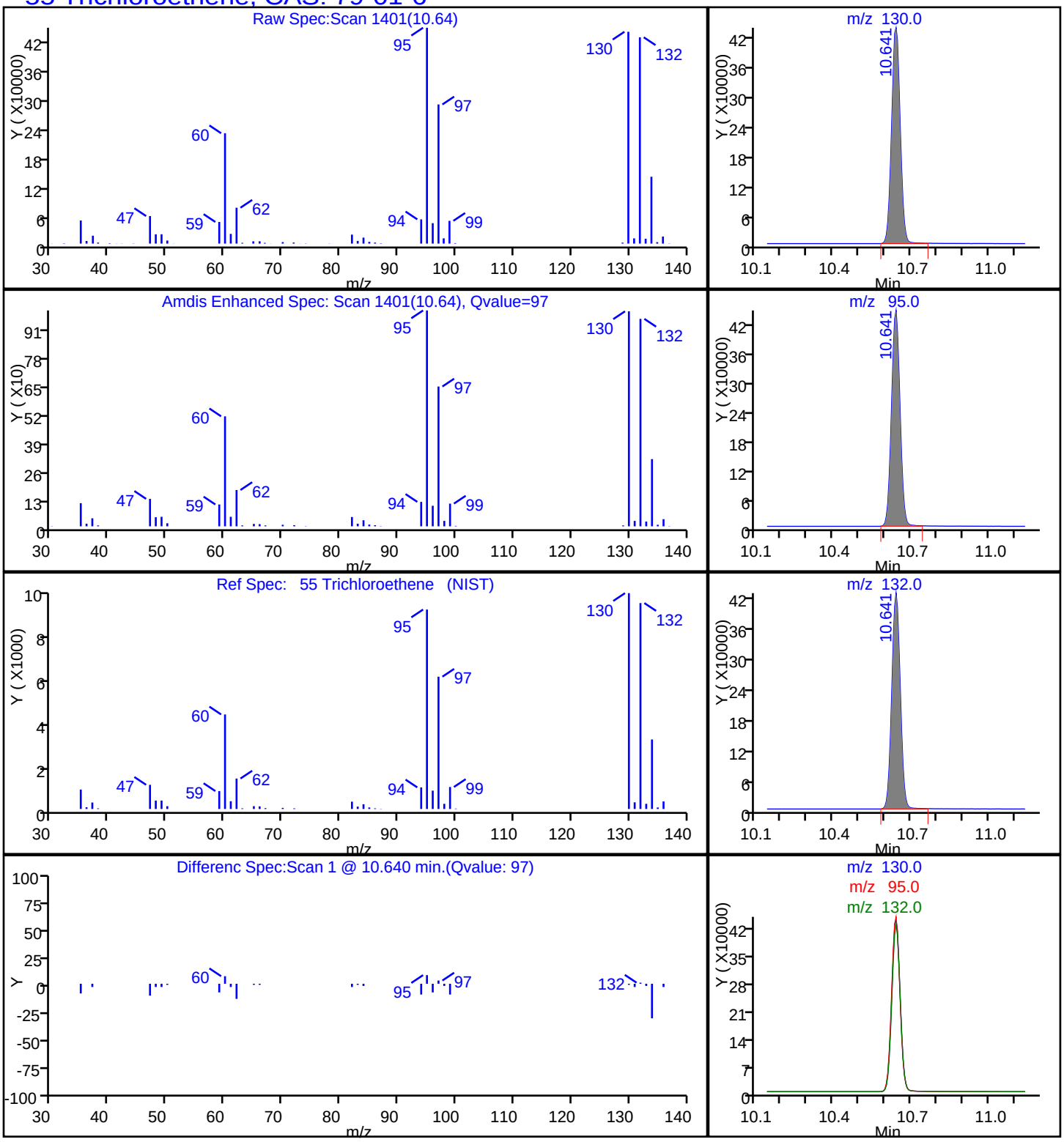
Report Date: 07-Dec-2017 10:16:37 Chrom Revision: 2.2 05-Dec-2017 07:36:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P104R.D

Injection Date:	06-Dec-2017 20:07:30	Instrument ID:	MR
Lims ID:	140-10079-A-1	Lab Sample ID:	
Client ID:	BLDG-A INFLUENT		
Operator ID:		ALS Bottle#:	4 Worklist Smp#: 18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

55 Trichloroethene, CAS: 79-01-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10079-1

SDG No.:

Client Sample ID: BLDG-A MIDGAC | Lab Sample ID: 140-10079-2

Matrix: Air | Lab File ID: RL06P105.D

Analysis Method: TO 15 LL | Date Collected: 12/04/2017 13:38

Sample wt/vol: 100(mL) | Date Analyzed: 12/06/2017 17:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 16560 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	14		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.40		0.40	0.075
67-66-3	Chloroform	119.38	0.79		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	24		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.37	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	6.9		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	0.14	J	0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	26		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.21	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.78	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.40		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	*1,1,1-Trichloroethane*	*133.41*	*140*	*E B*	*0.40*	*0.060*
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.50	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	109		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10079-1

SDG No.:

Client Sample ID: BLDG-A MIDGAC | Lab Sample ID: 140-10079-2

Matrix: Air | Lab File ID: RL06P105.D

Analysis Method: TO 15 LL | Date Collected: 12/04/2017 13:38

Sample wt/vol: 100(mL) | Date Analyzed: 12/06/2017 17:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 16560 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	46		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4		1.4	0.27
67-66-3	Chloroform	119.38	3.9		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	95		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.8	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	28		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	0.57	J	1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	100		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.89	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.7	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	1.6		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	*1,1,1-Trichloroethane*	*133.41*	*740*	*E B*	*2.2*	*0.33*
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	109		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P105.D				
Lims ID:	140-10079-A-2				
Client ID:	BLDG-A MIDGAC				
Sample Type:	Client				
Inject. Date:	06-Dec-2017 17:47:30	ALS Bottle#:	5	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006818-014				
Misc. Info.:	140-10079-a-2				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	07-Dec-2017 10:16:08	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK028				
First Level Reviewer: barlozhetskayaa		Date:	06-Dec-2017 18:33:33		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.767	7.768	-0.001	83	242011	4.00	
* 2 1,4-Difluorobenzene	114	9.897	9.897	0.000	95	1427914	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.880	14.885	-0.005	90	1219380	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.589	16.589	0.000	87	977826	4.38	
6 Chlorodifluoromethane	67	3.513	3.518	-0.005	58	2420	0.0796	
8 Dichlorodifluoromethane	85	3.556	3.567	-0.011	99	17614	0.0743	
26 1,1-Dichloroethene	96	5.265	5.276	-0.011	96	501245	5.20	
30 Methylene Chloride	84	5.546	5.551	-0.005	91	15319	0.1555	
33 trans-1,2-Dichloroethene	96	6.247	6.252	-0.005	98	7849	0.0791	
36 1,1-Dichloroethane	63	6.597	6.603	-0.006	100	242613	1.38	
40 cis-1,2-Dichloroethene	96	7.476	7.482	-0.006	95	488275	4.81	
42 Chloroform	83	7.800	7.800	0.000	95	36315	0.1589	
44 1,1,1-Trichloroethane	97	8.749	8.749	0.000	95	6455343	27.1	E
45 1,2-Dichloroethane	62	8.824	8.824	0.000	37	4328	0.0281	
48 Benzene	78	9.320	9.321	0.000	97	823539	2.88	
64 Toluene	91	12.826	12.826	0.000	94	74183	0.2173	
72 Ethylbenzene	91	15.257	15.258	-0.001	99	18398	0.0412	
73 m-Xylene & p-Xylene	91	15.430	15.430	0.000	99	24870	0.0726	
77 o-Xylene	91	15.964	15.964	0.000	96	10155	0.0277	
S 111 Xylenes, Total	100				0		0.1003	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

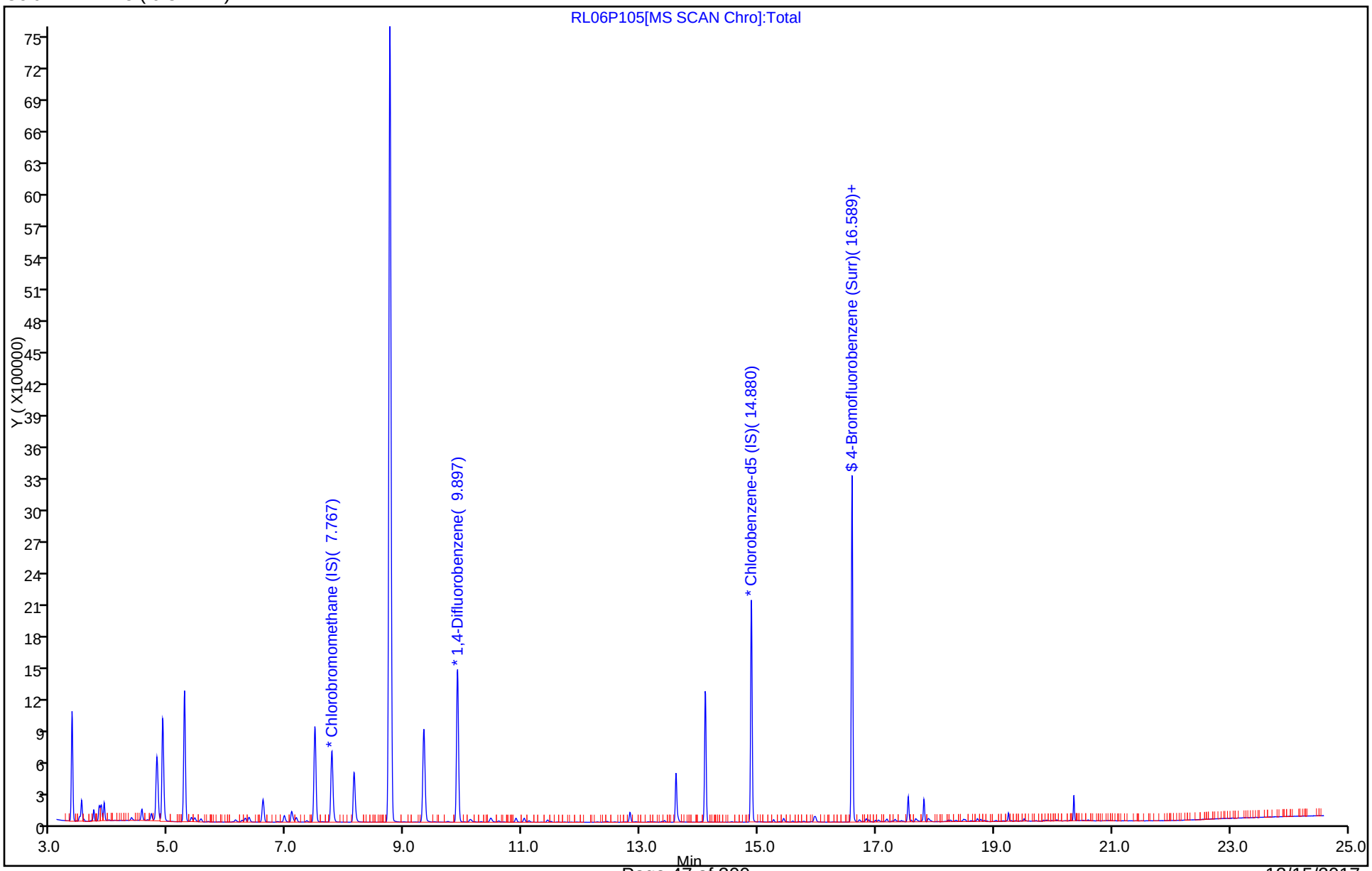
Report Date: 07-Dec-2017 10:16:25 Chrom Revision: 2.2 05-Dec-2017 07:36:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P105.D

Injection Date:	06-Dec-2017 17:47:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10079-A-2	Lab Sample ID:	140-10079-2	Worklist Smp#:	14
Client ID:	BLDG-A MIDGAC				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P105.D				
Lims ID:	140-10079-A-2				
Client ID:	BLDG-A MIDGAC				
Sample Type:	Client				
Inject. Date:	06-Dec-2017 17:47:30	ALS Bottle#:	5	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006818-014				
Misc. Info.:	140-10079-a-2				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	07-Dec-2017 10:16:08	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK028				

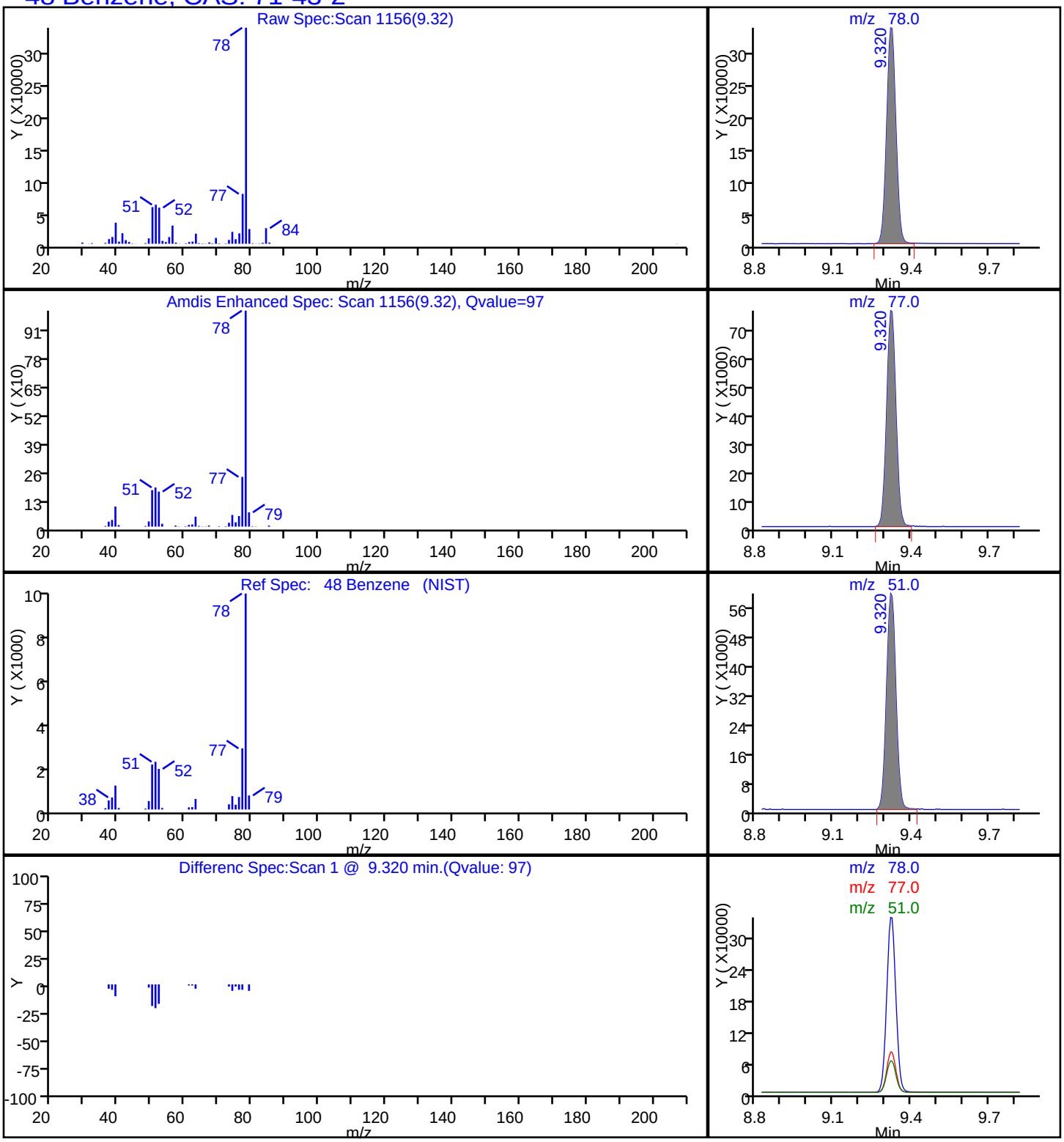
First Level Reviewer: barlozhetskayaa Date: 06-Dec-2017 18:33:33

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.38	109.41

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P105.D		
Injection Date:	06-Dec-2017 17:47:30	Instrument ID:	MR
Lims ID:	140-10079-A-2	Lab Sample ID:	140-10079-2
Client ID:	BLDG-A MIDGAC		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

48 Benzene, CAS: 71-43-2

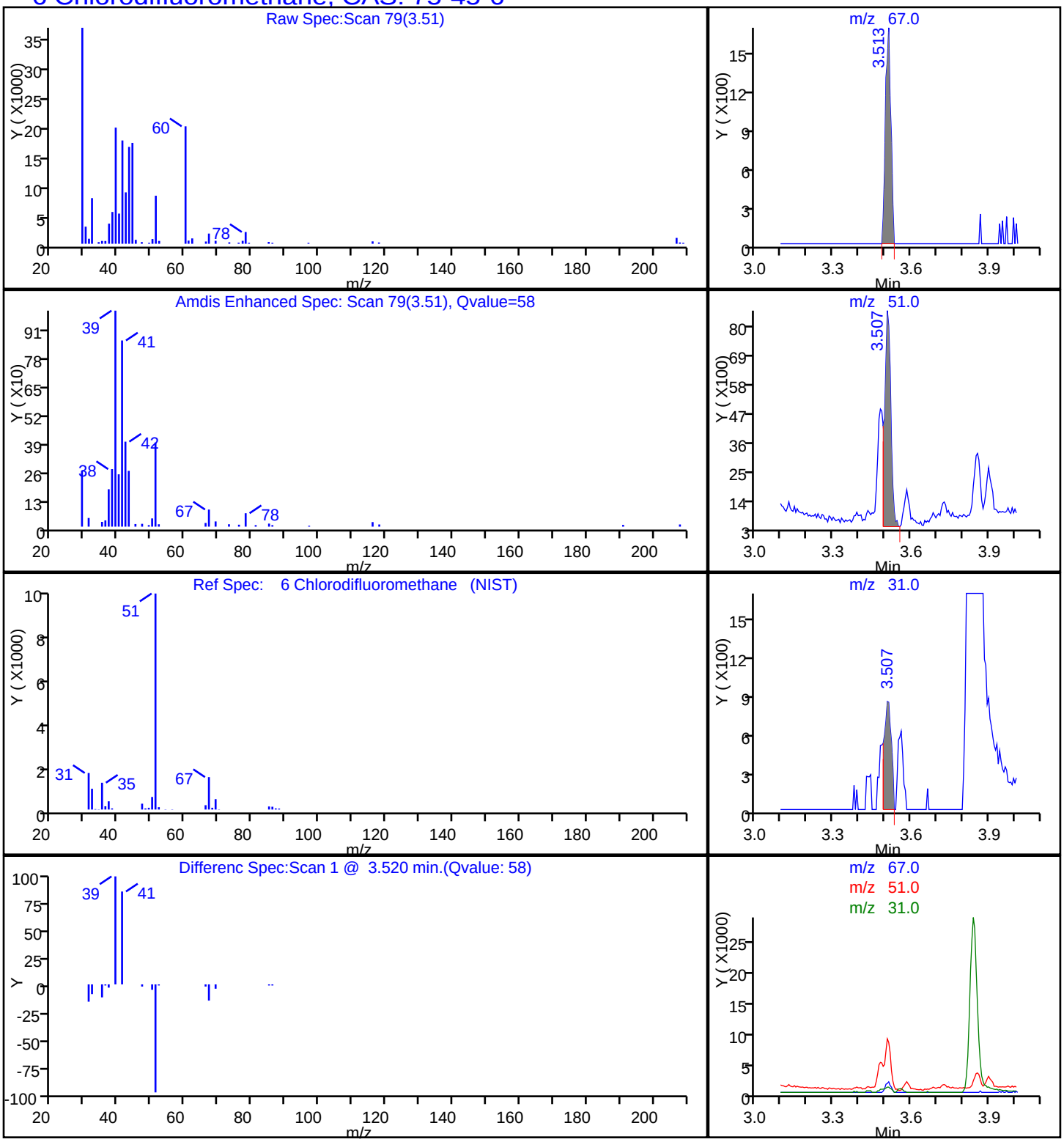


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P105.D

Injection Date:	06-Dec-2017 17:47:30	Instrument ID:	MR		
Lims ID:	140-10079-A-2	Lab Sample ID:	140-10079-2		
Client ID:	BLDG-A MIDGAC				
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

6 Chlorodifluoromethane, CAS: 75-45-6

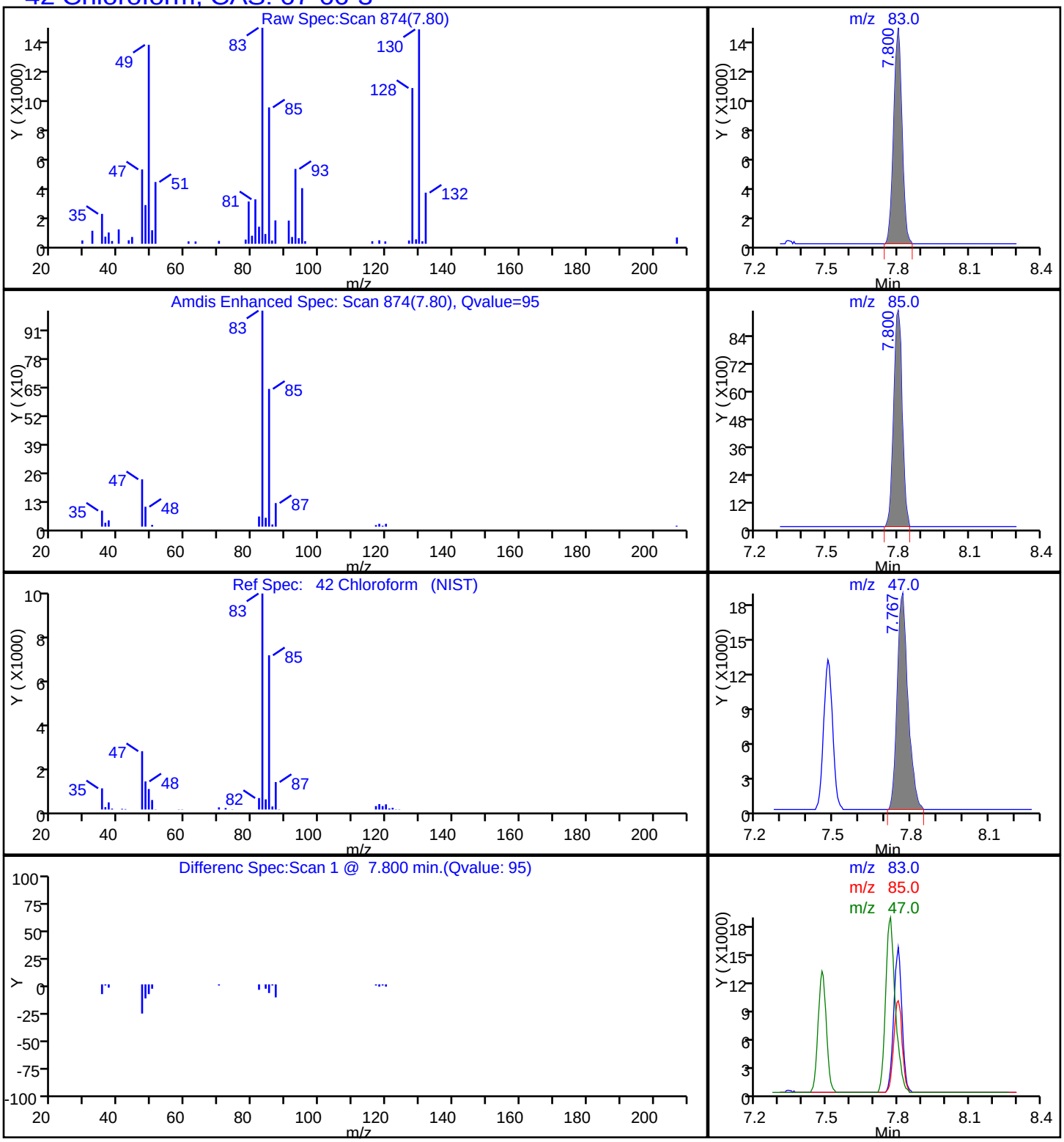


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P105.D

Injection Date:	06-Dec-2017 17:47:30	Instrument ID:	MR
Lims ID:	140-10079-A-2	Lab Sample ID:	140-10079-2
Client ID:	BLDG-A MIDGAC		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

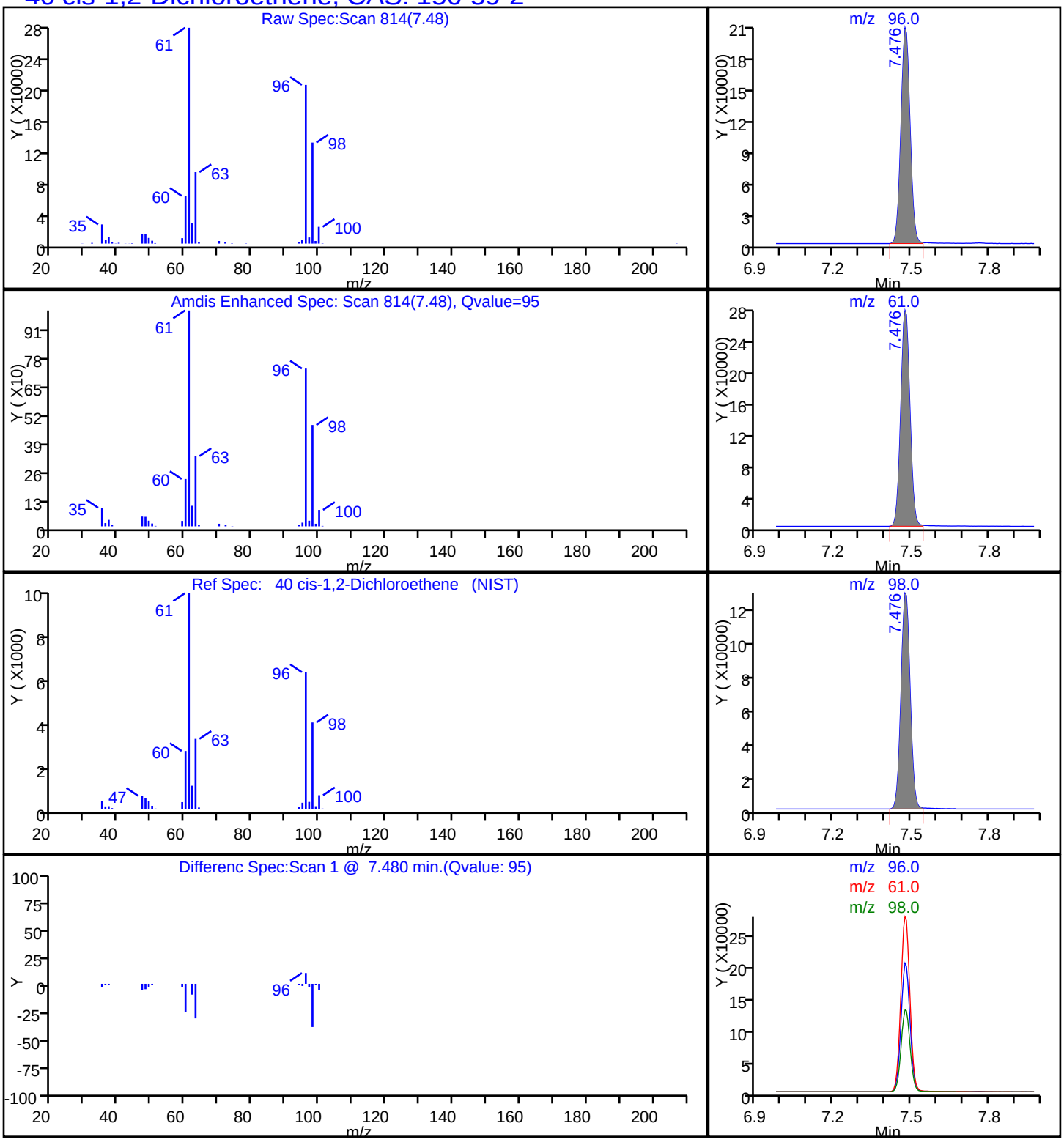
42 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P105.D		
Injection Date:	06-Dec-2017 17:47:30	Instrument ID:	MR
Lims ID:	140-10079-A-2	Lab Sample ID:	140-10079-2
Client ID:	BLDG-A MIDGAC		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

40 cis-1,2-Dichloroethene, CAS: 156-59-2



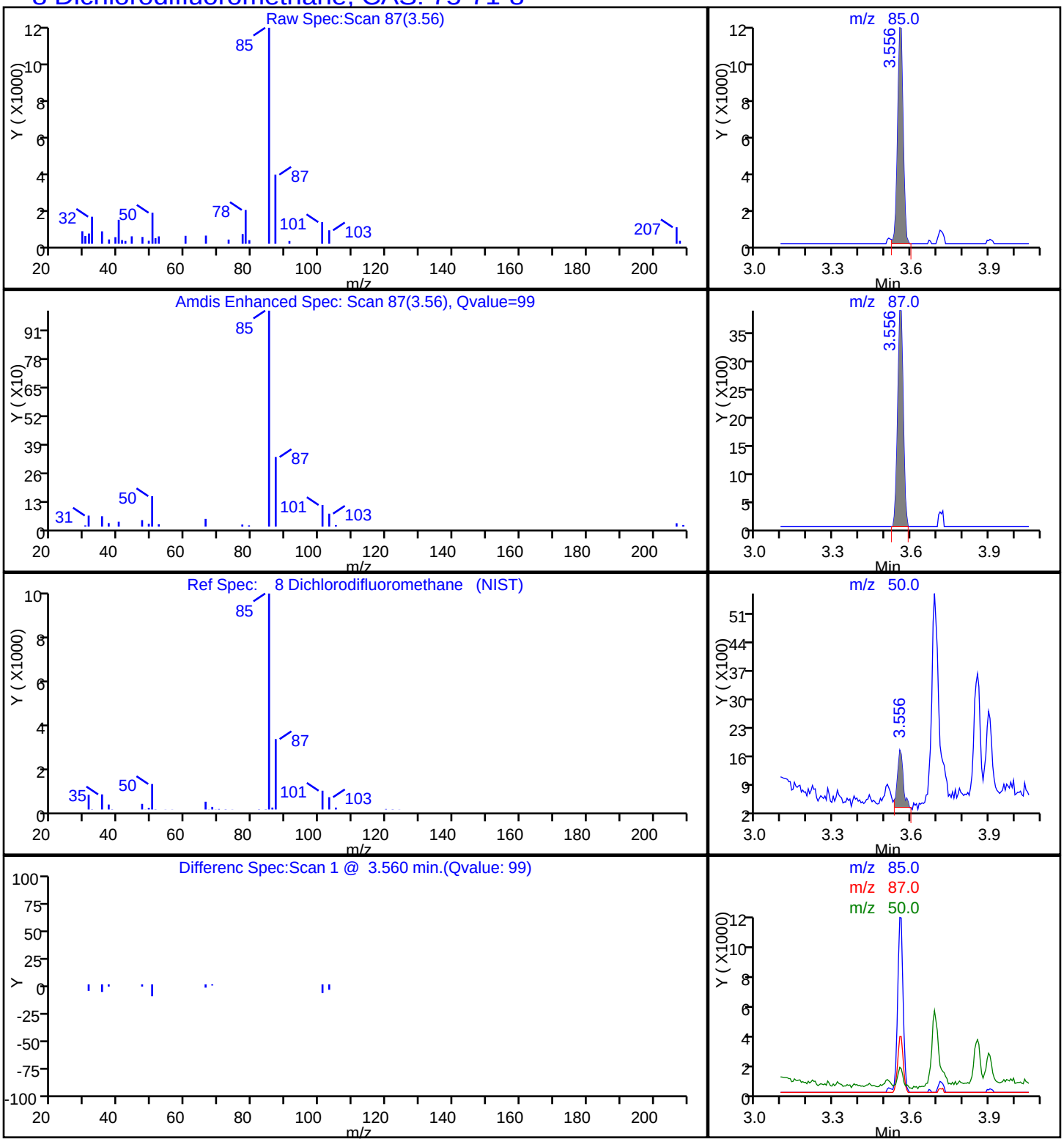
Report Date: 07-Dec-2017 10:16:26 Chrom Revision: 2.2 05-Dec-2017 07:36:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P105.D

Injection Date:	06-Dec-2017 17:47:30	Instrument ID:	MR		
Lims ID:	140-10079-A-2	Lab Sample ID:	140-10079-2		
Client ID:	BLDG-A MIDGAC				
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

8 Dichlorodifluoromethane, CAS: 75-71-8

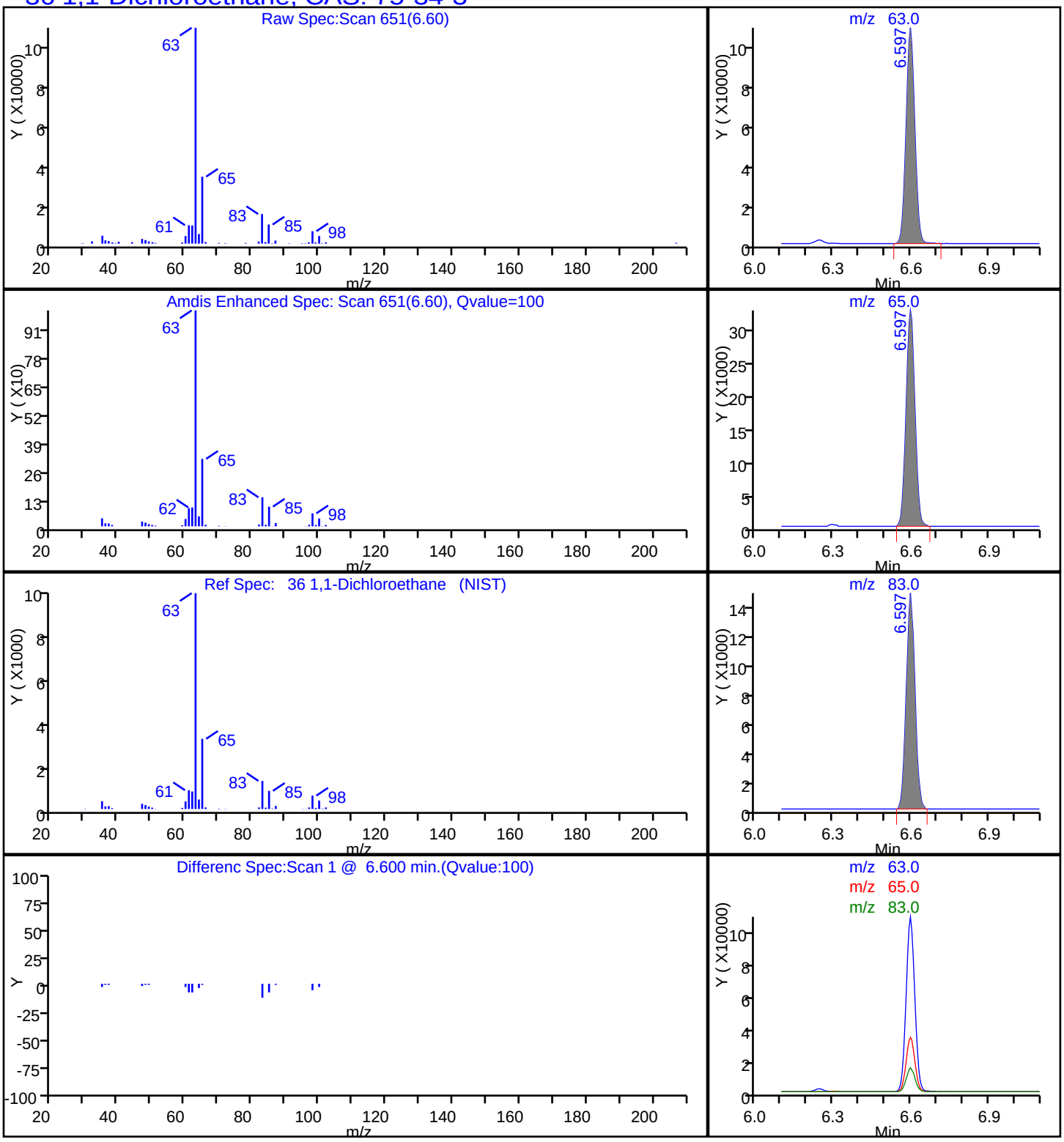


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P105.D

Injection Date:	06-Dec-2017 17:47:30	Instrument ID:	MR
Lims ID:	140-10079-A-2	Lab Sample ID:	140-10079-2
Client ID:	BLDG-A MIDGAC		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

36 1,1-Dichloroethane, CAS: 75-34-3

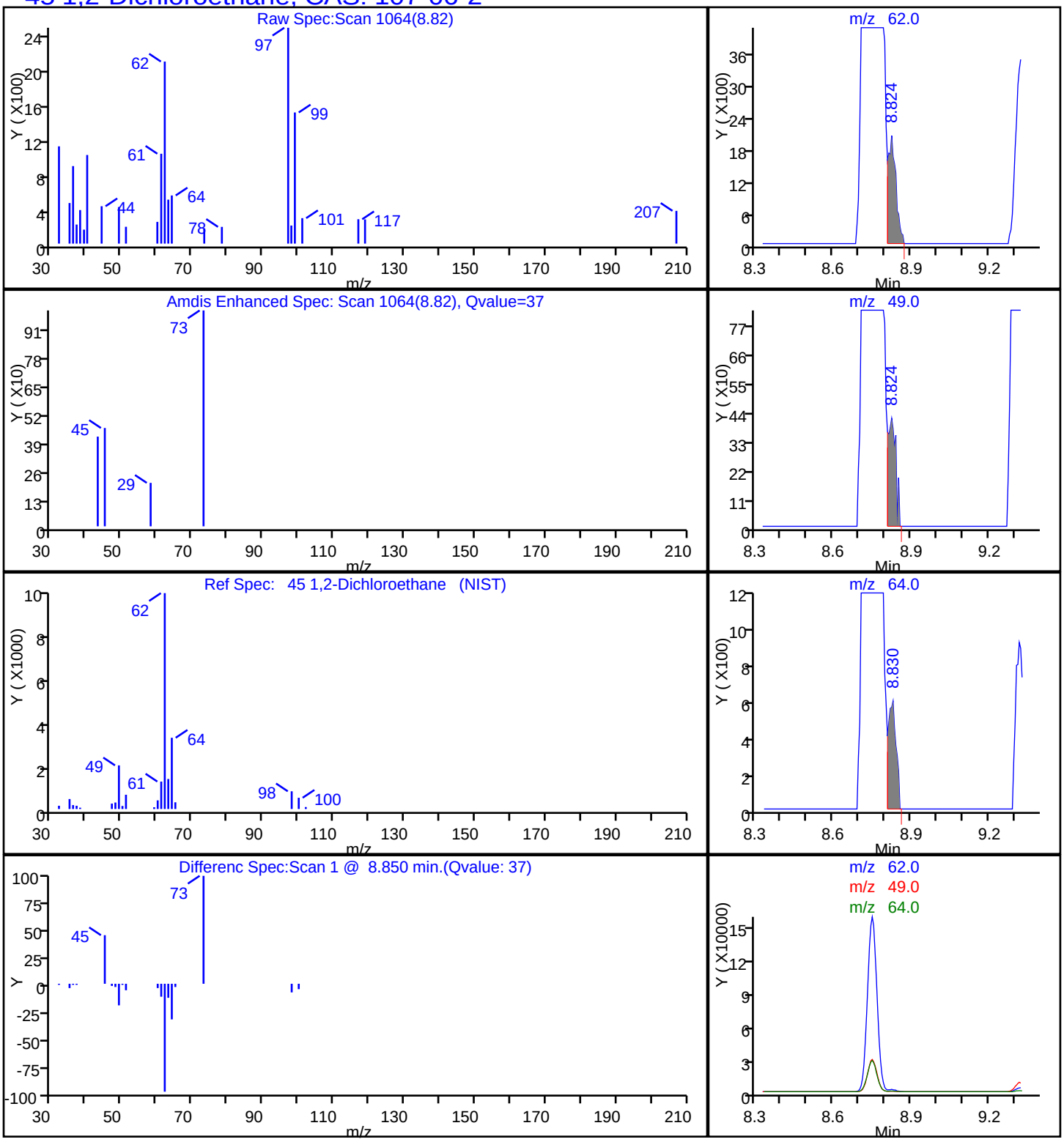


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P105.D

Injection Date:	06-Dec-2017 17:47:30	Instrument ID:	MR		
Lims ID:	140-10079-A-2	Lab Sample ID:	140-10079-2		
Client ID:	BLDG-A MIDGAC				
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

45 1,2-Dichloroethane, CAS: 107-06-2

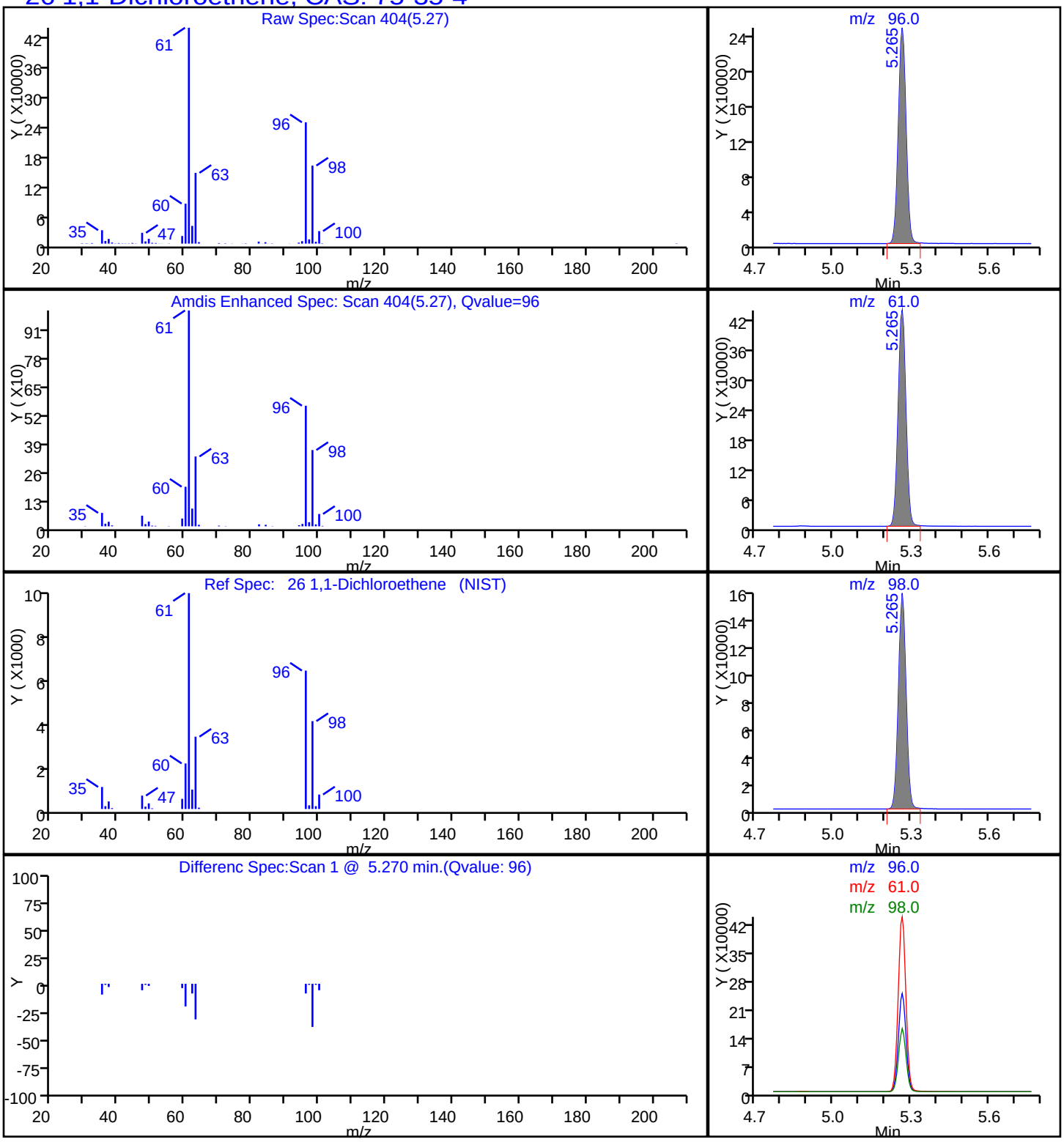


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P105.D

Injection Date:	06-Dec-2017 17:47:30	Instrument ID:	MR
Lims ID:	140-10079-A-2	Lab Sample ID:	140-10079-2
Client ID:	BLDG-A MIDGAC		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

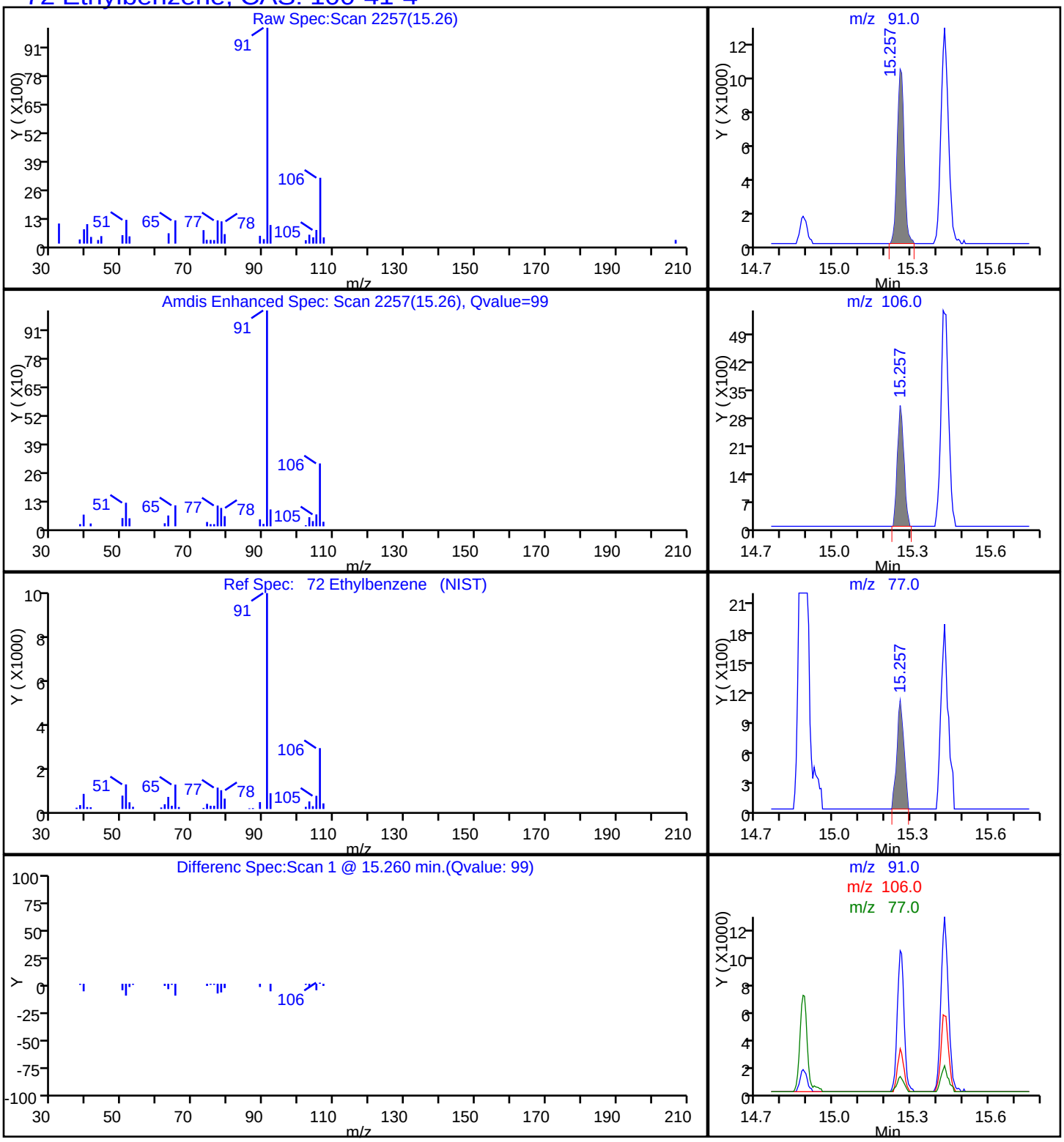
26 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P105.D		
Injection Date:	06-Dec-2017 17:47:30	Instrument ID:	MR
Lims ID:	140-10079-A-2	Lab Sample ID:	140-10079-2
Client ID:	BLDG-A MIDGAC		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

72 Ethylbenzene, CAS: 100-41-4



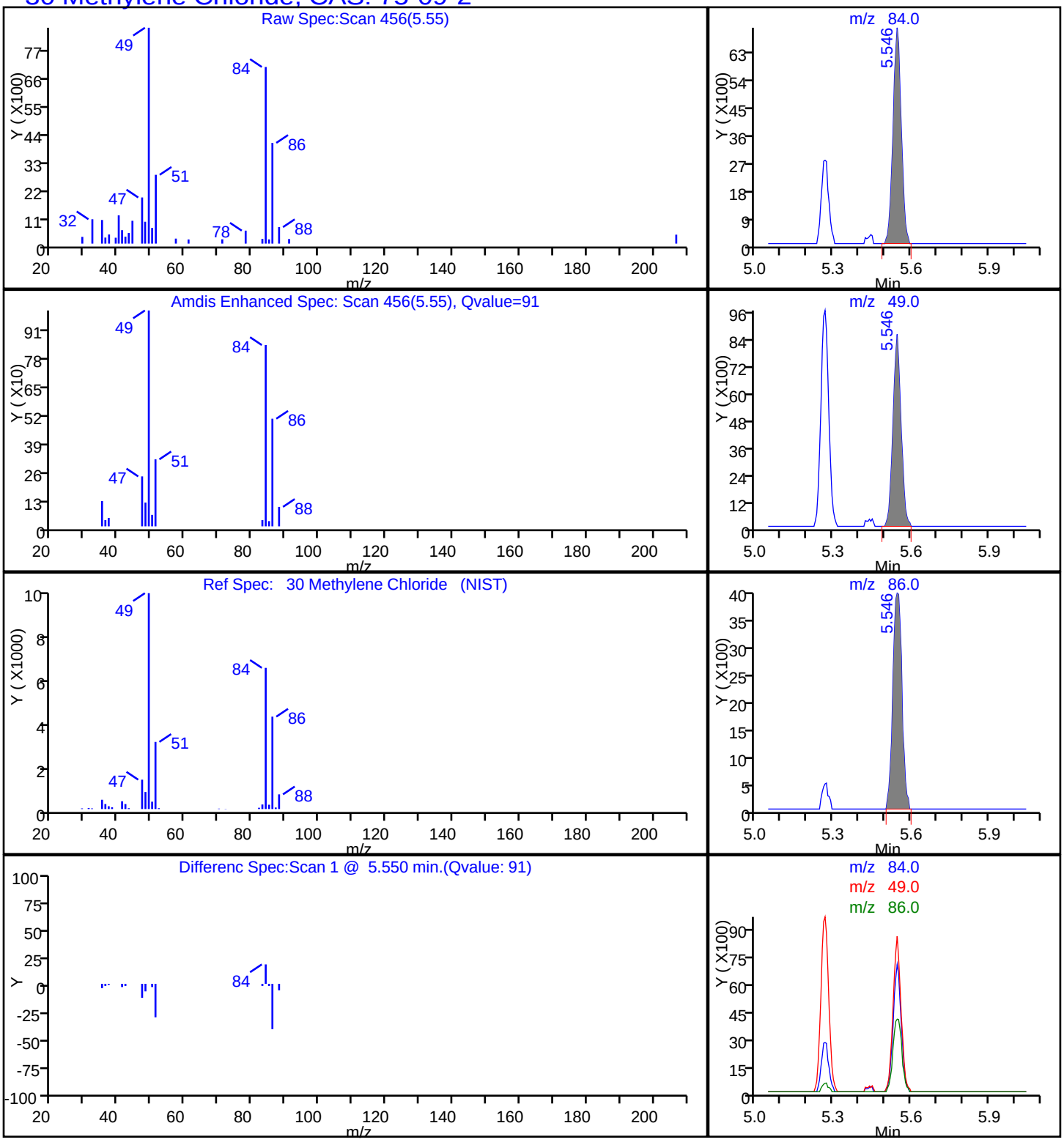
Report Date: 07-Dec-2017 10:16:26 Chrom Revision: 2.2 05-Dec-2017 07:36:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P105.D

Injection Date:	06-Dec-2017 17:47:30	Instrument ID:	MR
Lims ID:	140-10079-A-2	Lab Sample ID:	140-10079-2
Client ID:	BLDG-A MIDGAC		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

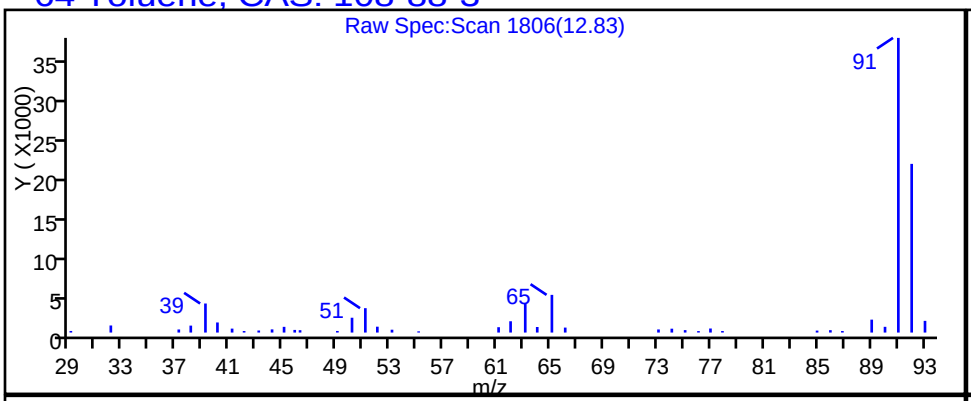
30 Methylene Chloride, CAS: 75-09-2

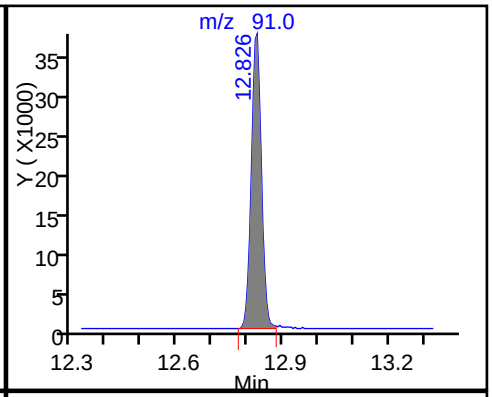


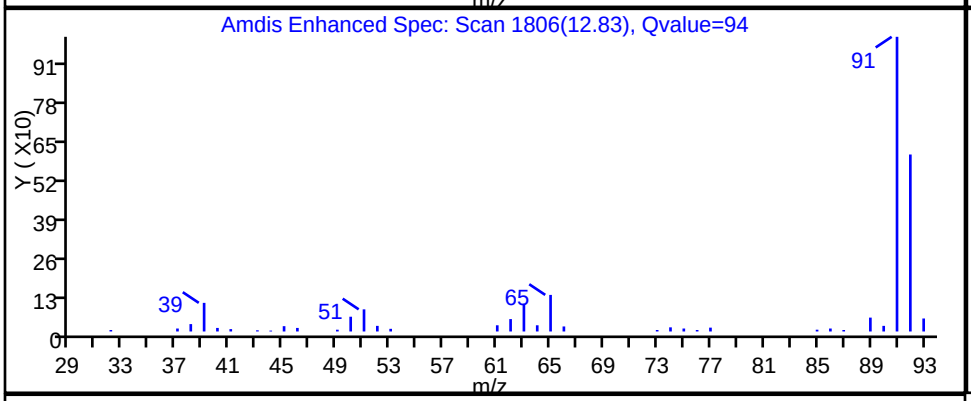
TestAmerica Knoxville

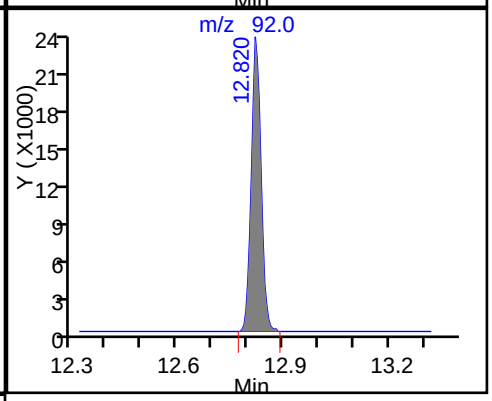
Data File:	\\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P105.D		
Injection Date:	06-Dec-2017 17:47:30	Instrument ID:	MR
Lims ID:	140-10079-A-2	Lab Sample ID:	140-10079-2
Client ID:	BLDG-A MIDGAC		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

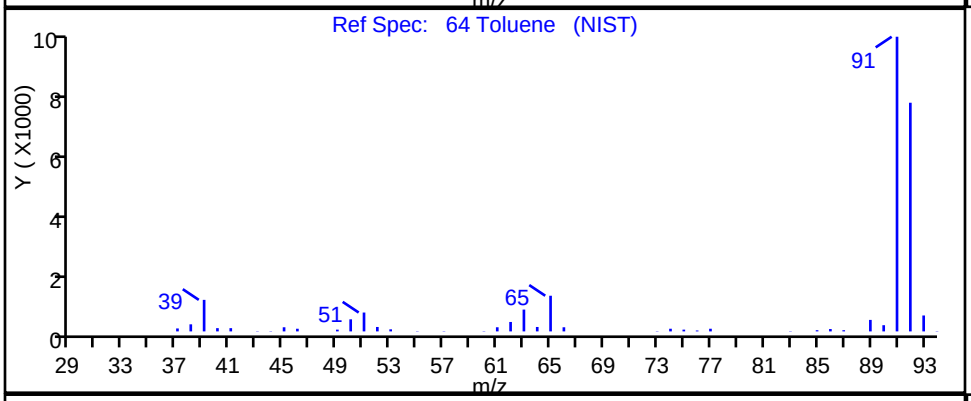
64 Toluene, CAS: 108-88-3

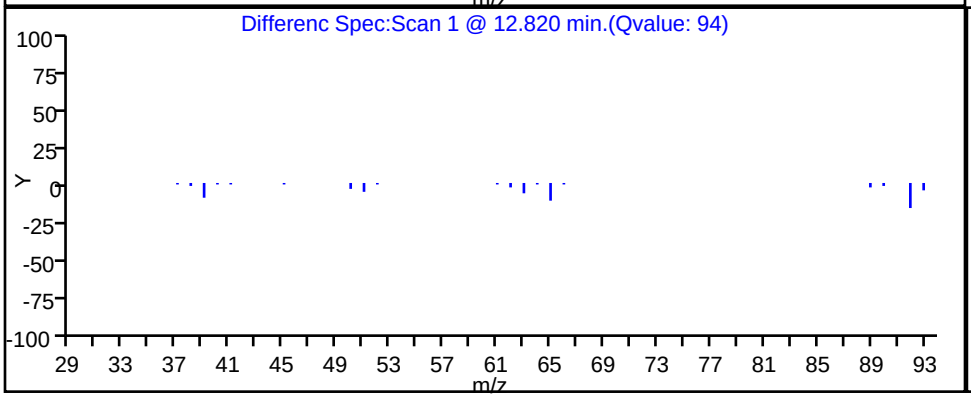


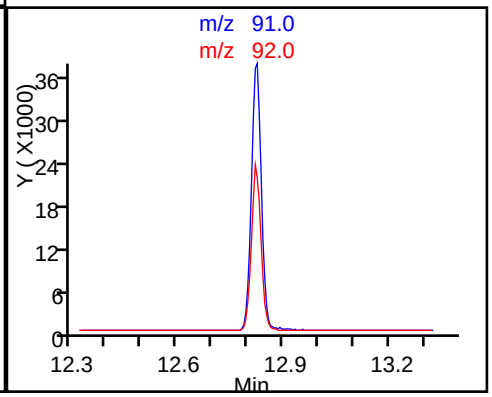










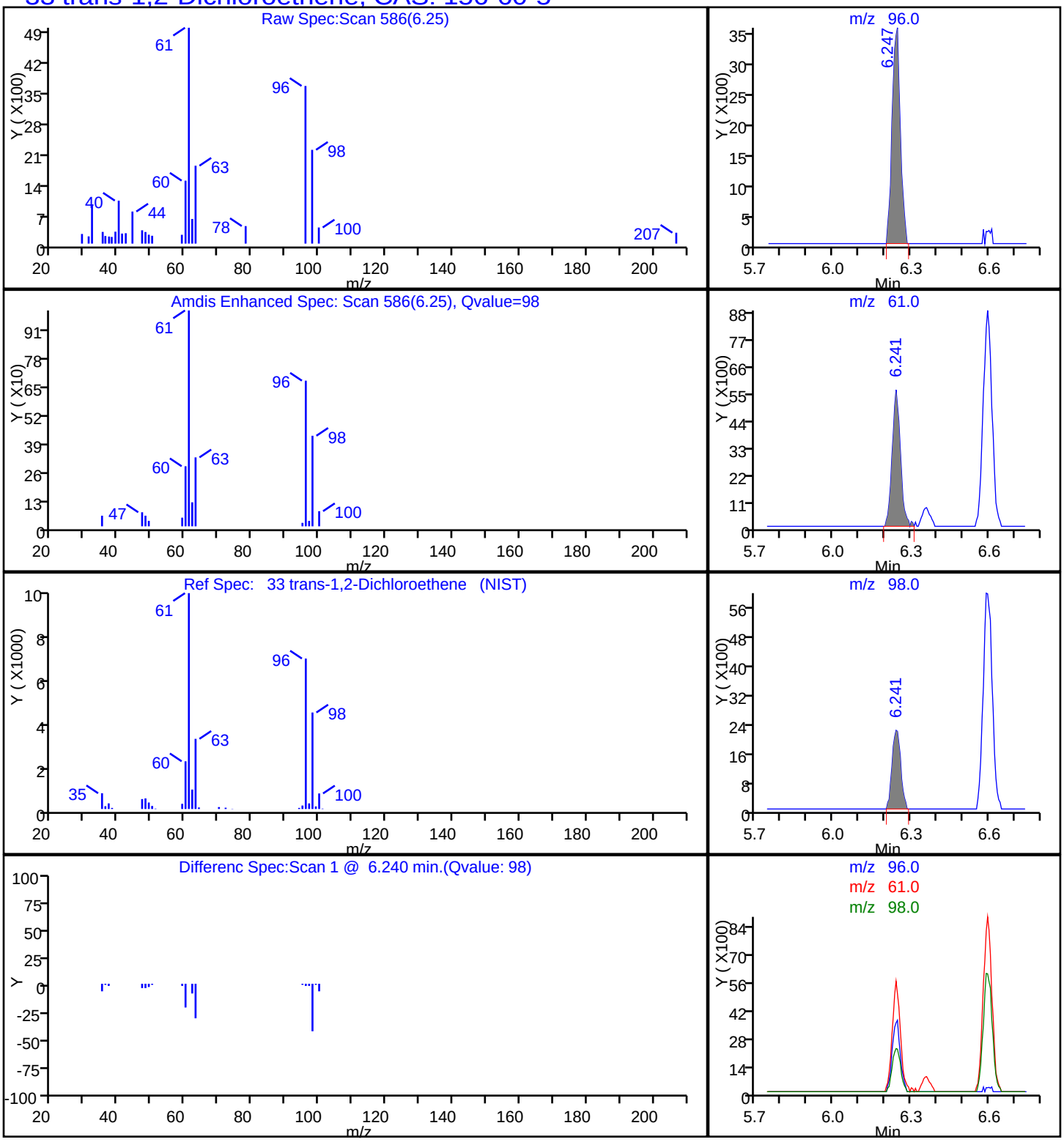


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P105.D

Injection Date:	06-Dec-2017 17:47:30	Instrument ID:	MR
Lims ID:	140-10079-A-2	Lab Sample ID:	140-10079-2
Client ID:	BLDG-A MIDGAC		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

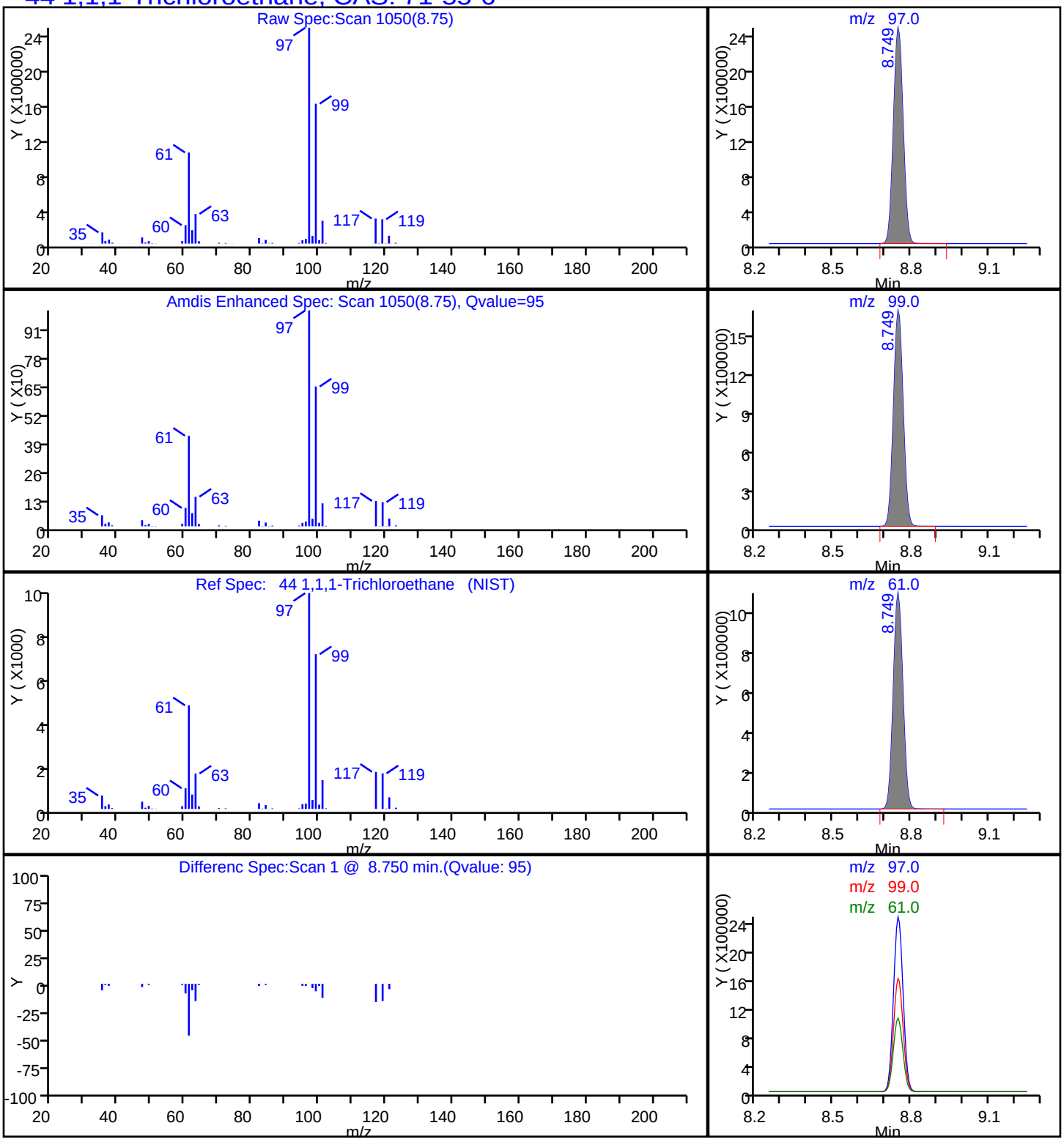
33 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P105.D		
Injection Date:	06-Dec-2017 17:47:30	Instrument ID:	MR
Lims ID:	140-10079-A-2	Lab Sample ID:	140-10079-2
Client ID:	BLDG-A MIDGAC		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

44 1,1,1-Trichloroethane, CAS: 71-55-6

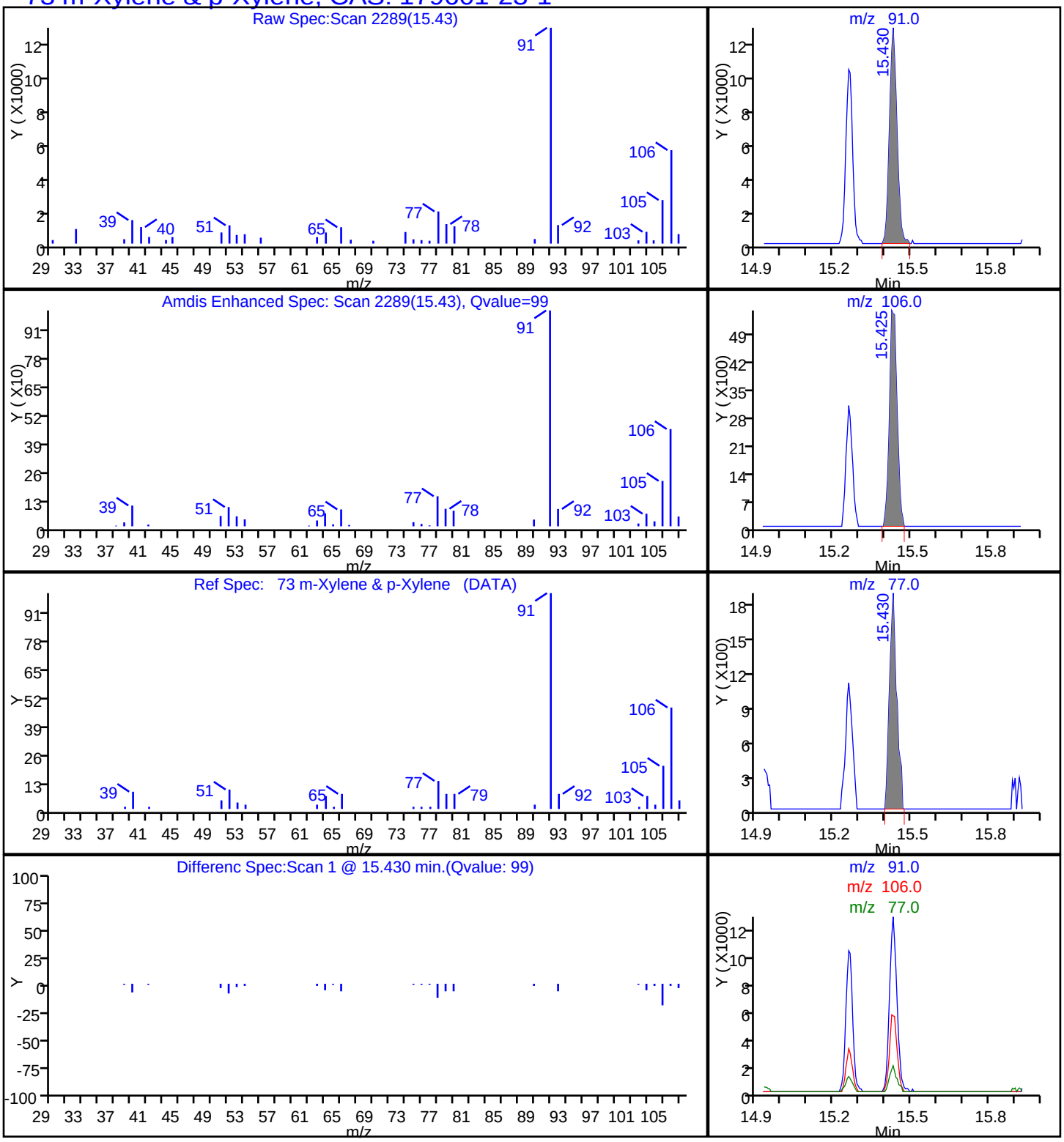


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P105.D

Injection Date:	06-Dec-2017 17:47:30	Instrument ID:	MR		
Lims ID:	140-10079-A-2	Lab Sample ID:	140-10079-2		
Client ID:	BLDG-A MIDGAC				
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

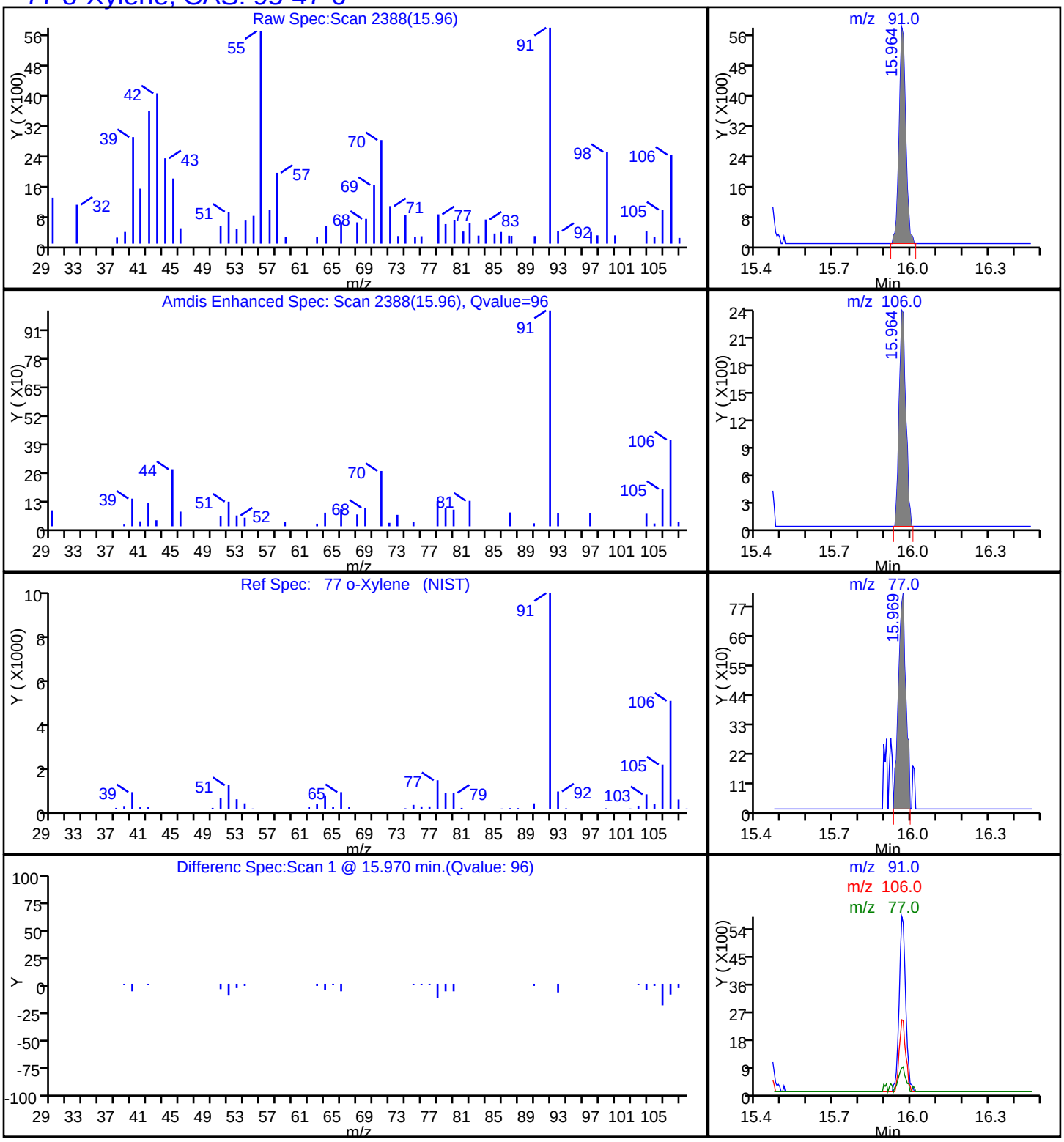
73 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P105.D		
Injection Date:	06-Dec-2017 17:47:30	Instrument ID:	MR
Lims ID:	140-10079-A-2	Lab Sample ID:	140-10079-2
Client ID:	BLDG-A MIDGAC		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

77 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1

SDG No.:

Client Sample ID: BLDG-A MIDGAC DL Lab Sample ID: 140-10079-2 DL

Matrix: Air Lab File ID: RL06P105DL.D

Analysis Method: TO 15 LL Date Collected: 12/04/2017 13:38

Sample wt/vol: 30(mL) Date Analyzed: 12/06/2017 20:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 16560 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	133.41	150	B	1.3	0.20

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	108		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1

SDG No.:

Client Sample ID: BLDG-A MIDGAC DL Lab Sample ID: 140-10079-2 DL

Matrix: Air Lab File ID: RL06P105DL.D

Analysis Method: TO 15 LL Date Collected: 12/04/2017 13:38

Sample wt/vol: 30(mL) Date Analyzed: 12/06/2017 20:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 16560 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	133.41	810	B	7.3	1.1

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	108		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P105DL.D
Lims ID: 140-10079-A-2
Client ID: BLDG-A MIDGAC
Sample Type: Client
Inject. Date: 06-Dec-2017 20:55:30 ALS Bottle#: 5 Worklist Smp#: 19
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006818-014
Misc. Info.: 140-10079-a-2
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 07-Dec-2017 10:16:08 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: barlozhetskayaa Date: 07-Dec-2017 10:04:44

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
*	1 Chlorobromomethane (IS)	128	7.762	7.768	-0.006	83	232616	4.00	
*	2 1,4-Difluorobenzene	114	9.892	9.897	-0.005	95	1376924	4.00	
*	3 Chlorobenzene-d5 (IS)	117	14.880	14.885	-0.005	89	1184536	4.00	
$	4 4-Bromofluorobenzene (Surr	95	16.589	16.589	0.000	87	934335	4.30	
	6 Chlorodifluoromethane	67	3.524	3.518	0.006	94	608	0.0208	
	8 Dichlorodifluoromethane	85	3.572	3.567	0.005	99	7753	0.0340	
	26 1,1-Dichloroethene	96	5.271	5.276	-0.005	96	149709	1.62	
	33 trans-1,2-Dichloroethene	96	6.241	6.252	-0.011	95	2566	0.0269	
	36 1,1-Dichloroethane	63	6.592	6.603	-0.011	100	73108	0.4333	
	40 cis-1,2-Dichloroethene	96	7.476	7.482	-0.006	96	146087	1.50	
	42 Chloroform	83	7.789	7.800	-0.011	90	10925	0.0497	
	44 1,1,1-Trichloroethane	97	8.749	8.749	0.000	95	2039605	8.91	
	45 1,2-Dichloroethane	62	8.743	8.824	-0.081	41	124588	0.8397	
	48 Benzene	78	9.320	9.321	0.000	97	244929	0.8870	
	64 Toluene	91	12.820	12.826	-0.006	93	21587	0.0651	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

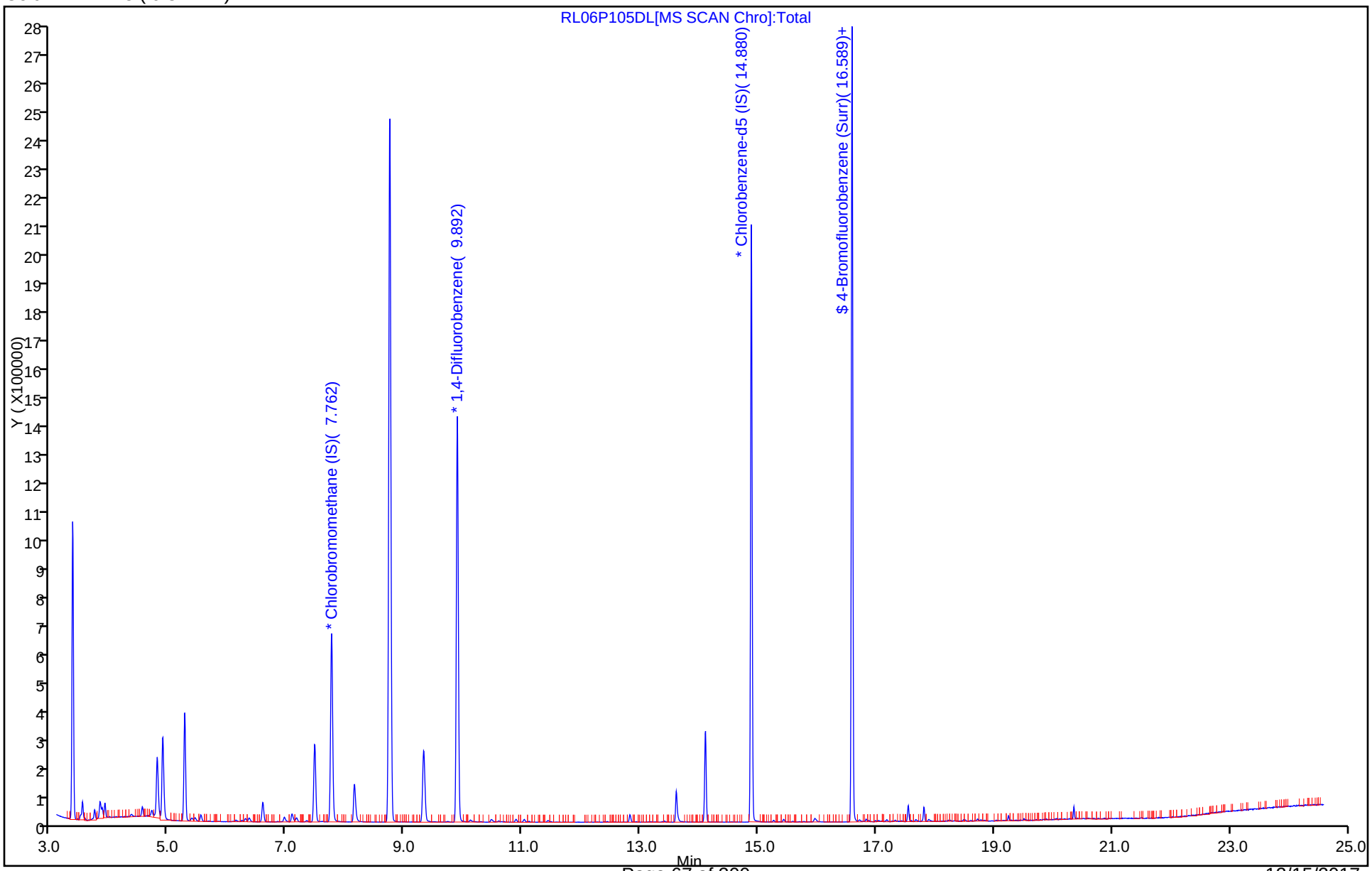
Report Date: 07-Dec-2017 10:16:39 Chrom Revision: 2.2 05-Dec-2017 07:36:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P105DL.D

Injection Date:	06-Dec-2017 20:55:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10079-A-2	Lab Sample ID:		Worklist Smp#:	19
Client ID:	BLDG-A MIDGAC				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P105DL.D				
Lims ID:	140-10079-A-2				
Client ID:	BLDG-A MIDGAC				
Sample Type:	Client				
Inject. Date:	06-Dec-2017 20:55:30	ALS Bottle#:	5	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006818-014				
Misc. Info.:	140-10079-a-2				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	07-Dec-2017 10:16:08	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK028				
First Level Reviewer: barlozhetskayaa		Date:	07-Dec-2017 10:04:44		

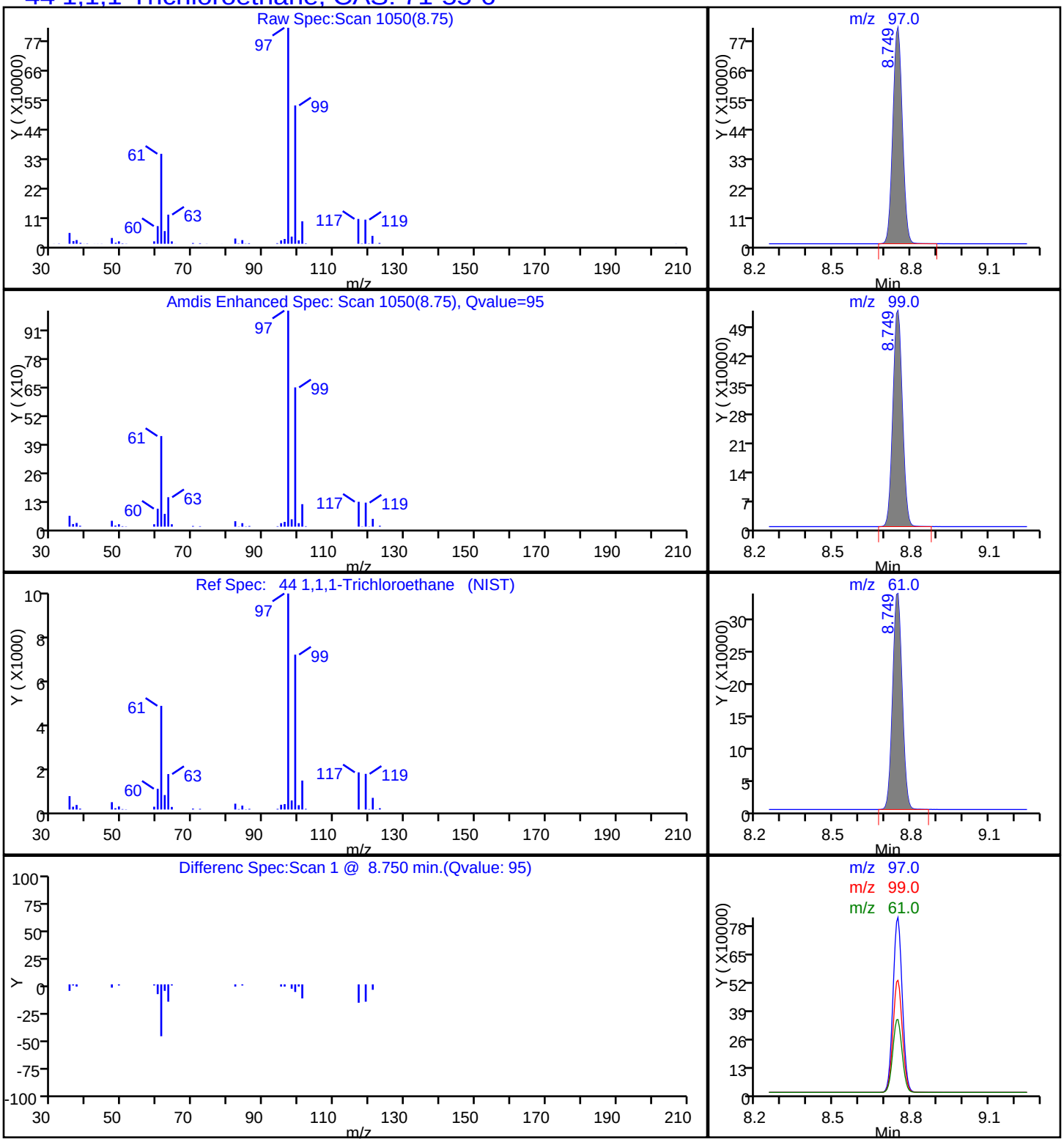
Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.30	107.62

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P105DL.D

Injection Date:	06-Dec-2017 20:55:30	Instrument ID:	MR		
Lims ID:	140-10079-A-2	Lab Sample ID:			
Client ID:	BLDG-A MIDGAC				
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

44 1,1,1-Trichloroethane, CAS: 71-55-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10079-1

SDG No.:

Client Sample ID: BLDG-A EFFLUENT | Lab Sample ID: 140-10079-3

Matrix: Air | Lab File ID: RL06P106DU.D

Analysis Method: TO 15 LL | Date Collected: 12/04/2017 13:45

Sample wt/vol: 100(mL) | Date Analyzed: 12/06/2017 19:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 16560 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	3.4		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.53		0.40	0.075
67-66-3	Chloroform	119.38	0.23	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	11		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.51		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	1.6		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	6.4		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.20	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.73	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.16	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	25	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	5.5		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	0.15	J	0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.28	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	109		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10079-1

SDG No.:

Client Sample ID: BLDG-A EFFLUENT | Lab Sample ID: 140-10079-3

Matrix: Air | Lab File ID: RL06P106DU.D

Analysis Method: TO 15 LL | Date Collected: 12/04/2017 13:45

Sample wt/vol: 100(mL) | Date Analyzed: 12/06/2017 19:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 16560 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	11		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9		1.4	0.27
67-66-3	Chloroform	119.38	1.1	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	42		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	6.6		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	25		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.85	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.5	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	0.65	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	140	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	29		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	0.38	J	0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	109		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P106DU.D
Lims ID: 140-10079-A-3
Client ID: BLDG-A EFFLUENT
Sample Type: Client
Inject. Date: 06-Dec-2017 19:21:30 ALS Bottle#: 7 Worklist Smp#: 17
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006818-017
Misc. Info.: 140-10079-a-1
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 07-Dec-2017 10:16:08 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: tajh Date: 07-Dec-2017 10:14:59

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
*	1 Chlorobromomethane (IS)	128	7.762	7.768	-0.006	83	235110	4.00	
*	2 1,4-Difluorobenzene	114	9.892	9.897	-0.005	95	1378011	4.00	
*	3 Chlorobenzene-d5 (IS)	117	14.880	14.885	-0.005	89	1187070	4.00	
$	4 4-Bromofluorobenzene (Surr	95	16.589	16.589	0.000	87	944215	4.34	
	6 Chlorodifluoromethane	67	3.524	3.518	0.006	94	3116	0.1055	
	8 Dichlorodifluoromethane	85	3.572	3.567	0.005	100	23688	0.1028	
	11 Vinyl chloride	62	3.842	3.836	0.006	33	2008	0.0301	
	26 1,1-Dichloroethene	96	5.271	5.276	-0.005	96	119027	1.27	
	30 Methylene Chloride	84	5.546	5.551	-0.005	89	13996	0.1462	
	33 trans-1,2-Dichloroethene	96	6.247	6.252	-0.005	95	3156	0.0327	
	36 1,1-Dichloroethane	63	6.592	6.603	-0.011	100	55319	0.3244	
	40 cis-1,2-Dichloroethene	96	7.471	7.482	-0.011	95	211128	2.14	
	42 Chloroform	83	7.800	7.800	0.000	89	10297	0.0464	
	44 1,1,1-Trichloroethane	97	8.749	8.749	0.000	95	1155794	5.00	
	48 Benzene	78	9.320	9.321	0.000	96	187815	0.6796	
	55 Trichloroethene	130	10.642	10.647	-0.005	97	145339	1.09	
	64 Toluene	91	12.820	12.826	-0.006	93	33506	0.1008	
	72 Ethylbenzene	91	15.257	15.258	-0.001	99	17033	0.0392	
	73 m-Xylene & p-Xylene	91	15.430	15.430	0.000	100	18515	0.0555	
S	111 Xylenes, Total	100				0		0.0555	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

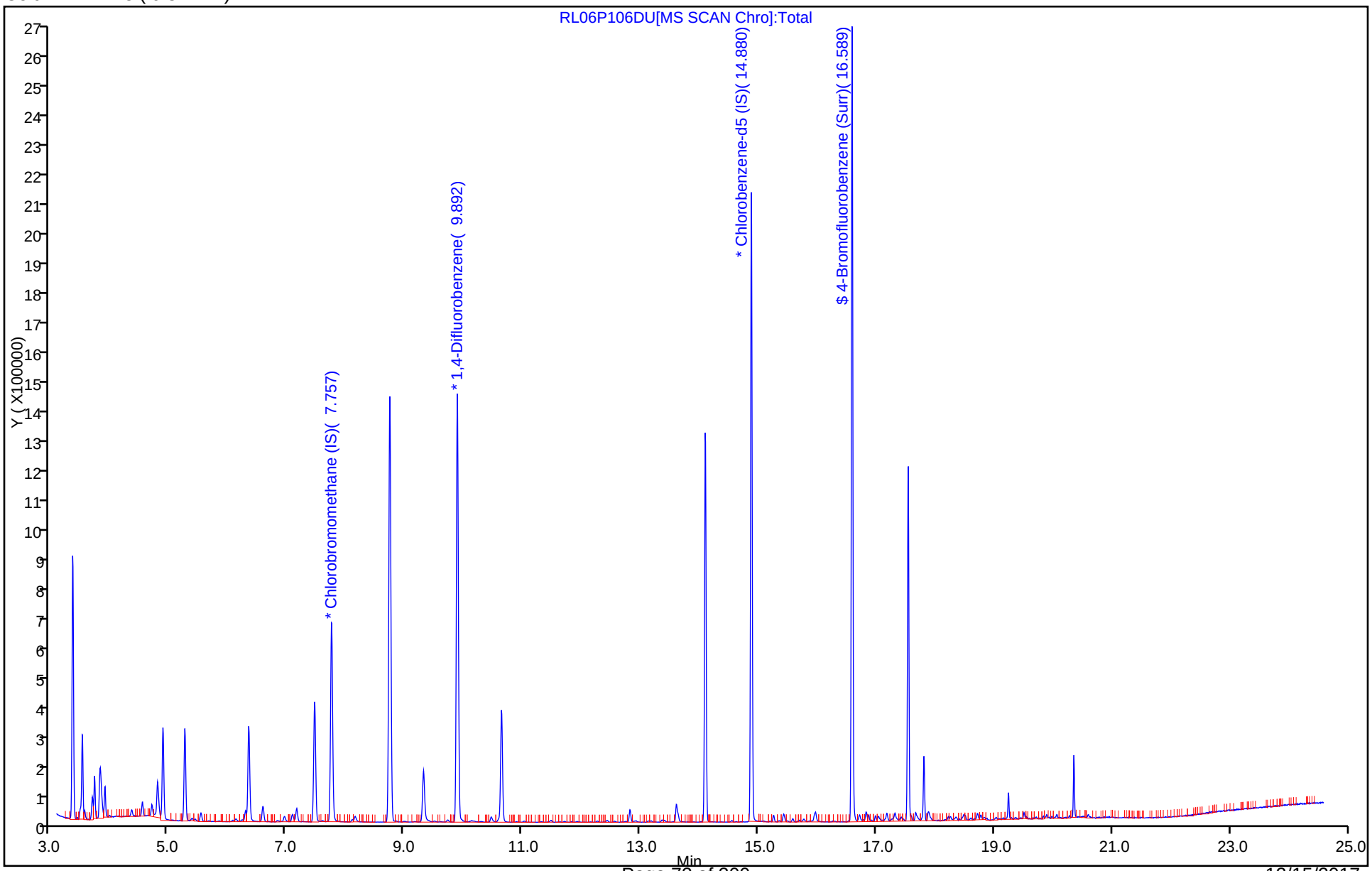
Report Date: 07-Dec-2017 10:16:32 Chrom Revision: 2.2 05-Dec-2017 07:36:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P106DU.D

Injection Date:	06-Dec-2017 19:21:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10079-A-3	Lab Sample ID:	140-10079-3	Worklist Smp#:	17
Client ID:	BLDG-A EFFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P106DU.D				
Lims ID:	140-10079-A-3				
Client ID:	BLDG-A EFFLUENT				
Sample Type:	Client				
Inject. Date:	06-Dec-2017 19:21:30	ALS Bottle#:	7	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006818-017				
Misc. Info.:	140-10079-a-1				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	07-Dec-2017 10:16:08	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK028				

First Level Reviewer: tajh Date: 07-Dec-2017 10:14:59

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.34	108.52

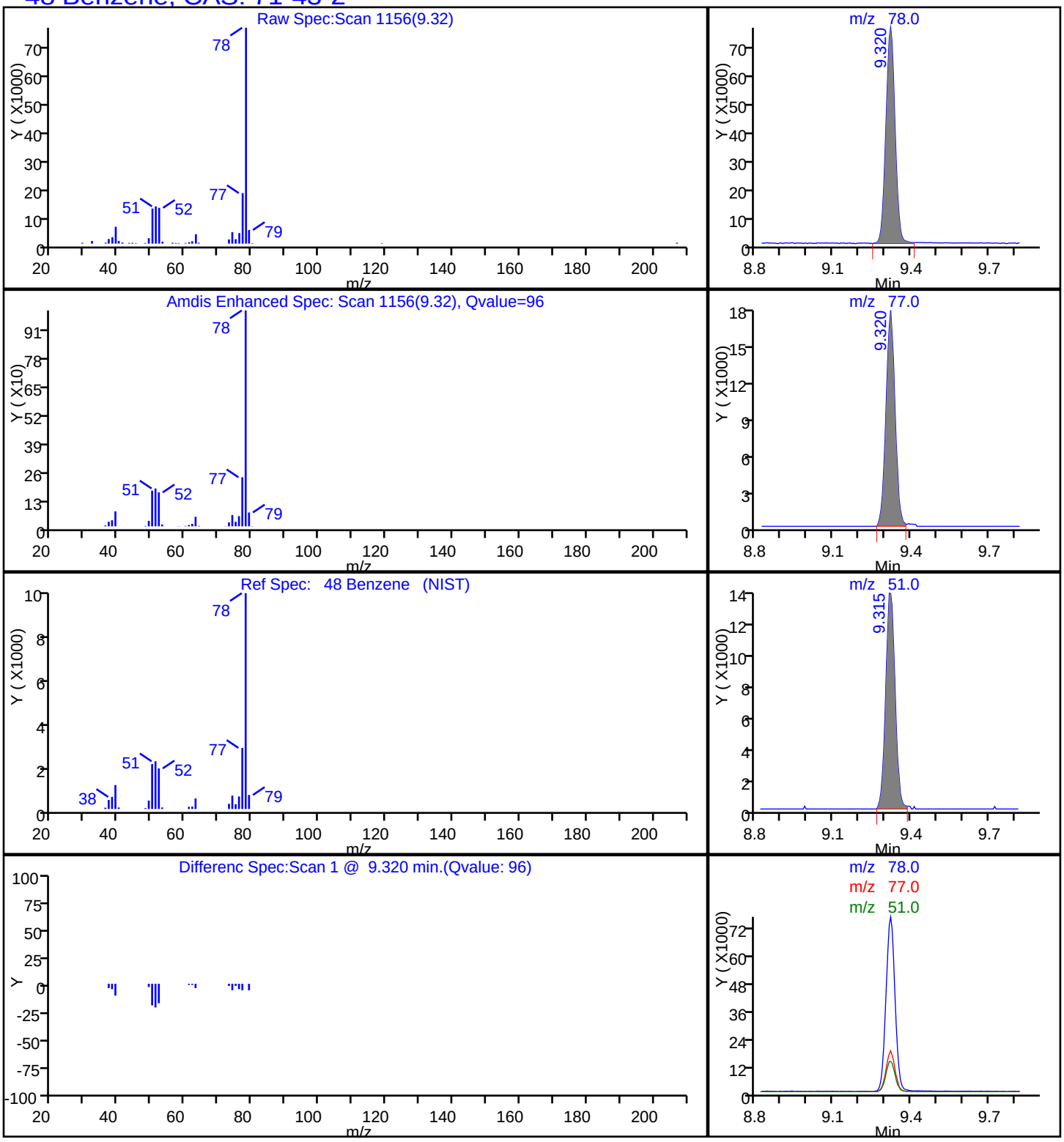
Report Date: 07-Dec-2017 10:16:33 Chrom Revision: 2.2 05-Dec-2017 07:36:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P106DU.D

Injection Date:	06-Dec-2017 19:21:30	Instrument ID:	MR		
Lims ID:	140-10079-A-3	Lab Sample ID:	140-10079-3		
Client ID:	BLDG-A EFFLUENT				
Operator ID:		ALS Bottle#:	7	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

48 Benzene, CAS: 71-43-2



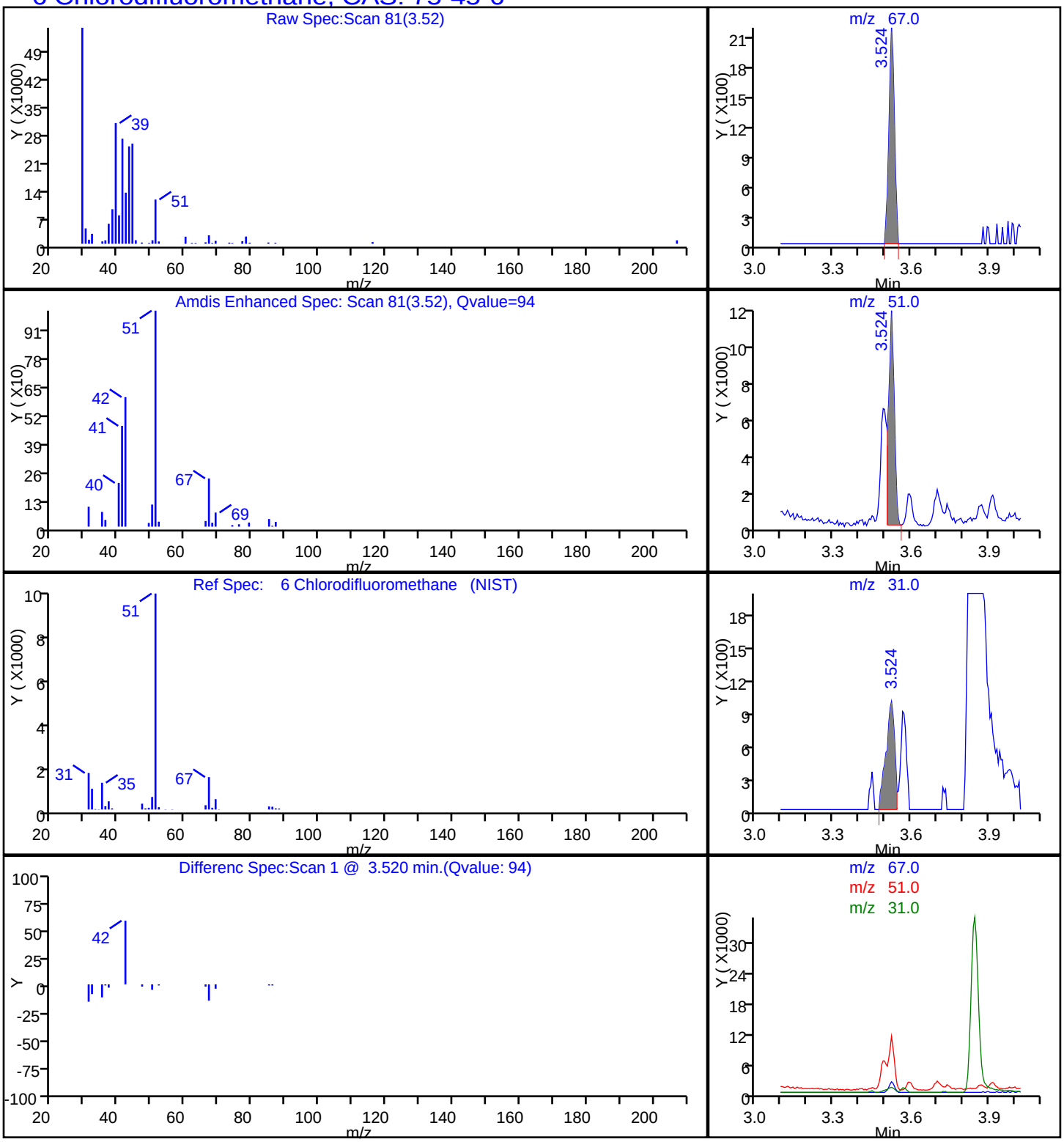
Report Date: 07-Dec-2017 10:16:32 Chrom Revision: 2.2 05-Dec-2017 07:36:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P106DU.D

Injection Date:	06-Dec-2017 19:21:30	Instrument ID:	MR		
Lims ID:	140-10079-A-3	Lab Sample ID:	140-10079-3		
Client ID:	BLDG-A EFFLUENT				
Operator ID:		ALS Bottle#:	7	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

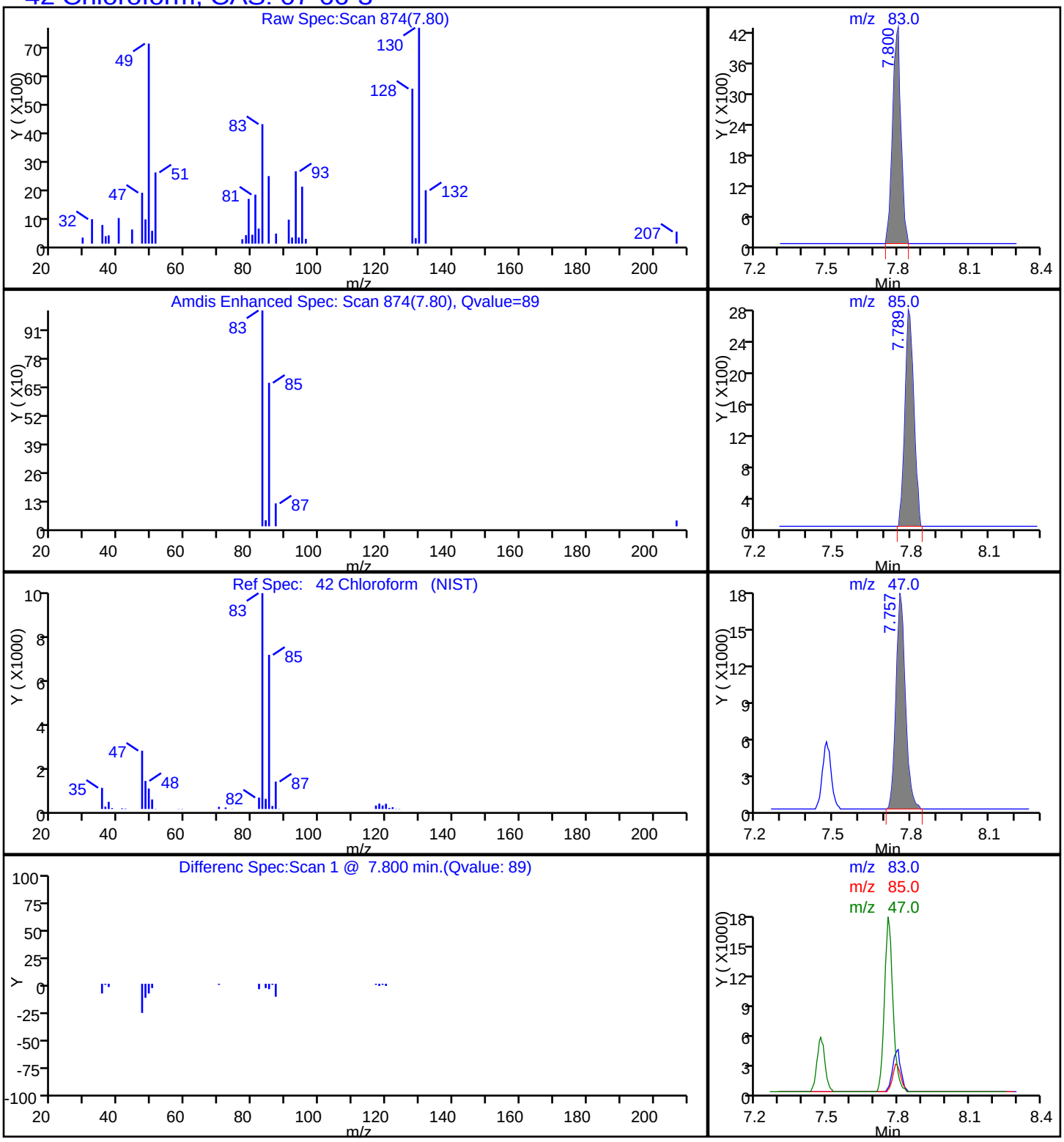
6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P106DU.D		
Injection Date:	06-Dec-2017 19:21:30	Instrument ID:	MR
Lims ID:	140-10079-A-3	Lab Sample ID:	140-10079-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:		ALS Bottle#:	7 Worklist Smp#: 17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

42 Chloroform, CAS: 67-66-3

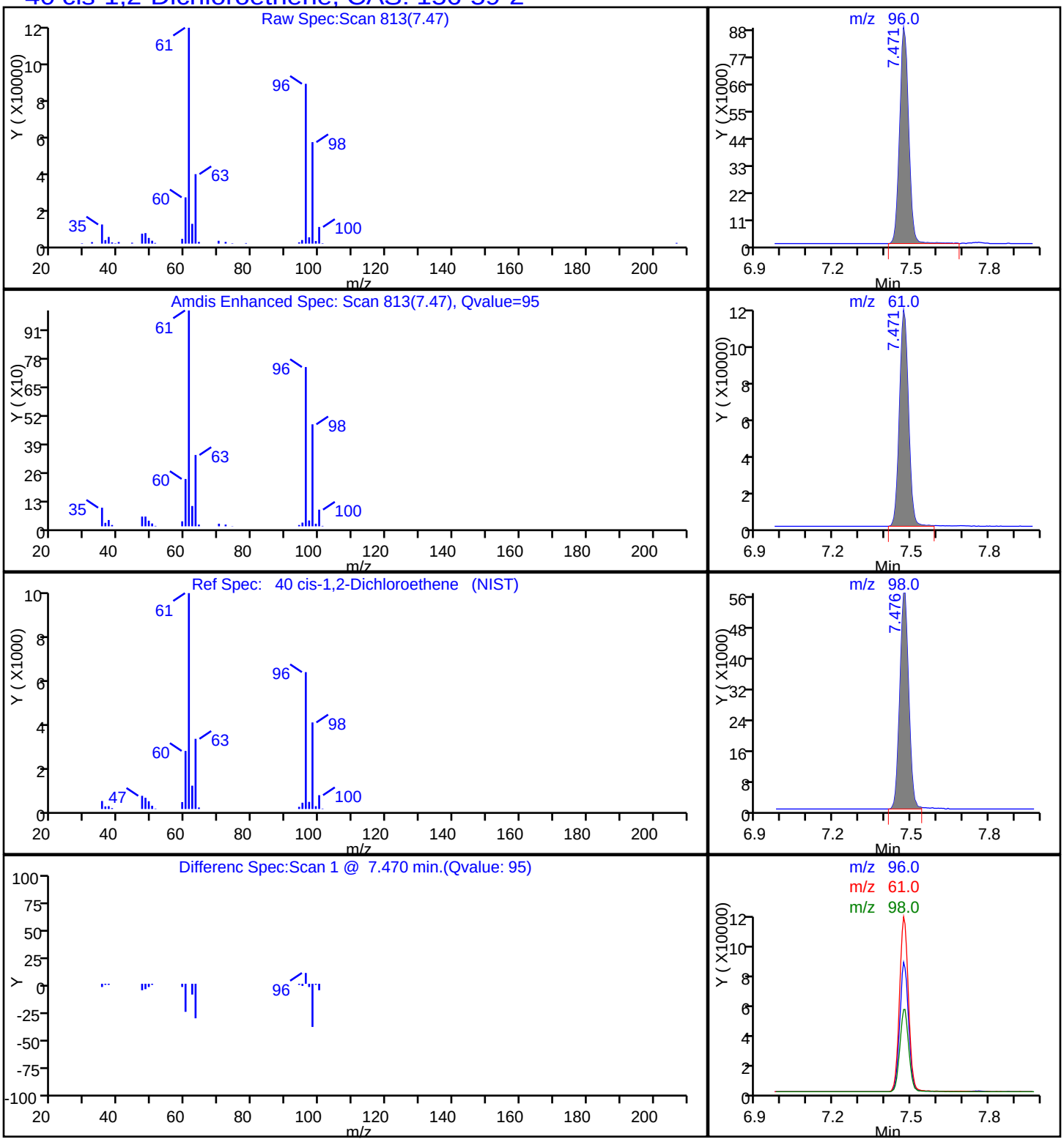


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P106DU.D

Injection Date:	06-Dec-2017 19:21:30	Instrument ID:	MR
Lims ID:	140-10079-A-3	Lab Sample ID:	140-10079-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:		ALS Bottle#:	7 Worklist Smp#: 17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

40 cis-1,2-Dichloroethene, CAS: 156-59-2



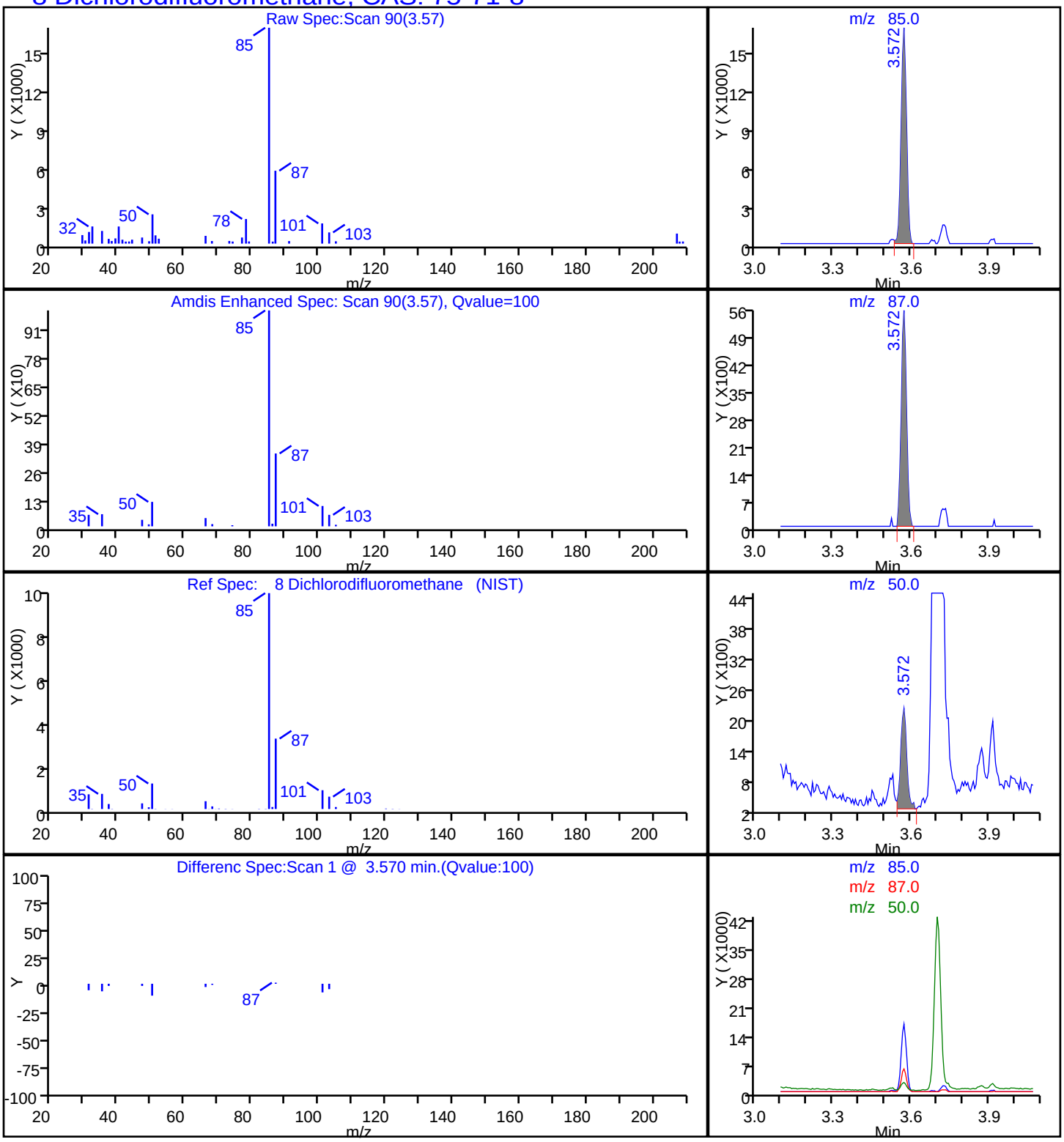
Report Date: 07-Dec-2017 10:16:33 Chrom Revision: 2.2 05-Dec-2017 07:36:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P106DU.D

Injection Date:	06-Dec-2017 19:21:30	Instrument ID:	MR		
Lims ID:	140-10079-A-3	Lab Sample ID:	140-10079-3		
Client ID:	BLDG-A EFFLUENT				
Operator ID:		ALS Bottle#:	7	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

8 Dichlorodifluoromethane, CAS: 75-71-8

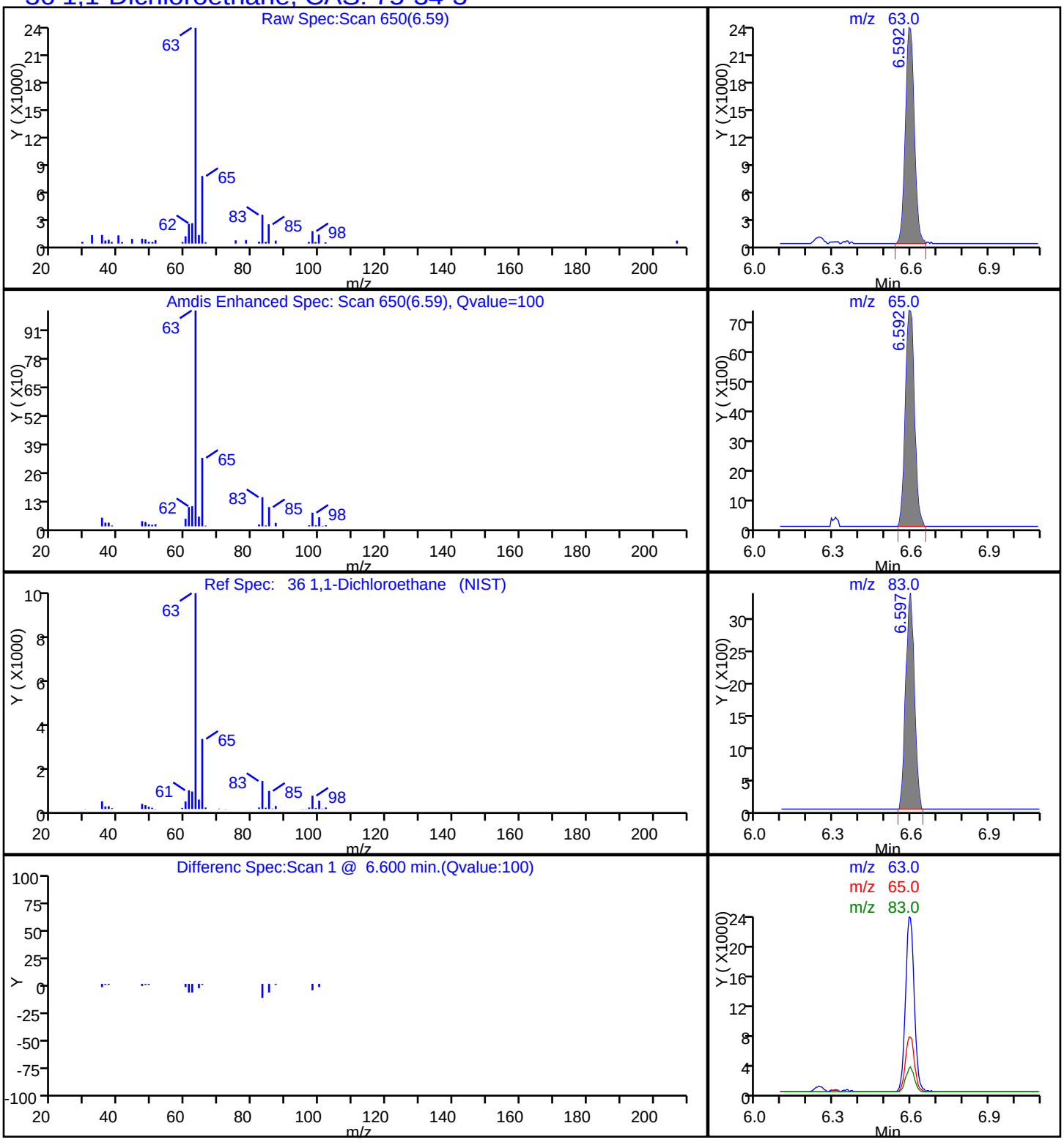


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P106DU.D

Injection Date:	06-Dec-2017 19:21:30	Instrument ID:	MR
Lims ID:	140-10079-A-3	Lab Sample ID:	140-10079-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:		ALS Bottle#:	7 Worklist Smp#: 17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

36 1,1-Dichloroethane, CAS: 75-34-3

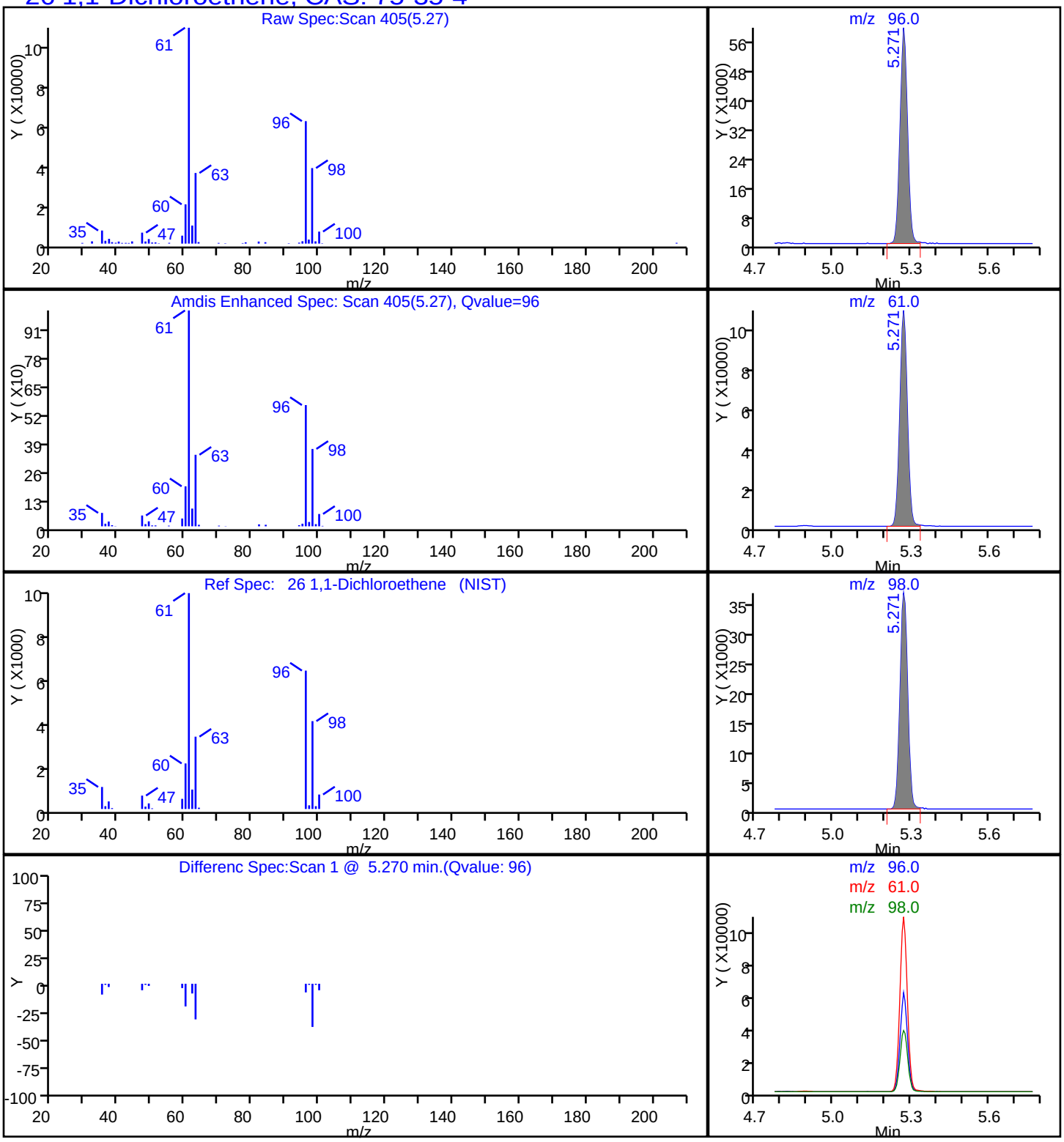


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P106DU.D

Injection Date:	06-Dec-2017 19:21:30	Instrument ID:	MR
Lims ID:	140-10079-A-3	Lab Sample ID:	140-10079-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:		ALS Bottle#:	7 Worklist Smp#: 17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

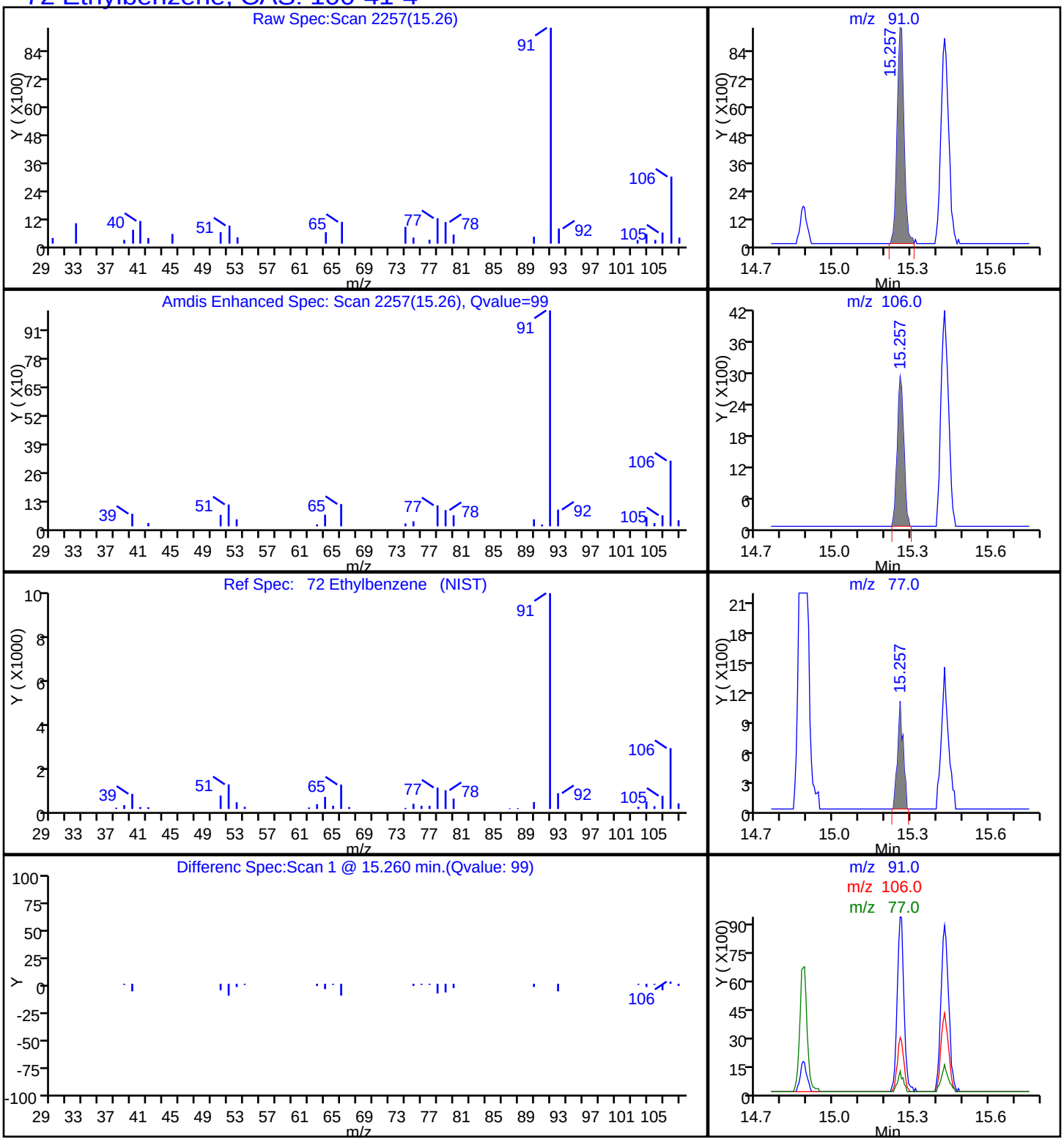
26 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P106DU.D		
Injection Date:	06-Dec-2017 19:21:30	Instrument ID:	MR
Lims ID:	140-10079-A-3	Lab Sample ID:	140-10079-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:		ALS Bottle#:	7 Worklist Smp#: 17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

72 Ethylbenzene, CAS: 100-41-4

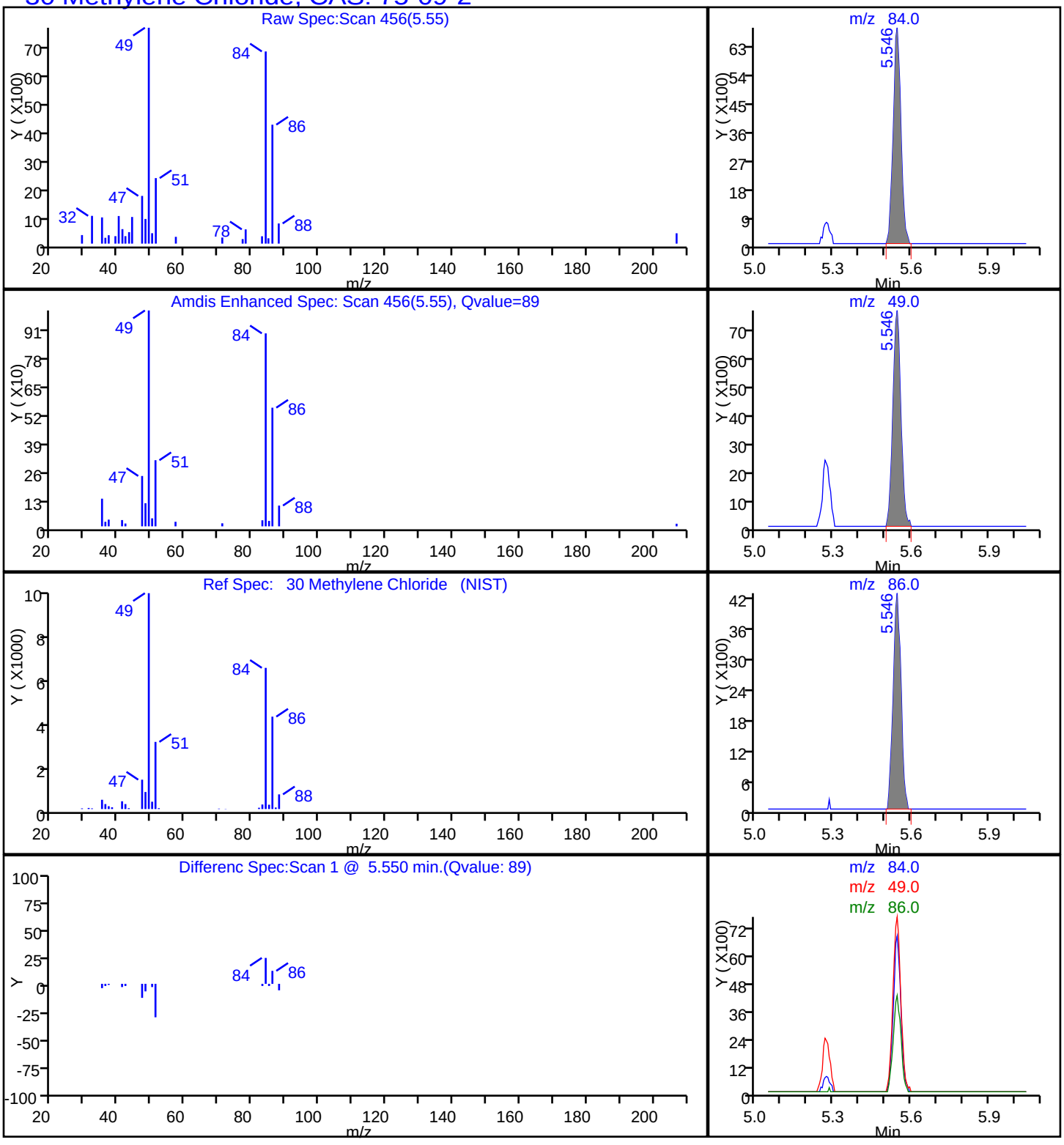


Report Date: 07-Dec-2017 10:16:33 Chrom Revision: 2.2 05-Dec-2017 07:36:06

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P106DU.D		
Injection Date:	06-Dec-2017 19:21:30	Instrument ID:	MR
Lims ID:	140-10079-A-3	Lab Sample ID:	140-10079-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:		ALS Bottle#:	7 Worklist Smp#: 17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

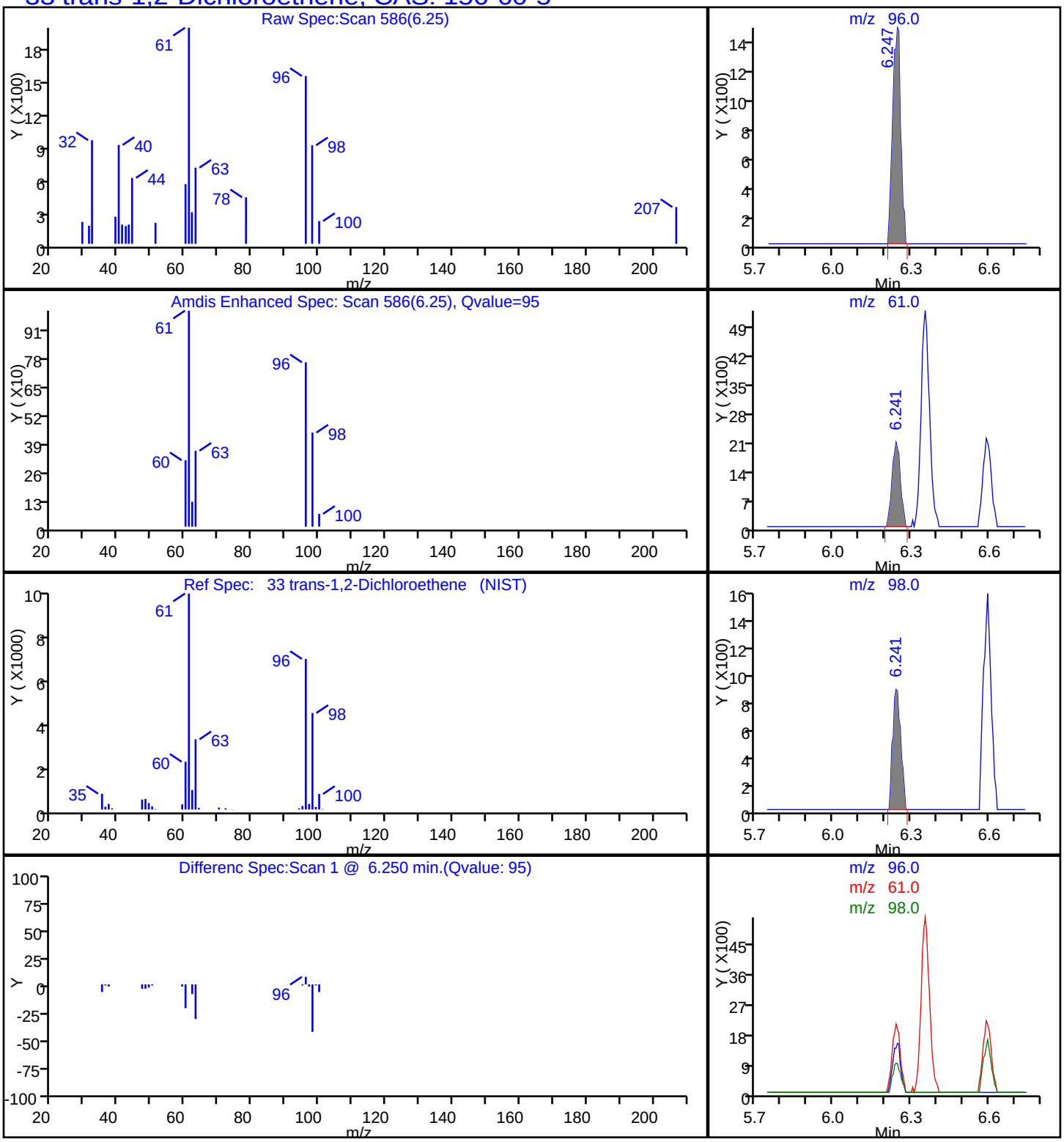
30 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P106DU.D				
Injection Date:	06-Dec-2017 19:21:30	Instrument ID:	MR		
Lims ID:	140-10079-A-3	Lab Sample ID:	140-10079-3		
Client ID:	BLDG-A EFFLUENT				
Operator ID:		ALS Bottle#:	7	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

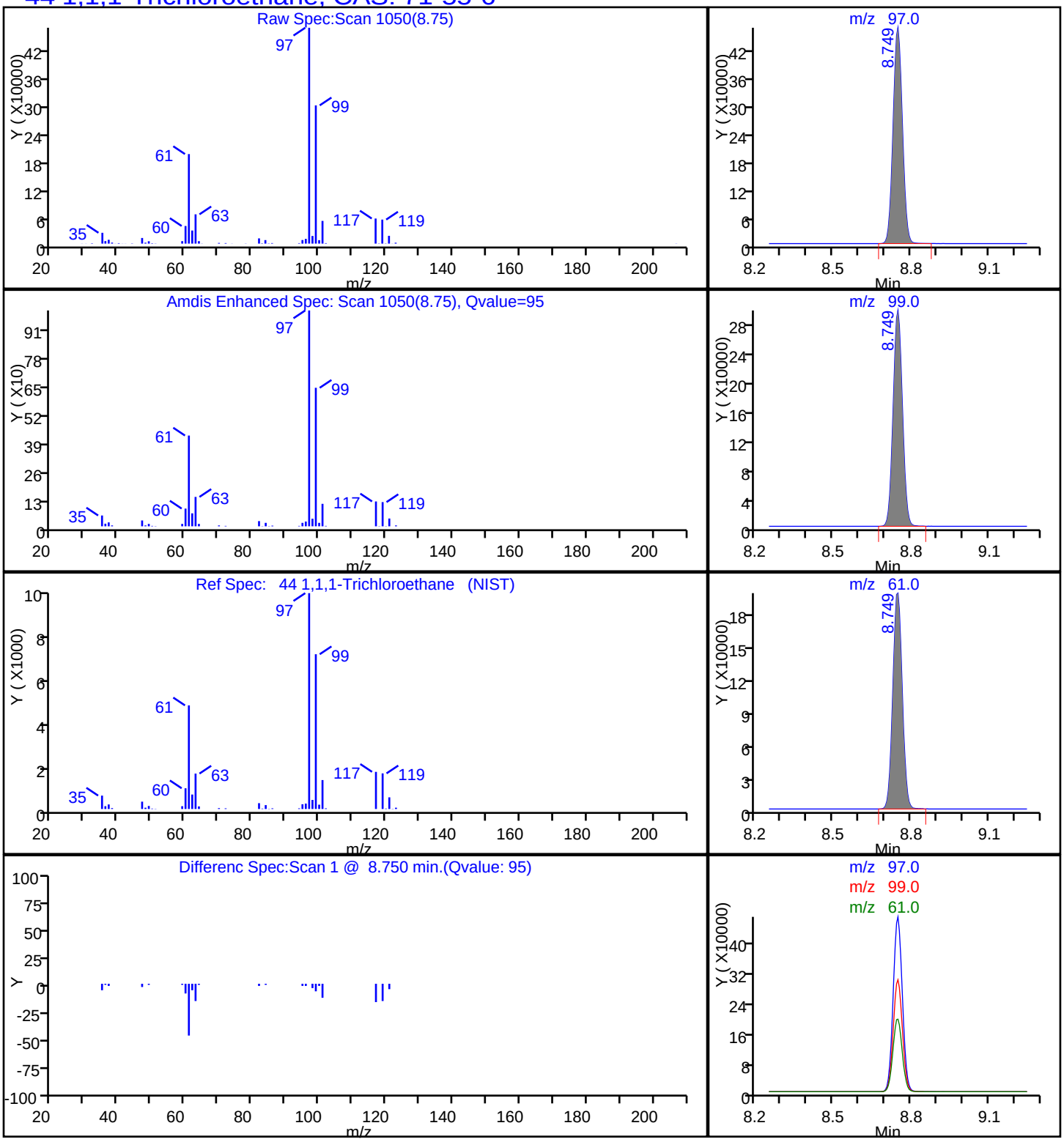
33 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P106DU.D		
Injection Date:	06-Dec-2017 19:21:30	Instrument ID:	MR
Lims ID:	140-10079-A-3	Lab Sample ID:	140-10079-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:		ALS Bottle#:	7 Worklist Smp#: 17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

44 1,1,1-Trichloroethane, CAS: 71-55-6



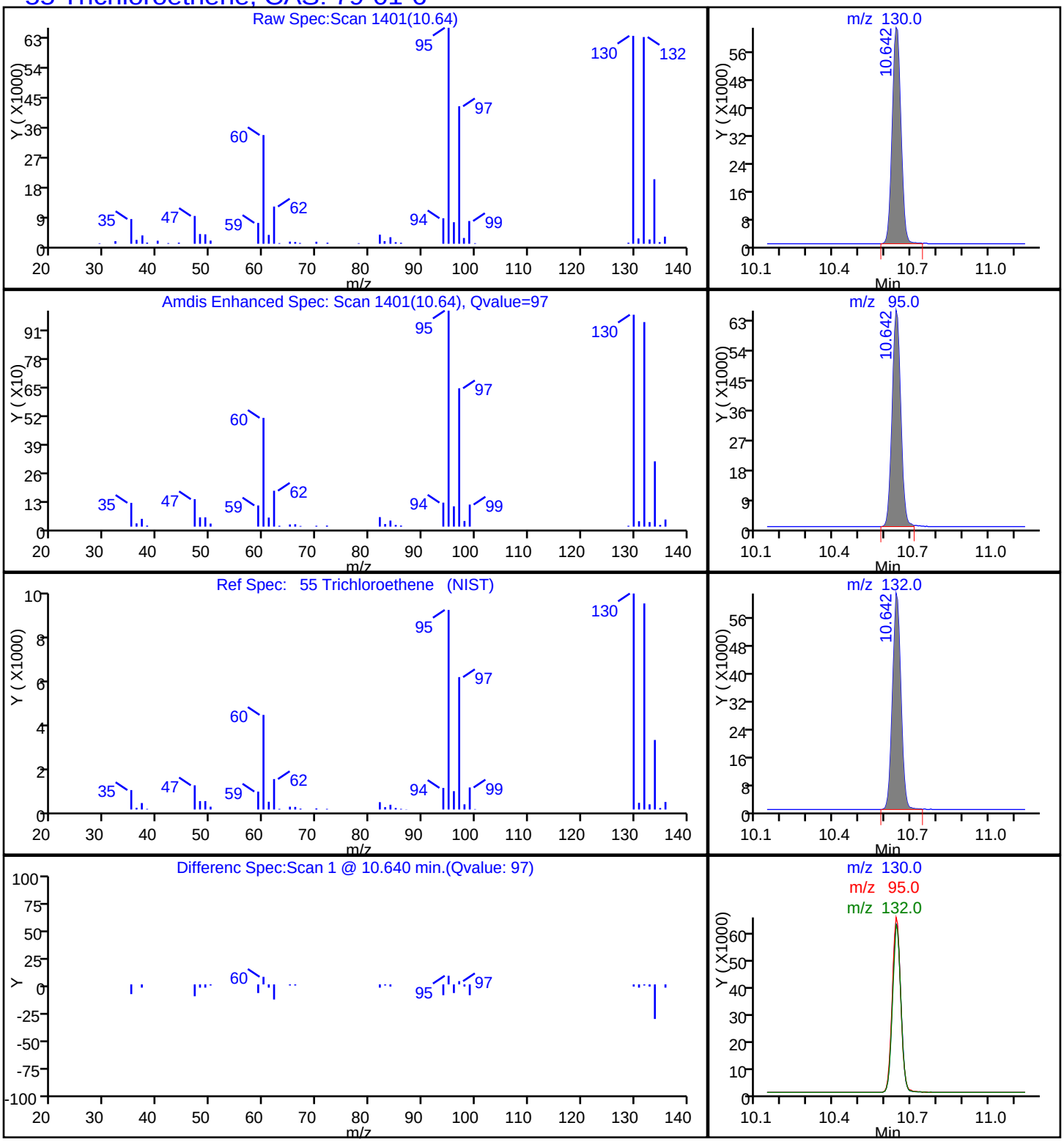
Report Date: 07-Dec-2017 10:16:33 Chrom Revision: 2.2 05-Dec-2017 07:36:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P106DU.D

Injection Date:	06-Dec-2017 19:21:30	Instrument ID:	MR		
Lims ID:	140-10079-A-3	Lab Sample ID:	140-10079-3		
Client ID:	BLDG-A EFFLUENT				
Operator ID:		ALS Bottle#:	7	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

55 Trichloroethene, CAS: 79-01-6

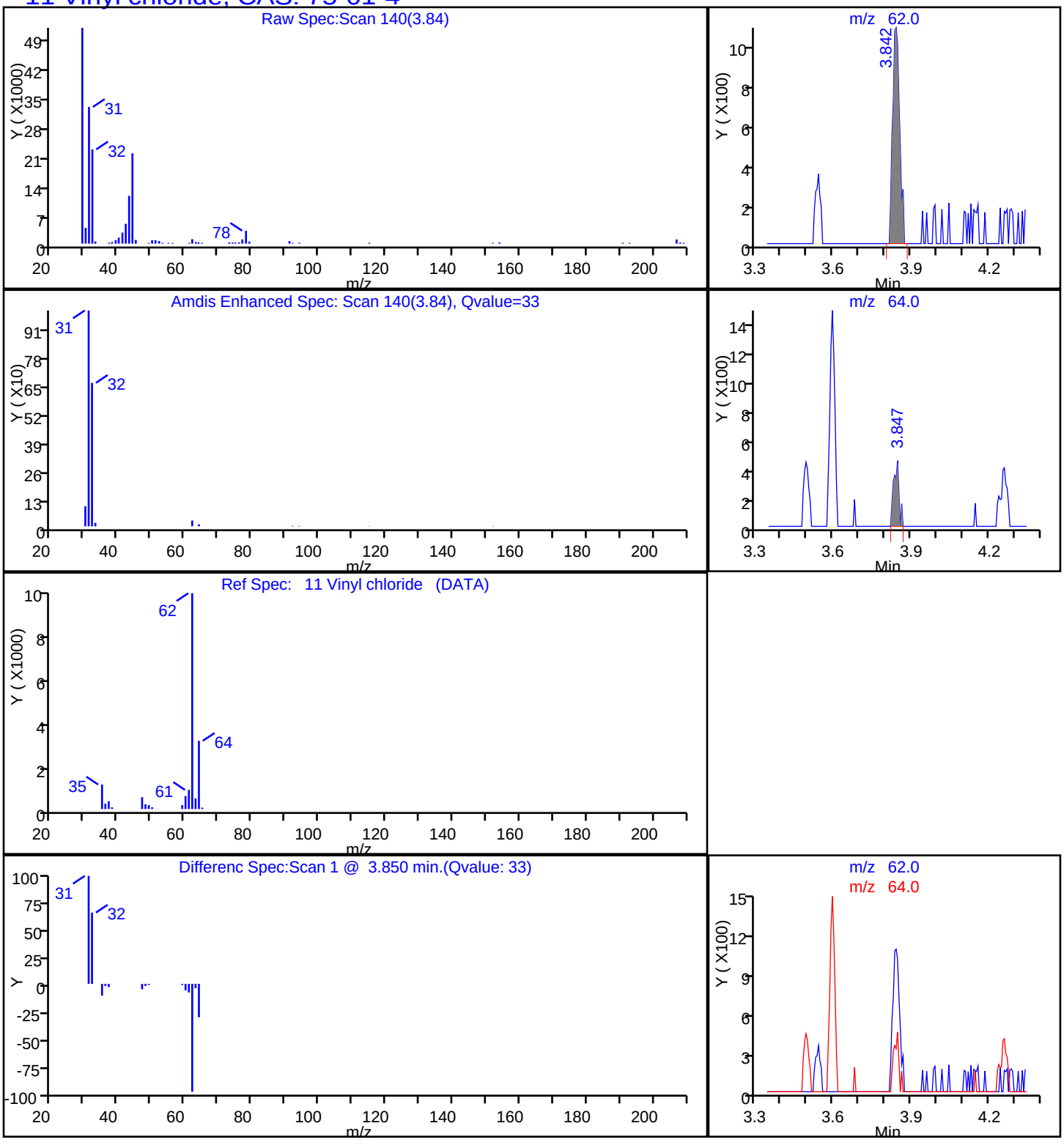


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P106DU.D

Injection Date:	06-Dec-2017 19:21:30	Instrument ID:	MR
Lims ID:	140-10079-A-3	Lab Sample ID:	140-10079-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:		ALS Bottle#:	7 Worklist Smp#: 17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

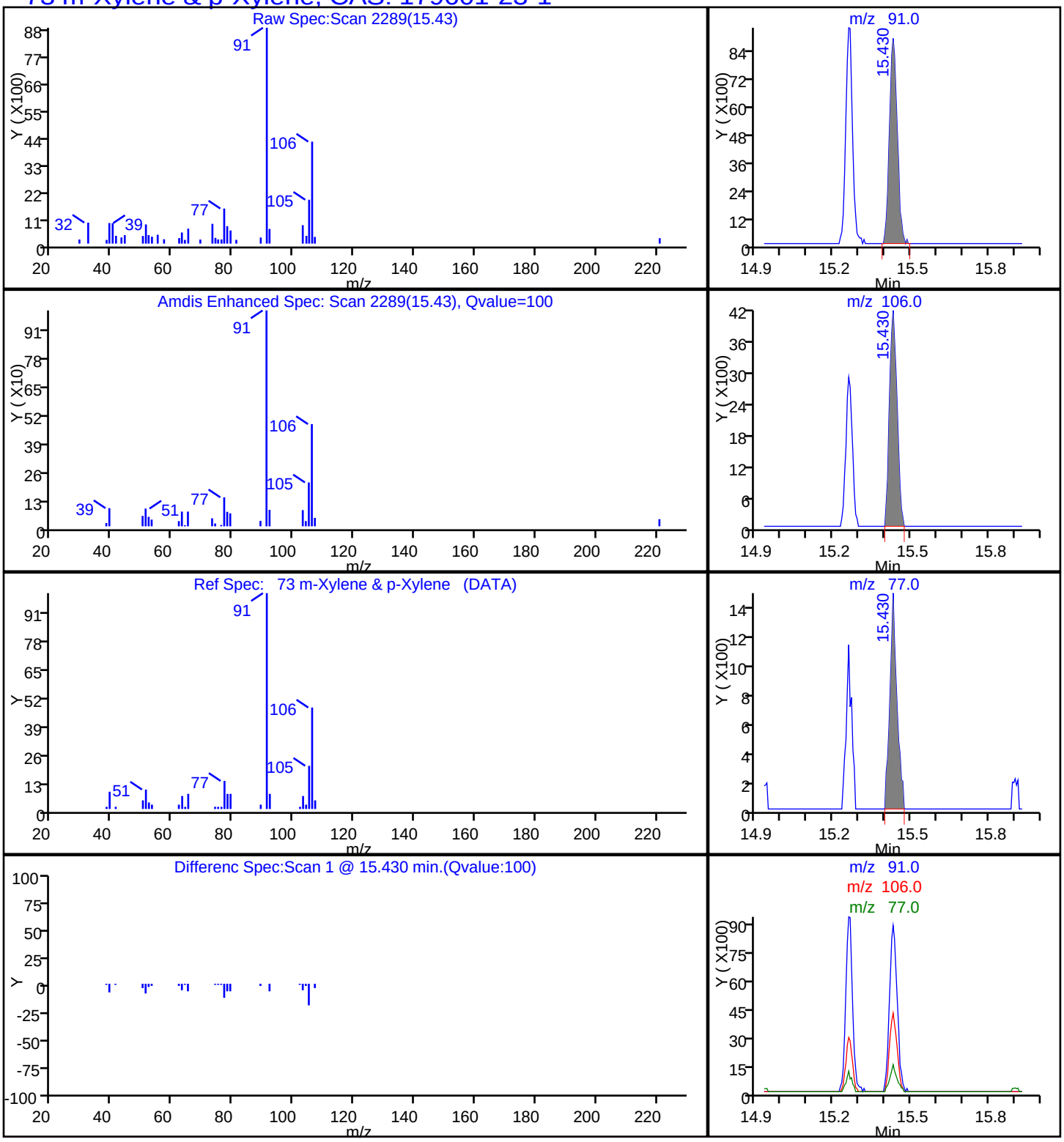
11 Vinyl chloride, CAS: 75-01-4



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RL06P106DU.D		
Injection Date:	06-Dec-2017 19:21:30	Instrument ID:	MR
Lims ID:	140-10079-A-3	Lab Sample ID:	140-10079-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:		ALS Bottle#:	7 Worklist Smp#: 17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

73 m-Xylene & p-Xylene, CAS: 179601-23-1



FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-15542/3	RJ25IC01.D
Level 2	IC 140-15542/4	RJ25IC02.D
Level 3	IC 140-15542/5	RJ25IC03.D
Level 4	IC 140-15542/6	RJ25IC04.D
Level 5	IC 140-15542/7	RJ25IC05.D
Level 6	IC 140-15542/8	RJ25IC06.D
Level 7	ICIS 140-15542/9	RJ25IC07.D
Level 8	IC 140-15542/10	RJ25IC08.D
Level 9	IC 140-15542/11	RJ25IC09.D
Level 10	IC 140-15542/12	RJ25IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Chlorodifluoromethane	+++++ 0.5284	0.5498 0.4869	0.5388 0.4776	0.5514 0.4437	0.5122 0.4332	Ave		0.5024				8.9		30.0			
Propene	+++++ 1.2081	+++++ 1.1108	1.2646 1.0852	1.2728 0.9817	1.1663 0.9148	Ave		1.1255				11.5		30.0			
Dichlorodifluoromethane	+++++ 3.9909	+++++ 3.8141	4.5987 3.9931	4.0497 3.6894	4.0128 3.2171	Ave		3.9207				9.9		30.0			
Chloromethane	+++++ 0.4116	+++++ 0.3616	+++++ 0.3895	0.4111 0.3351	0.4051 0.3187	Ave		0.3761				10.1		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++ 3.0515	+++++ 2.8159	3.0416 2.9081	3.0050 2.6689	2.9047 2.5575	Ave		2.8691				6.2		30.0			
Vinyl chloride	1.3671 1.1454	1.3059 1.0931	1.1656 1.0562	1.1683 0.9864	1.1298 0.9446	Ave		1.1362				11.4		30.0			
1,3-Butadiene	+++++ 0.7792	+++++ 0.7365	0.8596 0.7109	0.8017 0.6647	0.7534 0.6270	Ave		0.7416				10.1		30.0			
Butane	+++++ 1.3174	+++++ 1.2614	1.4036 1.2076	1.3738 1.1090	1.2919 1.0300	Ave		1.2493				10.3		30.0			
Bromomethane	+++++ 1.2347	+++++ 1.1667	1.2049 1.1542	1.2405 1.0697	1.1939 1.0402	Ave		1.1631				6.3		30.0			
Chloroethane	+++++ 0.5232	+++++ 0.5083	0.6044 0.5006	0.5876 0.4680	0.5358 0.4487	Ave		0.5221				10.3		30.0			
Ethanol	+++++ 0.3806	+++++ 0.3657	0.4194 0.3594	0.4087 0.3240	0.3758 0.2895	Ave		0.3654				11.6		30.0			
Vinyl bromide	+++++ 1.2472	+++++ 1.1823	1.3997 1.1573	1.3081 1.0917	1.2478 1.0557	Ave		1.2112				9.3		30.0			
2-Methylbutane	+++++ 0.8799	+++++ 0.8645	0.9173 0.8285	0.9723 0.7731	0.8592 0.7294	Ave		0.8530				9.0		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Acrolein	+++++ 0.3247	+++++ 0.3251	+++++ 0.3096	0.4515 0.2725	0.3179 0.2686	Ave		0.3243				18.8		30.0			
Trichlorofluoromethane	+++++ 4.2099	+++++ 3.9483	4.3466 3.8229	4.2598 3.5155	4.1478 3.2490	Ave		3.9375				9.9		30.0			
Acetonitrile	+++++ 0.2877	+++++ 0.2707	+++++ 0.2631	0.2664 0.2836	0.2659 0.2681	Ave		0.2722				3.5		30.0			
Acetone	+++++ 0.4388	+++++ 0.4317	+++++ 0.4039	0.5941 0.3861	0.4720 0.3595	Ave		0.4409				17.5		30.0			
Pentane	+++++ 0.2794	+++++ 0.2839	+++++ 0.2643	0.2943 0.2603	0.2820 0.2474	Ave		0.2731				6.0		30.0			
Isopropyl alcohol	+++++ 1.7956	+++++ 1.7656	1.8207 1.6884	1.8180 1.5825	1.7570 1.4204	Ave		1.7060				8.2		30.0			
Ethyl ether	+++++ 1.2446	+++++ 1.1803	1.2561 1.1394	1.2411 1.0701	1.2076 1.0311	Ave		1.1713				7.2		30.0			
1,1-Dichloroethene	1.8089 1.6087	1.7207 1.5302	1.6111 1.5478	1.5863 1.4839	1.5436 1.4952	Ave		1.5936				6.4		30.0			
Acrylonitrile	+++++ 1.0563	+++++ 0.9844	0.9679 0.9980	1.0591 0.9662	0.9578 0.9584	Ave		0.9935				4.2		30.0			
tert-Butyl alcohol	+++++ 3.1960	+++++ 3.0657	2.9798 3.0580	3.0771 2.9311	2.9858 2.7796	Ave		3.0091				4.1		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++ 3.5686	3.7467 3.3630	3.5432 3.3638	3.5431 3.1737	3.4737 3.0611	Ave		3.4263				6.2		30.0			
Methylene Chloride	+++++ 1.6389	+++++ 1.4623	+++++ 1.4218	2.4173 1.3471	1.7931 1.3204	Ave		1.6287				23.7		30.0			
3-Chloropropene	+++++ 1.4043	+++++ 1.2922	1.2624 1.2868	1.3073 1.2170	1.3032 1.1720	Ave		1.2806				5.4		30.0			
Carbon disulfide	+++++ 4.5562	+++++ 4.2698	4.4603 4.3410	4.3596 4.1377	4.3768 4.0665	Ave		4.3210				3.7		30.0			
trans-1,2-Dichloroethene	1.8154 1.6726	1.7919 1.5890	1.6255 1.6145	1.5941 1.5669	1.5688 1.5630	Ave		1.6402				5.6		30.0			
Methyl tert-butyl ether	+++++ 4.8940	4.8207 4.6951	4.5643 4.7557	4.5992 4.5445	4.5994 4.4091	Ave		4.6535				3.3		30.0			
1,1-Dichloroethane	3.1254 2.9871	3.1325 2.8151	2.9741 2.8056	3.0246 2.6622	2.8860 2.6015	Ave		2.9014				6.2		30.0			
Vinyl acetate	+++++ 3.3745	+++++ 3.3132	2.6662 3.4378	2.8636 3.3276	2.9765 3.3006	Ave		3.1575				9.0		30.0			
2-Butanone (MEK)	+++++ 0.7408	+++++ 0.7222	0.6292 0.7386	0.7368 0.7192	0.6927 0.7157	Ave		0.7119				5.2		30.0			
Hexane	+++++ 1.1962	+++++ 1.1320	1.1952 1.1397	1.1913 1.0739	1.1475 1.0325	Ave		1.1385				5.2		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
cis-1,2-Dichloroethene	1.7777 1.7143	1.7900 1.6382	1.6687 1.6819	1.6562 1.6167	1.6070 1.6130	Ave		1.6764				3.9		30.0			
Ethyl acetate	+++++ 2.9873	+++++ 2.8362	2.7319 2.9106	2.7331 2.7482	2.6995 2.6863	Ave		2.7916				3.9		30.0			
Chloroform	4.2002 3.8862	4.1393 3.6677	3.7970 3.6669	3.8508 3.4657	3.7285 3.3729	Ave		3.7775				6.9		30.0			
Tetrahydrofuran	1.5974 1.3952	1.4904 1.3613	1.3532 1.3696	1.3431 1.3057	1.3117 1.2739	Ave		1.3802				7.0		30.0			
1,1,1-Trichloroethane	4.1022 4.1028	4.1446 3.9110	3.8572 3.9680	3.9403 3.7653	3.8814 3.6726	Ave		3.9345				3.9		30.0			
1,2-Dichloroethane	0.4376 0.4545	0.4586 0.4265	0.4367 0.4301	0.4298 0.4022	0.4313 0.4027	Ave		0.4310				4.3		30.0			
Benzene	0.8874 0.8377	0.8387 0.7949	0.8005 0.8129	0.8016 0.7541	0.7867 0.7073	Ave		0.8022				6.1		30.0			
1-Butanol	+++++ 0.0669	+++++ 0.0692	+++++ 0.0721	+++++ 0.0712	0.0540 0.0656	Ave		0.0665				9.9		30.0			
Cyclohexane	+++++ 0.1326	+++++ 0.1266	0.1107 0.1275	0.1162 0.1174	0.1216 0.1097	Ave		0.1203				6.8		30.0			
Carbon tetrachloride	0.6796 0.7358	0.6730 0.7073	0.6550 0.7210	0.6741 0.6748	0.6693 0.6573	Ave		0.6847				4.0		30.0			
2,2,4-Trimethylpentane	+++++ 1.2439	+++++ 1.1739	1.1169 1.1877	1.1465 1.0995	1.1539 1.0350	Ave		1.1447				5.5		30.0			
1,2-Dichloropropane	+++++ 0.2956	0.2944 0.2783	0.2863 0.2811	0.2784 0.2589	0.2796 0.2451	Ave		0.2775				5.8		30.0			
Heptane	+++++ 0.2917	+++++ 0.2811	0.2463 0.2865	0.2614 0.2666	0.2679 0.2521	Ave		0.2692				6.0		30.0			
Trichloroethene	0.3868 0.4089	0.3833 0.3915	0.3714 0.4007	0.3792 0.3827	0.3806 0.3815	Ave		0.3866				2.9		30.0			
Dibromomethane	+++++ 0.3485	0.3979 0.3352	0.3510 0.3421	0.3356 0.3252	0.3268 0.3238	Ave		0.3429				6.7		30.0			
Bromodichloromethane	+++++ 0.6564	0.5743 0.6406	0.5553 0.6635	0.5717 0.6328	0.5804 0.6202	Ave		0.6106				6.6		30.0			
1,4-Dioxane	+++++ 0.1342	+++++ 0.1284	+++++ 0.1314	0.1128 0.1227	0.1208 0.1144	Ave		0.1235				6.7		30.0			
Methyl methacrylate	+++++ 0.2930	+++++ 0.2991	0.1956 0.3136	0.2214 0.3010	0.2473 0.2988	Ave		0.2712				16.2		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.5139	+++++ 0.5046	+++++ 0.5184	0.4085 0.4915	0.4384 0.4709	Ave		0.4780				8.7		30.0			
cis-1,3-Dichloropropene	0.3917 0.4936	0.3928 0.4868	0.3807 0.5057	0.4204 0.4814	0.4360 0.4785	Ave		0.4468				10.7		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
trans-1,3-Dichloropropene	0.3882 0.5309	0.4202 0.5238	0.4155 0.5568	0.4506 0.5354	0.4726 0.5456	Ave		0.4839				12.8		30.0			
Toluene	1.1241 1.2084	1.0868 1.1506	1.0517 1.1907	1.0960 1.1068	1.1100 1.0717	Ave		1.1197				4.5		30.0			
1,1,2-Trichloroethane	0.3102 0.3473	0.3229 0.3300	0.3082 0.3361	0.3193 0.3146	0.3197 0.3103	Ave		0.3219				3.9		30.0			
2-Hexanone	+++++ 0.3134	+++++ 0.3241	0.1763 0.3399	0.2213 0.3226	0.2561 0.3137	Ave		0.2834				20.8		30.0			
Dibromochloromethane	0.5587 0.7291	0.5598 0.7381	0.5475 0.7922	0.5886 0.7537	0.6237 0.7415	Ave		0.6633				14.5		30.0			
Octane	+++++ 0.3937	+++++ 0.3800	0.3096 0.3881	0.3400 0.3585	0.3548 0.3431	Ave		0.3585				7.9		30.0			
1,2-Dibromoethane (EDB)	+++++ 0.6389	+++++ 0.6187	0.5190 0.6466	0.5500 0.6149	0.5703 0.6122	Ave		0.5963				7.6		30.0			
Tetrachloroethene	0.4304 0.4653	0.4501 0.4431	0.4223 0.4543	0.4370 0.4282	0.4336 0.4230	Ave		0.4387				3.2		30.0			
Chlorobenzene	0.9992 0.9864	0.9718 0.9345	0.9281 0.9494	0.9398 0.8849	0.9365 0.8618	Ave		0.9392				4.5		30.0			
Ethylbenzene	1.4401 1.6275	1.3993 1.5401	1.3903 1.5662	1.4540 1.4291	1.4862 1.3231	Ave		1.4656				6.2		30.0			
m-Xylene & p-Xylene	1.0711 1.2823	1.0649 1.2091	1.0702 1.2012	1.1449 1.0714	1.1823 0.9448	Ave		1.1242				8.7		30.0			
Bromoform	0.4674 0.6394	0.4865 0.6797	0.4696 0.7422	0.4946 0.7185	0.5232 0.7222	Ave		0.5943				19.5		30.0			
Styrene	+++++ 0.8867	+++++ 0.8831	0.5643 0.9141	0.6456 0.8567	0.7237 0.8325	Ave		0.7883				16.3		30.0			
Nonane	+++++ 0.7206	+++++ 0.6652	0.5507 0.6497	0.6229 0.5720	0.6636 0.5123	Ave		0.6196				11.2		30.0			
o-Xylene	1.1302 1.3545	1.1569 1.2573	1.1624 1.2520	1.2472 1.1358	1.2666 1.0500	Ave		1.2013				7.4		30.0			
1,1,2,2-Tetrachloroethane	+++++ 0.8957	0.7355 0.8362	0.7299 0.8372	0.7901 0.7630	0.8060 0.7191	Ave		0.7903				7.5		30.0			
1,2,3-Trichloropropane	+++++ 0.3061	+++++ 0.2848	0.2659 0.2816	0.2880 0.2587	0.2822 0.2535	Ave		0.2776				6.2		30.0			
Isopropylbenzene	+++++ 1.8916	1.8696 1.7566	1.7791 1.7343	1.8252 1.5487	1.8101 1.3945	Ave		1.7344				9.3		30.0			
Propylbenzene	+++++ 0.5358	0.4255 0.5029	0.4062 0.4998	0.4593 0.4505	0.4832 0.4206	Ave		0.4649				9.4		30.0			
2-Chlorotoluene	+++++ 0.4797	0.4156 0.4462	0.4109 0.4420	0.4537 0.3971	0.4522 0.3770	Ave		0.4305				7.5		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
4-Ethyltoluene	+++++ 2.0232	1.5384 1.8873	1.5441 1.8623	1.7128 1.6421	1.8142 1.4584	Ave		1.7203				11.0		30.0			
1,3,5-Trimethylbenzene	0.6131 0.8251	0.6256 0.7732	0.6275 0.7713	0.7130 0.6963	0.7475 0.6549	Ave		0.7048				10.4		30.0			
Alpha Methyl Styrene	+++++ 0.7234	+++++ 0.7310	+++++ 0.7573	0.4842 0.7002	0.5590 0.6628	Ave		0.6597				15.3		30.0			
Decane	+++++ 1.0382	+++++ 0.9664	0.7218 0.9491	0.8677 0.8185	0.9184 0.6960	Ave		0.8720				13.8		30.0			
tert-Butylbenzene	+++++ 1.9116	1.5250 1.7775	1.5052 1.7572	1.7050 1.5403	1.7410 1.3578	Ave		1.6467				10.5		30.0			
1,2,4-Trimethylbenzene	1.2958 1.7741	1.3547 1.6220	1.3822 1.5674	1.5708 1.3511	1.6211 1.1658	Ave		1.4705				12.7		30.0			
1,3-Dichlorobenzene	0.9501 1.1491	0.9755 1.0709	0.9435 1.0555	1.0461 0.9334	1.0454 0.8545	Ave		1.0024				8.6		30.0			
sec-Butylbenzene	+++++ 2.5239	1.9242 2.3507	1.9211 2.2918	2.1731 1.9258	2.2800 1.5928	Ave		2.1093				13.7		30.0			
Benzyl chloride	+++++ 1.4749	+++++ 1.4399	+++++ 1.4370	1.1324 1.2503	1.2318 1.0883	Ave		1.2935				12.2		30.0			
1,4-Dichlorobenzene	0.9723 1.1642	0.9722 1.0795	0.9703 1.0577	1.0618 0.9359	1.0514 0.8577	Ave		1.0123				8.6		30.0			
4-Isopropyltoluene	+++++ 2.2611	1.6211 2.1503	1.6490 2.1293	1.9267 1.8090	2.0038 1.4958	Ave		1.8940				14.1		30.0			
1,2,3-Trimethylbenzene	1.4171 1.9595	1.5428 1.8127	1.5222 1.7708	1.7559 1.5408	1.7871 1.3448	Ave		1.6454				12.0		30.0			
1,2-Dichlorobenzene	0.9674 1.1266	0.9741 1.0457	0.9121 1.0282	1.0300 0.9062	1.0081 0.8238	Ave		0.9822				8.7		30.0			
Butylbenzene	+++++ 2.1055	1.4970 1.9952	1.4408 1.9800	1.7130 1.6753	1.8234 1.3513	Ave		1.7313				15.4		30.0			
Undecane	+++++ 1.2182	+++++ 1.1654	0.7698 1.1579	0.9546 1.0014	1.0143 0.8324	Ave		1.0142				15.9		30.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.8502	+++++ 0.8663	0.4966 0.9051	0.6087 0.7949	0.6550 0.7083	Ave		0.7356				19.4		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 2.9309	+++++ 2.7917	1.9390 2.7937	2.3411 2.3234	2.4353 +++++	Ave		2.5079				13.9		30.0			
Dodecane	+++++ 1.2500	+++++ 1.1858	0.7480 1.2104	0.9446 1.0380	0.8935 0.8562	Ave		1.0158				18.2		30.0			
1,2,4-Trichlorobenzene	0.6124 0.9441	0.6407 0.9438	0.6398 1.0228	0.7850 0.9588	0.7135 0.9088	Ave		0.8170				19.1		30.0			
Naphthalene	1.4478 2.2892	1.4742 2.2339	1.5283 2.3428	1.9081 2.0982	1.6880 +++++	Ave		1.8900				19.3		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Hexachlorobutadiene	0.7935 0.9253	0.7986 0.8965	0.7203 0.9510	0.8263 0.8975	0.7528 0.8453	Ave		0.8407				9.1		30.0			
1,2,3-Trichlorobenzene	0.6537 0.9130	0.6742 0.8952	0.6874 0.9642	0.8226 0.9021	0.6708 0.8908	Ave		0.8074				15.1		30.0			
2-Methylnaphthalene	+++++ 0.5736	+++++ 0.5700	0.2460 0.6969	0.4439 0.6255	0.2461 0.5637	Ave		0.4957				34.2		50.0			
1-Methylnaphthalene	+++++ 0.4999	+++++ 0.4680	0.2664 0.5744	0.4502 0.5052	0.2201 0.4656	Ave		0.4312				28.4		50.0			
4-Bromofluorobenzene (Surr)	0.7461 0.7392	0.7608 0.7333	0.7634 0.7106	0.7613 0.6920	0.7646 0.6584	Ave		0.7330				4.9		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-15542/3	RJ25IC01.D
Level 2	IC 140-15542/4	RJ25IC02.D
Level 3	IC 140-15542/5	RJ25IC03.D
Level 4	IC 140-15542/6	RJ25IC04.D
Level 5	IC 140-15542/7	RJ25IC05.D
Level 6	IC 140-15542/8	RJ25IC06.D
Level 7	ICIS 140-15542/9	RJ25IC07.D
Level 8	IC 140-15542/10	RJ25IC08.D
Level 9	IC 140-15542/11	RJ25IC09.D
Level 10	IC 140-15542/12	RJ25IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorodifluoromethane	CBM	Ave	+++++ 52665	2085 101769	4125 202279	8460 399853	20097 803086	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Propene	CBM	Ave	+++++ 120415	+++++ 232191	9681 459626	19529 884721	45765 1695857	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	+++++ 397784	+++++ 797253	35205 1691282	62139 3324893	157459 5963801	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Chloromethane	CBM	Ave	+++++ 41021	+++++ 75586	+++++ 164958	6308 301993	15895 590896	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	+++++ 304153	+++++ 588597	23285 1231703	46108 2405230	113975 4741073	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	2540 114161	4952 228480	8923 447334	17927 888956	44332 1751141	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	+++++ 77662	+++++ 153951	6581 301083	12301 599027	29563 1162419	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Butane	CBM	Ave	+++++ 131312	+++++ 263673	10745 511458	21079 999430	50692 1909389	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Bromomethane	CBM	Ave	+++++ 123066	+++++ 243878	9224 488872	19034 964057	46848 1928308	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Chloroethane	CBM	Ave	+++++ 52144	+++++ 106239	4627 212019	9016 421811	21026 831792	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Ethanol	CBM	Ave	+++++ 189667	+++++ 382186	16054 761181	31352 1460090	73720 2683051	+++++ 5.01	+++++ 9.99	0.397 20.0	0.793 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	+++++ 124308	+++++ 247129	10715 490166	20071 983817	48964 1957010	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	+++++ 87697	+++++ 180708	7022 350900	14919 696681	33713 1352243	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Acrolein	CBM	Ave	+++++ 32362	+++++ 67963	+++++ 131136	6928 245571	12474 497887	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Trichlorofluoromethane	CBM	Ave	+++++	+++++	33275	65362	162753	+++++	+++++	0.0793	0.159	0.400
			419611	825311	1619197	3168243	6022956	1.00	2.00	4.00	8.00	16.0
Acetonitrile	CBM	Ave	+++++	+++++	+++++	4087	10434	+++++	+++++	+++++	0.159	0.400
			28679	56588	111432	255539	496965	1.00	2.00	4.00	8.00	16.0
Acetone	CBM	Ave	+++++	+++++	+++++	27350	55570	+++++	+++++	+++++	0.476	1.20
			131209	270718	513231	1043967	1999735	3.01	5.99	12.0	24.0	48.0
Pentane	CBM	Ave	+++++	+++++	+++++	4515	11065	+++++	+++++	+++++	0.159	0.400
			27851	59347	111955	234577	458645	1.00	2.00	4.00	8.00	16.0
Isopropyl alcohol	CBM	Ave	+++++	+++++	41818	83694	206847	+++++	+++++	0.238	0.476	1.20
			536958	1107259	2145485	4278764	7900031	3.01	5.99	12.0	24.0	48.0
Ethyl ether	CBM	Ave	+++++	+++++	9616	19044	47384	+++++	+++++	0.0793	0.159	0.400
			124053	246725	482585	964411	1911537	1.00	2.00	4.00	8.00	16.0
1,1-Dichloroethene	CBM	Ave	3361	6525	12334	24340	60569	0.0196	0.0392	0.0793	0.159	0.400
			160338	319852	655584	1337323	2771817	1.00	2.00	4.00	8.00	16.0
Acrylonitrile	CBM	Ave	+++++	+++++	7410	16250	37581	+++++	+++++	0.0793	0.159	0.400
			105280	205776	422684	870731	1776662	1.00	2.00	4.00	8.00	16.0
tert-Butyl alcohol	CBM	Ave	+++++	+++++	22812	47215	117160	+++++	+++++	0.0793	0.159	0.400
			318549	640820	1295192	2641518	5152924	1.00	2.00	4.00	8.00	16.0
1,1,2-Trichloro-1,2,2-trifluoroetha ne	CBM	Ave	+++++	14208	27125	54365	136304	+++++	0.0392	0.0793	0.159	0.400
			355686	702951	1424722	2860127	5674605	1.00	2.00	4.00	8.00	16.0
Methylene Chloride	CBM	Ave	+++++	+++++	+++++	37091	70360	+++++	+++++	+++++	0.159	0.400
			163357	305658	602192	1214064	2447809	1.00	2.00	4.00	8.00	16.0
3-Chloropropene	CBM	Ave	+++++	+++++	9664	20059	51135	+++++	+++++	0.0793	0.159	0.400
			139966	270102	545029	1096804	2172614	1.00	2.00	4.00	8.00	16.0
Carbon disulfide	CBM	Ave	+++++	+++++	34146	66894	171741	+++++	+++++	0.0793	0.159	0.400
			454130	892511	1838624	3728924	7538407	1.00	2.00	4.00	8.00	16.0
trans-1,2-Dichloroethene	CBM	Ave	3373	6795	12444	24460	61556	0.0196	0.0392	0.0793	0.159	0.400
			166711	332139	683800	1412134	2897432	1.00	2.00	4.00	8.00	16.0
Methyl tert-butyl ether	CBM	Ave	+++++	18281	34942	70570	180474	+++++	0.0392	0.0793	0.159	0.400
			487791	981395	2014267	4095585	8173520	1.00	2.00	4.00	8.00	16.0
1,1-Dichloroethane	CBM	Ave	5807	11879	22768	46409	113245	0.0196	0.0392	0.0793	0.159	0.400
			297732	588426	1188290	2399193	4822750	1.00	2.00	4.00	8.00	16.0
Vinyl acetate	CBM	Ave	+++++	+++++	20411	43939	116793	+++++	+++++	0.0793	0.159	0.400
			336347	692559	1456065	2998874	6118655	1.00	2.00	4.00	8.00	16.0
2-Butanone (MEK)	CBM	Ave	+++++	+++++	4817	11306	27179	+++++	+++++	0.0793	0.159	0.400
			73837	150957	312840	648132	1326766	1.00	2.00	4.00	8.00	16.0
Hexane	CBM	Ave	+++++	+++++	9150	18279	45026	+++++	+++++	0.0793	0.159	0.400
			119227	236625	482705	967848	1914109	1.00	2.00	4.00	8.00	16.0
cis-1,2-Dichloroethene	CBM	Ave	3303	6788	12775	25412	63056	0.0196	0.0392	0.0793	0.159	0.400
			170867	342438	712388	1456970	2990205	1.00	2.00	4.00	8.00	16.0
Ethyl acetate	CBM	Ave	+++++	+++++	20914	41937	105925	+++++	+++++	0.0793	0.159	0.400
			297748	592846	1232791	2476675	4979960	1.00	2.00	4.00	8.00	16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chloroform	CBM	Ave	7804 387346	15697 766644	29068 1553122	59087 3123300	146303 6252680	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	2968 139063	5652 284558	10359 580107	20608 1176753	51471 2361471	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	7622 408931	15717 817496	29529 1680641	60460 3393282	152300 6808210	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	4708 261684	10148 517134	19447 1044848	38556 2085161	98892 4238188	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Benzene	DFBZ	Ave	9547 482364	18558 963873	35648 1974761	71904 3909074	180361 7444515	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	+++++ 38505	+++++ 83873	+++++ 175085	+++++ 369245	12391 690517	+++++ 1.00	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	+++++ 76338	+++++ 153538	4928 309783	10422 608419	27883 1155065	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	7312 423680	14892 857647	29168 1751616	60470 3498240	153437 6918118	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	+++++ 716205	+++++ 1423496	49738 2885411	102839 5699452	264556 10894189	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	+++++ 170193	6514 337441	12751 682983	24970 1342220	64112 2579606	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Heptane	DFBZ	Ave	+++++ 167936	+++++ 340822	10970 695938	23448 1381937	61428 2653569	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	4162 235437	8482 474722	16538 973448	34011 1983769	87248 4015133	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	+++++ 200653	8804 406474	15629 831073	30101 1685672	74912 3407808	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	+++++ 377939	12709 776763	24729 1611990	51286 3280388	133067 6527638	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	+++++ 77269	+++++ 155698	+++++ 319197	10114 635939	27703 1204443	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	+++++ 168681	+++++ 362703	8710 761754	19860 1560531	56707 3144744	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	+++++ 295912	+++++ 611907	+++++ 1259401	36640 2547644	100514 4956312	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0
cis-1,3-Dichloropropene	DFBZ	Ave	4214 284232	8692 590333	16952 1228466	37708 2495678	99963 5036601	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	3642 264230	8127 550671	16117 1169692	34823 2418731	92653 4954997	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Toluene	CBZd 5	Ave	10546 601460	21020 1209692	40799 2501333	84708 5000244	217615 9732782	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	2910 172853	6246 346900	11956 705972	24681 1421474	62680 2818197	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Hexanone	CBZd 5	Ave	+++++ 155983	+++++ 340754	6841 714062	17103 1457582	50215 2849200	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Dibromochloromethane	CBZd 5	Ave	5242 362871	10827 776008	21241 1664137	45494 3404955	122286 6733481	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Octane	CBZd 5	Ave	+++++ 195933	+++++ 399529	12011 815331	26281 1619656	69565 3115693	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	+++++ 317987	+++++ 650482	20134 1358421	42511 2777984	111812 5559926	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Tetrachloroethene	CBZd 5	Ave	4038 231568	8705 465829	16381 954469	33774 1934461	85007 3841103	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Chlorobenzene	CBZd 5	Ave	9374 490951	18796 982434	36005 1994464	72632 3997886	183593 7825995	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Ethylbenzene	CBZd 5	Ave	13511 810050	27063 1619183	53935 3290297	112376 6456253	291382 12015013	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd 5	Ave	20098 1276477	41194 2542321	83030 5046733	176975 9680607	463595 17160895	0.0392 2.00	0.0784 3.99	0.159 8.00	0.317 16.0	0.800 32.0
Bromoform	CBZd 5	Ave	4385 318253	9410 714603	18219 1559205	38228 3245877	102577 6558869	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Styrene	CBZd 5	Ave	+++++ 441338	+++++ 928423	21890 1920288	49897 3870267	141877 7560228	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Nonane	CBZd 5	Ave	+++++ 358631	+++++ 699319	21365 1364959	48143 2584312	130104 4652330	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
o-Xylene	CBZd 5	Ave	10603 674160	22375 1321857	45094 2630168	96395 5131084	248316 9535161	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	+++++ 445782	14226 879160	28316 1758724	61062 3446997	158018 6530374	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd 5	Ave	+++++ 152327	+++++ 299434	10316 591665	22255 1168938	55328 2302436	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Isopropylbenzene	CBZd 5	Ave	+++++ 941474	36160 1846740	69017 3643421	141062 6996543	354883 12663589	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Propylbenzene	CBZd 5	Ave	+++++ 266687	8230 528723	15756 1049883	35494 2035261	94728 3819742	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
2-Chlorotoluene	CBZd 5	Ave	+++++ 238746	8038 469063	15941 928581	35064 1794004	88647 3423413	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	+++++ 1006964	29754 1984214	59901 3912288	132375 7418547	355685 13244430	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	5752 410670	12100 812865	24343 1620384	55107 3145506	146542 5947640	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	+++++ 360064	+++++ 768512	+++++ 1590809	37420 3163348	109602 6018724	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0
Decane	CBZd 5	Ave	+++++ 516714	+++++ 1015986	28000 1993844	67062 3697959	180060 6320845	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
tert-Butylbenzene	CBZd 5	Ave	+++++ 951442	29495 1868713	58391 3691545	131776 6958642	341330 12330820	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	12157 883002	26201 1705234	53619 3292671	121401 6104034	317818 10587367	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	8914 571936	18867 1125927	36601 2217431	80846 4216783	204946 7759848	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	+++++ 1256189	37216 2471421	74524 4814563	167950 8700337	446997 14464983	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	+++++ 734076	+++++ 1513870	+++++ 3018732	87519 5648570	241503 9882812	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	9122 579460	18804 1134967	37641 2222060	82059 4227916	206120 7788742	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	+++++ 1125379	31354 2260739	63969 4473245	148906 8172682	392846 13583476	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	13295 975263	29839 1905721	59053 3720027	135710 6961070	350369 12212729	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	9076 560747	18839 1099439	35383 2160064	79606 4093958	197633 7481468	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	+++++ 1047935	28954 2097682	55892 4159498	132390 7568750	357490 12271794	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Undecane	CBZd 5	Ave	+++++ 606307	+++++ 1225234	29862 2432418	73775 4523930	198846 7559425	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	+++++ 423136	+++++ 910820	19265 1901418	47048 3591223	128407 6432249	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 1458763	+++++ 2935017	75221 5868924	180933 10496588	477440 +++++	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 +++++
Dodecane	CBZd 5	Ave	+++++ 622152	+++++ 1246644	29017 2542680	73006 4689410	175178 7775809	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2,4-Trichlorobenzene	CBZd 5	Ave	5745 469912	12391 992300	24821 2148606	60667 4331499	139886 8252878	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	13583 1139353	28513 2348566	59288 4921580	147471 9478899	330933 +++++	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 +++++
Hexachlorobutadiene	CBZd 5	Ave	7444 460520	15446 942489	27942 1997835	63860 4054563	147591 7676608	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	6133 454418	13039 941154	26665 2025469	63574 4075342	131520 8089214	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	+++++ 656625	+++++ 1378404	21947 3367217	78912 6499587	110967 11773396	+++++ 2.30	+++++ 4.59	0.182 9.20	0.365 18.4	0.920 36.8
1-Methylnaphthalene	CBZd 5	Ave	+++++ 572233	+++++ 1131655	23773 2775316	80019 5249732	99268 9724344	+++++ 2.30	+++++ 4.59	0.182 9.20	0.365 18.4	0.920 36.8
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1428582 1469194	1501404 1544010	1493098 1492736	1483356 1563108	1499096 1494682	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

Curve Type Legend:
Ave = Average ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-15542/3	RJ25IC01.D
Level 2	IC 140-15542/4	RJ25IC02.D
Level 3	IC 140-15542/5	RJ25IC03.D
Level 4	IC 140-15542/6	RJ25IC04.D
Level 5	IC 140-15542/7	RJ25IC05.D
Level 6	IC 140-15542/8	RJ25IC06.D
Level 7	ICIS 140-15542/9	RJ25IC07.D
Level 8	IC 140-15542/10	RJ25IC08.D
Level 9	IC 140-15542/11	RJ25IC09.D
Level 10	IC 140-15542/12	RJ25IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	9.4						50				
Propene	+++++	+++++	12.4						50			
Dichlorodifluoromethane	+++++	+++++	17.3						50			
Chloromethane	+++++	+++++	+++++	9.3						50		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	+++++	6.0						50			
Vinyl chloride	20.3						50					
1,3-Butadiene	+++++	+++++	15.9						50			
Butane	+++++	+++++	12.3						50			
Bromomethane	+++++	+++++	3.6						50			
Chloroethane	+++++	+++++	15.8						50			
Ethanol	+++++	+++++	14.8						50			
Vinyl bromide	+++++	+++++	15.6						50			
2-Methylbutane	+++++	+++++	7.5						50			
Acrolein	+++++	+++++	+++++	39.2						50		

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Trichlorofluoromethane	+++++	+++++	10.4						50			
Acetonitrile	+++++	+++++	+++++	-2.1						50		
Acetone	+++++	+++++	+++++	34.8						80		
Pentane	+++++	+++++	+++++	7.8						50		
Isopropyl alcohol	+++++	+++++	6.7						50			
Ethyl ether	+++++	+++++	7.2						50			
1,1-Dichloroethene	13.5						50					
Acrylonitrile	+++++	+++++	-2.6						50			
tert-Butyl alcohol	+++++	+++++	-1.0						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	9.4						50				
Methylene Chloride	+++++	+++++	+++++	48.4						80		
3-Chloropropene	+++++	+++++	-1.4						50			
Carbon disulfide	+++++	+++++	3.2						50			
trans-1,2-Dichloroethene	10.7						50					
Methyl tert-butyl ether	+++++	3.6						50				
1,1-Dichloroethane	7.7						50					
Vinyl acetate	+++++	+++++	-15.6						50			
2-Butanone (MEK)	+++++	+++++	-11.6						50			
Hexane	+++++	+++++	5.0						50			
cis-1,2-Dichloroethene	6.0						50					
Ethyl acetate	+++++	+++++	-2.1						50			

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chloroform	11.2						50					
Tetrahydrofuran	15.7						50					
1,1,1-Trichloroethane	4.3						50					
1,2-Dichloroethane	1.5						50					
Benzene	10.6						50					
1-Butanol	+++++	+++++	+++++	+++++	-18.7						50	
Cyclohexane	+++++	+++++	-8.0						50			
Carbon tetrachloride	-0.7						50					
2,2,4-Trimethylpentane	+++++	+++++	-2.4						50			
1,2-Dichloropropane	+++++	6.1						50				
Heptane	+++++	+++++	-8.5						50			
Trichloroethene	0.1						50					
Dibromomethane	+++++	16.0						50				
Bromodichloromethane	+++++	-5.9						50				
1,4-Dioxane	+++++	+++++	+++++	-8.7						50		
Methyl methacrylate	+++++	+++++	-27.9						50			
4-Methyl-2-pentanone (MIBK)	+++++	+++++	+++++	-14.6						50		
cis-1,3-Dichloropropene	-12.3						50					
trans-1,3-Dichloropropene	-19.8						50					
Toluene	0.4						50					
1,1,2-Trichloroethane	-3.6						50					

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
2-Hexanone	+++++	+++++	-37.8						50			
Dibromochloromethane	-15.8						50					
Octane	+++++	+++++	-13.6						50			
1,2-Dibromoethane (EDB)	+++++	+++++	-13.0						50			
Tetrachloroethene	-1.9						50					
Chlorobenzene	6.4						50					
Ethylbenzene	-1.7						50					
m-Xylene & p-Xylene	-4.7						50					
Bromoform	-21.4						50					
Styrene	+++++	+++++	-28.4						50			
Nonane	+++++	+++++	-11.1						50			
o-Xylene	-5.9						50					
1,1,2,2-Tetrachloroethane	+++++	-6.9						50				
1,2,3-Trichloropropane	+++++	+++++	-4.2						50			
Isopropylbenzene	+++++	7.8						50				
Propylbenzene	+++++	-8.5						50				
2-Chlorotoluene	+++++	-3.5						50				
4-Ethyltoluene	+++++	-10.6						50				
1,3,5-Trimethylbenzene	-13.0						50					
Alpha Methyl Styrene	+++++	+++++	+++++	-26.6						50		
Decane	+++++	+++++	-17.2						50			

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
tert-Butylbenzene	+++++	-7.4						50				
1,2,4-Trimethylbenzene	-11.9						50					
1,3-Dichlorobenzene	-5.2						50					
sec-Butylbenzene	+++++	-8.8						50				
Benzyl chloride	+++++	+++++	+++++	-12.5						50		
1,4-Dichlorobenzene	-3.9						50					
4-Isopropyltoluene	+++++	-14.4						50				
1,2,3-Trimethylbenzene	-13.9						50					
1,2-Dichlorobenzene	-1.5						50					
Butylbenzene	+++++	-13.5						50				
Undecane	+++++	+++++	-24.1						50			
1,2-Dibromo-3-Chloropropane	+++++	+++++	-32.5						50			
1,2,4,5-Tetramethylbenzene	+++++	+++++	-22.7	+++++					50			
Dodecane	+++++	+++++	-26.4						50			
1,2,4-Trichlorobenzene	-25.0						50					
Naphthalene	-23.4			+++++			80					
Hexachlorobutadiene	-5.6						50					
1,2,3-Trichlorobenzene	-19.0						50					
2-Methylnaphthalene	+++++	+++++	-50.4						80			
1-Methylnaphthalene	+++++	+++++	-38.2						80			

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC01.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 25-Oct-2017 13:00:30 ALS Bottle#: 1 Worklist Smp#: 3
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-003
Misc. Info.: 123609
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 11:55:51 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 25-Oct-2017 14:08:18

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.767	7.779	-0.012	82	379185	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.914	9.918	-0.004	94	2195698	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.902	14.903	-0.001	88	1914633	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.611	16.610	0.001	89	1428582	4.00	4.07	
6 Chlorodifluoromethane	67	3.507	3.505	0.002	95	1198	0.0196	0.0252	
7 Propene	41	3.507	3.509	-0.002	65	3765	0.0196	0.0353	
8 Dichlorodifluoromethane	85	3.556	3.554	0.002	98	10141	0.0196	0.0273	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.712	3.713	-0.001	91	6176	0.0196	0.0227	
11 Vinyl chloride	62	3.826	3.827	-0.001	58	2540	0.0196	0.0236	
13 Butadiene	54	3.896	3.900	-0.004	70	1998	0.0196	0.0284	
12 Butane	43	3.901	3.904	-0.003	84	3278	0.0196	0.0277	
14 Bromomethane	94	4.138	4.140	-0.002	97	3331	0.0196	0.0302	
15 Chloroethane	64	4.257	4.254	0.003	90	1503	0.0196	0.0304	
16 Ethanol	31	4.365	4.368	-0.003	93	4622	0.0980	0.1334	
17 Vinyl bromide	106	4.483	4.488	-0.005	95	2969	0.0196	0.0259	
18 2-Methylbutane	43	4.543	4.546	-0.003	82	2059	0.0196	0.0255	
19 Acrolein	56	4.710	4.709	0.001	32	1264	0.0196	0.0411	
20 Trichlorofluoromethane	101	4.705	4.710	-0.005	97	8594	0.0196	0.0230	
21 Acetonitrile	40	4.882	4.793	0.089	76	690	0.0196	0.0267	
22 Acetone	58	4.807	4.807	0.000	97	4780	0.0588	0.1144	
24 Pentane	72	4.893	4.899	-0.006	97	672	0.0196	0.0260	
23 Isopropyl alcohol	45	4.909	4.906	0.003	93	11844	0.0588	0.0732	
25 Ethyl ether	31	5.050	5.033	0.017	84	2423	0.0196	0.0218	
26 1,1-Dichloroethene	96	5.271	5.274	-0.003	95	3361	0.0196	0.0222	
27 Acrylonitrile	53	5.341	5.349	-0.008	91	2366	0.0196	0.0251	
28 2-Methyl-2-propanol	59	5.406	5.393	0.013	94	5480	0.0196	0.0192	
29 1,1,2-Trichloro-1,2,2-trif	101	5.438	5.446	-0.008	95	7324	0.0196	0.0225	
30 Methylene Chloride	84	5.546	5.552	-0.006	91	17345	0.0196	0.1123	
31 3-Chloro-1-propene	39	5.567	5.572	-0.005	98	4234	0.0196	0.0349	
32 Carbon disulfide	76	5.675	5.683	-0.008	99	9161	0.0196	0.0224	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 trans-1,2-Dichloroethene	96	6.241	6.253	-0.012	96	3373	0.0196	0.0217	
34 Methyl tert-butyl ether	73	6.414	6.392	0.022	96	9211	0.0196	0.0209	
36 1,1-Dichloroethane	63	6.597	6.609	-0.012	99	5807	0.0196	0.0211	
37 Vinyl acetate	43	6.727	6.727	0.000	98	5384	0.0196	0.0180	
38 2-Butanone (MEK)	72	7.131	7.107	0.024	97	1036	0.0196	0.0154	
39 Hexane	56	7.174	7.179	-0.005	82	2301	0.0196	0.0213	
40 cis-1,2-Dichloroethene	96	7.482	7.492	-0.010	89	3303	0.0196	0.0208	
41 Ethyl acetate	43	7.703	7.688	0.015	97	5375	0.0196	0.0203	
42 Chloroform	83	7.800	7.811	-0.011	90	7804	0.0196	0.0218	
43 Tetrahydrofuran	42	8.204	8.178	0.026	80	2968	0.0196	0.0227	
44 1,1,1-Trichloroethane	97	8.760	8.769	-0.009	95	7622	0.0196	0.0204	
45 1,2-Dichloroethane	62	8.835	8.840	-0.005	96	4708	0.0196	0.0199	
47 Benzene	78	9.331	9.341	-0.010	97	9547	0.0196	0.0217	
48 Cyclohexane	69	9.353	9.362	-0.009	92	1227	0.0196	0.0186	
50 Carbon tetrachloride	117	9.374	9.378	-0.004	89	7312	0.0196	0.0195	
52 Isooctane	57	10.205	10.206	-0.001	97	12771	0.0196	0.0203	
53 1,2-Dichloropropane	63	10.598	10.602	-0.004	85	3370	0.0196	0.0221	
54 n-Heptane	71	10.615	10.617	-0.002	79	2765	0.0196	0.0187	
55 Trichloroethene	130	10.663	10.667	-0.004	93	4162	0.0196	0.0196	
56 Dibromomethane	93	10.706	10.711	-0.005	95	4973	0.0196	0.0264	
57 Dichlorobromomethane	83	10.879	10.886	-0.007	99	6206	0.0196	0.0185	
58 1,4-Dioxane	88	10.933	10.912	0.021	62	1025	0.0196	0.0151	
59 Methyl methacrylate	41	11.051	11.045	0.006	19	1257	0.0196	0.008443	
61 4-Methyl-2-pentanone (MIBK	43	11.952	11.931	0.021	94	3969	0.0196	0.0151	
62 cis-1,3-Dichloropropene	75	11.968	11.968	0.000	95	4214	0.0196	0.0172	
63 trans-1,3-Dichloropropene	75	12.712	12.709	0.003	96	3642	0.0196	0.0157	
64 Toluene	91	12.847	12.845	0.002	94	10546	0.0196	0.0197	
65 1,1,2-Trichloroethane	83	12.906	12.904	0.002	94	2910	0.0196	0.0189	
66 2-Hexanone	58	13.381	13.355	0.026	87	663	0.0196	0.004887	
67 Chlorodibromomethane	129	13.624	13.628	-0.004	96	5242	0.0196	0.0165	
68 n-Octane	85	13.656	13.658	-0.002	83	2664	0.0196	0.0155	
69 Ethylene Dibromide	107	13.920	13.923	-0.003	98	4839	0.0196	0.0170	
70 Tetrachloroethene	129	14.044	14.048	-0.004	94	4038	0.0196	0.0192	
71 Chlorobenzene	112	14.950	14.952	-0.002	95	9374	0.0196	0.0209	
72 Ethylbenzene	91	15.279	15.278	0.001	98	13511	0.0196	0.0193	
73 m-Xylene & p-Xylene	91	15.452	15.452	0.000	0	20098	0.0392	0.0373	
74 Bromoform	173	15.856	15.854	0.002	94	4385	0.0196	0.0154	
75 Styrene	104	15.926	15.923	0.003	98	5160	0.0196	0.0137	
76 n-Nonane	57	15.964	15.961	0.003	83	5092	0.0196	0.0172	
77 o-Xylene	91	15.991	15.986	0.005	99	10603	0.0196	0.0184	
78 1,1,2,2-Tetrachloroethane	83	16.309	16.308	0.001	95	7069	0.0196	0.0187	
79 1,2,3-Trichloropropane	110	16.465	16.464	0.001	95	2509	0.0196	0.0189	
80 Isopropylbenzene	105	16.605	16.605	0.000	46	19278	0.0196	0.0232	
81 N-Propylbenzene	120	17.182	17.182	0.000	99	3895	0.0196	0.0175	
82 2-Chlorotoluene	126	17.204	17.203	0.001	95	3954	0.0196	0.0192	
83 4-Ethyltoluene	105	17.355	17.351	0.004	98	14130	0.0196	0.0172	
84 1,3,5-Trimethylbenzene	120	17.436	17.436	0.000	93	5752	0.0196	0.0171	
85 Alpha Methyl Styrene	118	17.695	17.691	0.004	88	3853	0.0196	0.0122	
86 n-Decane	57	17.824	17.826	-0.002	94	6182	0.0196	0.0148	
87 tert-Butylbenzene	119	17.905	17.906	-0.001	93	14100	0.0196	0.0179	
88 1,2,4-Trimethylbenzene	105	17.921	17.921	0.000	95	12157	0.0196	0.0173	
89 1,3-Dichlorobenzene	146	18.185	18.189	-0.004	96	8914	0.0196	0.0186	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
90 sec-Butylbenzene	105	18.207	18.206	0.001	98	18076	0.0196	0.0179	
91 Benzyl chloride	91	18.277	18.273	0.004	97	9621	0.0196	0.0155	
92 1,4-Dichlorobenzene	146	18.288	18.287	0.001	93	9122	0.0196	0.0188	
93 4-Isopropyltoluene	119	18.390	18.391	-0.001	96	15276	0.0196	0.0169	
94 1,2,3-Trimethylbenzene	105	18.428	18.429	-0.001	96	13295	0.0196	0.0169	
95 1,2-Dichlorobenzene	146	18.671	18.672	-0.001	94	9076	0.0196	0.0193	
98 n-Butylbenzene	91	18.865	18.865	0.000	98	13421	0.0196	0.0162	
99 Undecane	57	19.259	19.259	0.000	93	6979	0.0196	0.0144	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	90	4714	0.0196	0.0134	
101 1,2,4,5-Tetramethylbenzene	119	19.674	19.674	0.000	96	18980	0.0196	0.0158	
104 Dodecane	57	20.369	20.366	0.003	96	5984	0.0196	0.0123	
105 1,2,4-Trichlorobenzene	180	20.477	20.474	0.003	93	5745	0.0196	0.0147	
106 Naphthalene	128	20.601	20.603	-0.002	99	13583	0.0196	0.0150	
107 Hexachlorobutadiene	225	20.860	20.859	0.001	93	7444	0.0196	0.0185	
108 1,2,3-Trichlorobenzene	180	20.898	20.897	0.001	93	6133	0.0196	0.0159	
109 2-Methylnaphthalene	142	21.701	21.702	-0.001	93	1424	0.0451	0.006001	
110 1-Methylnaphthalene	142	21.847	21.847	0.000	97	2144	0.0451	0.0104	
S 111 Xylenes, Total	100				0		0.0588	0.0558	
S 112 1,2-Dichloroethene, Total	1				0		0.0392	0.0425	

Reagents:

40L12DNP_00015	Amount Added: 50.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

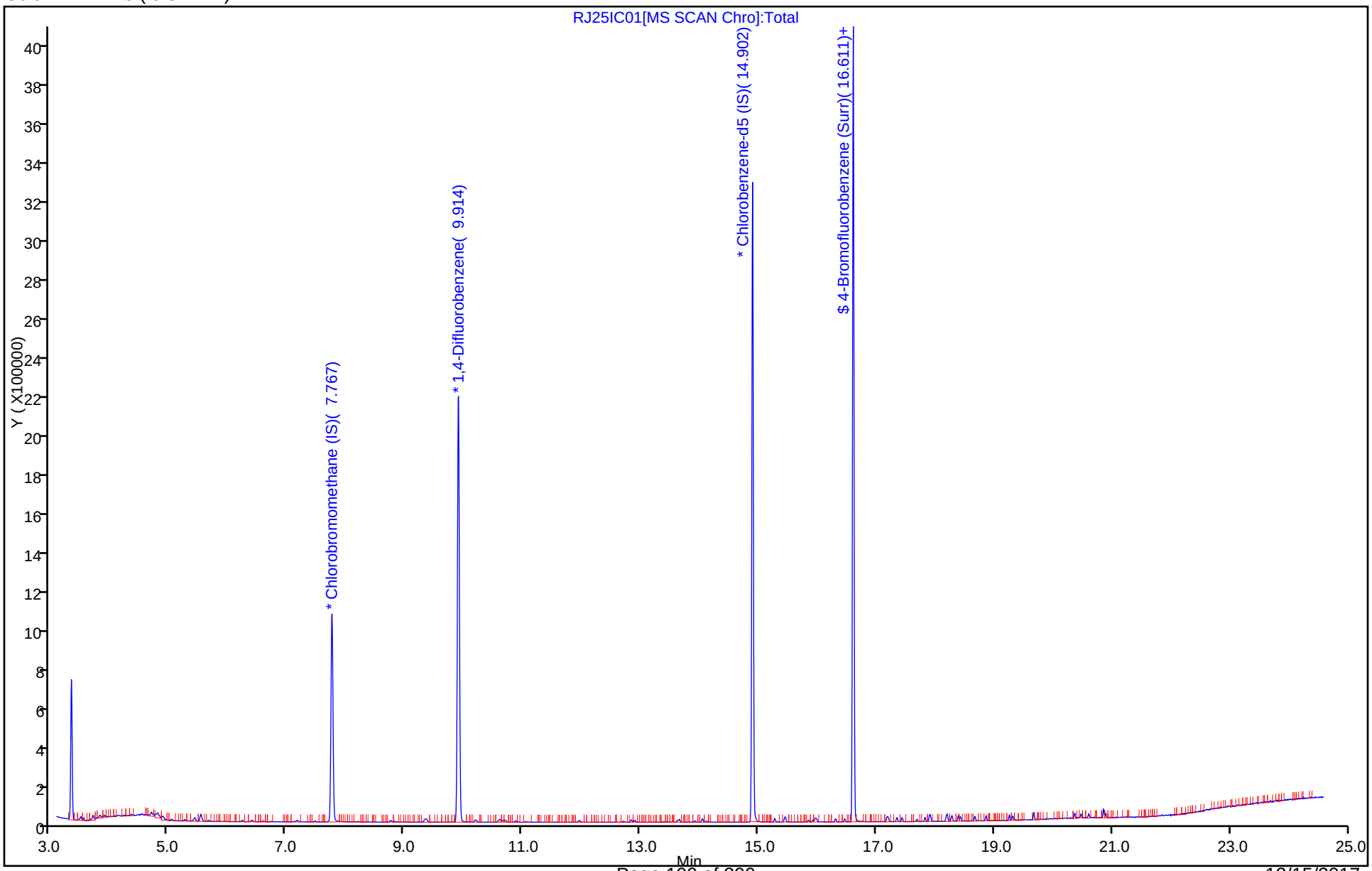
Report Date: 27-Oct-2017 11:55:53 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC01.D

Injection Date:	25-Oct-2017 13:00:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L1			Worklist Smp#:	3
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC02.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 25-Oct-2017 13:46:30 ALS Bottle#: 1 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-004
Misc. Info.: 123609
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 11:55:54 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 25-Oct-2017 15:07:47

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.767	7.779	-0.012	83	386955	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.914	9.918	-0.004	94	2257959	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.902	14.903	-0.001	88	1973559	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.611	16.610	0.001	88	1501404	4.00	4.15	
6 Chlorodifluoromethane	67	3.518	3.505	0.013	97	2085	0.0392	0.0429	
7 Propene	41	3.518	3.509	0.009	78	5687	0.0392	0.0522	
8 Dichlorodifluoromethane	85	3.561	3.554	0.007	99	19272	0.0392	0.0508	
9 Chloromethane	52	3.696	3.690	0.006	99	2219	0.0392	0.0610	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.723	3.713	0.010	90	12064	0.0392	0.0435	
11 Vinyl chloride	62	3.836	3.827	0.009	74	4952	0.0392	0.0451	
13 Butadiene	54	3.907	3.900	0.007	72	3559	0.0392	0.0496	
12 Butane	43	3.912	3.904	0.008	81	5368	0.0392	0.0444	
14 Bromomethane	94	4.149	4.140	0.009	97	5122	0.0392	0.0455	
15 Chloroethane	64	4.262	4.254	0.008	96	2104	0.0392	0.0417	
16 Ethanol	31	4.359	4.368	-0.009	95	8149	0.1960	0.2305	
17 Vinyl bromide	106	4.494	4.488	0.006	97	5939	0.0392	0.0507	
18 2-Methylbutane	43	4.548	4.546	0.002	90	4418	0.0392	0.0535	
19 Acrolein	56	4.710	4.709	0.001	34	3362	0.0392	0.1072	
20 Trichlorofluoromethane	101	4.715	4.710	0.005	99	16836	0.0392	0.0442	
21 Acetonitrile	40	4.753	4.785	-0.032	88	1032	0.0392	0.0392	
22 Acetone	58	4.812	4.807	0.005	99	7719	0.1176	0.1810	
24 Pentane	72	4.899	4.899	0.000	76	1154	0.0392	0.0437	
23 Isopropyl alcohol	45	4.904	4.906	-0.002	84	20814	0.1176	0.1261	
25 Ethyl ether	31	5.044	5.033	0.011	85	4965	0.0392	0.0438	
26 1,1-Dichloroethene	96	5.271	5.274	-0.003	98	6525	0.0392	0.0423	
27 Acrylonitrile	53	5.346	5.349	-0.003	90	4454	0.0392	0.0463	
28 2-Methyl-2-propanol	59	5.400	5.393	0.007	93	11747	0.0392	0.0404	
29 1,1,2-Trichloro-1,2,2-trif	101	5.443	5.446	-0.003	96	14208	0.0392	0.0429	
30 Methylene Chloride	84	5.546	5.552	-0.006	90	20826	0.0392	0.1322	
31 3-Chloro-1-propene	39	5.567	5.572	-0.005	96	7272	0.0392	0.0587	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.686	5.683	0.003	98	18402	0.0392	0.0440	
33 trans-1,2-Dichloroethene	96	6.247	6.253	-0.006	97	6795	0.0392	0.0428	
34 Methyl tert-butyl ether	73	6.403	6.392	0.011	95	18281	0.0392	0.0406	
36 1,1-Dichloroethane	63	6.597	6.609	-0.012	99	11879	0.0392	0.0423	
37 Vinyl acetate	43	6.732	6.727	0.005	98	11113	0.0392	0.0364	
38 2-Butanone (MEK)	72	7.120	7.107	0.013	96	2274	0.0392	0.0330	
39 Hexane	56	7.180	7.179	0.001	83	4707	0.0392	0.0427	
40 cis-1,2-Dichloroethene	96	7.482	7.492	-0.010	93	6788	0.0392	0.0419	
41 Ethyl acetate	43	7.703	7.688	0.015	97	10101	0.0392	0.0374	
42 Chloroform	83	7.805	7.811	-0.006	88	15697	0.0392	0.0430	
43 Tetrahydrofuran	42	8.193	8.178	0.015	86	5652	0.0392	0.0423	
44 1,1,1-Trichloroethane	97	8.770	8.769	0.001	95	15717	0.0392	0.0413	
45 1,2-Dichloroethane	62	8.835	8.840	-0.005	97	10148	0.0392	0.0417	
47 Benzene	78	9.342	9.341	0.001	97	18558	0.0392	0.0410	
48 Cyclohexane	69	9.353	9.362	-0.009	88	2574	0.0392	0.0379	
46 n-Butanol	31	9.428	9.365	0.063	1	209	0.0392	0.005568	
50 Carbon tetrachloride	117	9.369	9.378	-0.009	94	14892	0.0392	0.0385	
52 Isooctane	57	10.205	10.206	-0.001	97	25184	0.0392	0.0390	
53 1,2-Dichloropropane	63	10.593	10.602	-0.009	70	6514	0.0392	0.0416	
54 n-Heptane	71	10.615	10.617	-0.002	83	5361	0.0392	0.0353	
55 Trichloroethene	130	10.663	10.667	-0.004	91	8482	0.0392	0.0389	
56 Dibromomethane	93	10.706	10.711	-0.005	93	8804	0.0392	0.0455	
57 Dichlorobromomethane	83	10.879	10.886	-0.007	99	12709	0.0392	0.0369	
58 1,4-Dioxane	88	10.933	10.912	0.021	77	2410	0.0392	0.0346	
59 Methyl methacrylate	41	11.051	11.045	0.006	44	2355	0.0392	0.0154	
61 4-Methyl-2-pentanone (MIBK	43	11.947	11.931	0.016	91	8126	0.0392	0.0301	
62 cis-1,3-Dichloropropene	75	11.968	11.968	0.000	96	8692	0.0392	0.0345	
63 trans-1,3-Dichloropropene	75	12.707	12.709	-0.002	97	8127	0.0392	0.0340	
64 Toluene	91	12.842	12.845	-0.003	93	21020	0.0392	0.0380	
65 1,1,2-Trichloroethane	83	12.901	12.904	-0.003	98	6246	0.0392	0.0393	
66 2-Hexanone	58	13.370	13.355	0.015	94	1660	0.0392	0.0119	
67 Chlorodibromomethane	129	13.624	13.628	-0.004	97	10827	0.0392	0.0331	
68 n-Octane	85	13.656	13.658	-0.002	86	5883	0.0392	0.0333	
69 Ethylene Dibromide	107	13.920	13.923	-0.003	98	9997	0.0392	0.0340	
70 Tetrachloroethene	129	14.044	14.048	-0.004	95	8705	0.0392	0.0402	
71 Chlorobenzene	112	14.956	14.952	0.004	94	18796	0.0392	0.0406	
72 Ethylbenzene	91	15.279	15.278	0.001	99	27063	0.0392	0.0374	
73 m-Xylene & p-Xylene	91	15.452	15.452	0.000	0	41194	0.0784	0.0743	
74 Bromoform	173	15.851	15.854	-0.003	94	9410	0.0392	0.0321	
75 Styrene	104	15.921	15.923	-0.002	98	10882	0.0392	0.0280	
76 n-Nonane	57	15.958	15.961	-0.003	84	10244	0.0392	0.0335	
77 o-Xylene	91	15.985	15.986	-0.001	98	22375	0.0392	0.0378	
78 1,1,2,2-Tetrachloroethane	83	16.309	16.308	0.001	96	14226	0.0392	0.0365	
79 1,2,3-Trichloropropane	110	16.465	16.464	0.001	97	5493	0.0392	0.0401	
80 Isopropylbenzene	105	16.606	16.605	0.001	74	36160	0.0392	0.0423	
81 N-Propylbenzene	120	17.188	17.182	0.006	98	8230	0.0392	0.0359	
82 2-Chlorotoluene	126	17.204	17.203	0.001	89	8038	0.0392	0.0378	
83 4-Ethyltoluene	105	17.350	17.351	-0.001	98	29754	0.0392	0.0351	
84 1,3,5-Trimethylbenzene	120	17.436	17.436	0.000	93	12100	0.0392	0.0348	
85 Alpha Methyl Styrene	118	17.695	17.691	0.004	86	7847	0.0392	0.0241	
86 n-Decane	57	17.824	17.826	-0.002	94	13108	0.0392	0.0305	
87 tert-Butylbenzene	119	17.905	17.906	-0.001	93	29495	0.0392	0.0363	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.921	17.921	0.000	96	26201	0.0392	0.0361	
89 1,3-Dichlorobenzene	146	18.191	18.189	0.002	98	18867	0.0392	0.0381	
90 sec-Butylbenzene	105	18.207	18.206	0.001	98	37216	0.0392	0.0358	
91 Benzyl chloride	91	18.272	18.273	-0.001	98	18994	0.0392	0.0298	
92 1,4-Dichlorobenzene	146	18.288	18.287	0.001	92	18804	0.0392	0.0376	
93 4-Isopropyltoluene	119	18.390	18.391	-0.001	97	31354	0.0392	0.0336	
94 1,2,3-Trimethylbenzene	105	18.428	18.429	-0.001	97	29839	0.0392	0.0368	
95 1,2-Dichlorobenzene	146	18.671	18.672	-0.001	93	18839	0.0392	0.0389	
98 n-Butylbenzene	91	18.865	18.865	0.000	98	28954	0.0392	0.0339	
99 Undecane	57	19.259	19.259	0.000	92	14443	0.0392	0.0289	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	91	10022	0.0392	0.0276	
101 1,2,4,5-Tetramethylbenzene	119	19.674	19.674	0.000	97	37837	0.0392	0.0306	
104 Dodecane	57	20.364	20.366	-0.002	95	13461	0.0392	0.0269	
105 1,2,4-Trichlorobenzene	180	20.477	20.474	0.003	94	12391	0.0392	0.0307	
106 Naphthalene	128	20.607	20.603	0.004	99	28513	0.0392	0.0306	
107 Hexachlorobutadiene	225	20.855	20.859	-0.004	93	15446	0.0392	0.0372	
108 1,2,3-Trichlorobenzene	180	20.898	20.897	0.001	94	13039	0.0392	0.0327	
109 2-Methylnaphthalene	142	21.701	21.702	-0.001	99	7137	0.0902	0.0292	
110 1-Methylnaphthalene	142	21.847	21.847	0.000	98	8889	0.0902	0.0418	
S 111 Xylenes, Total	100				0		0.1176	0.1120	
S 112 1,2-Dichloroethene, Total	1				0		0.0784	0.0847	

Reagents:

40L12DNP_00015	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

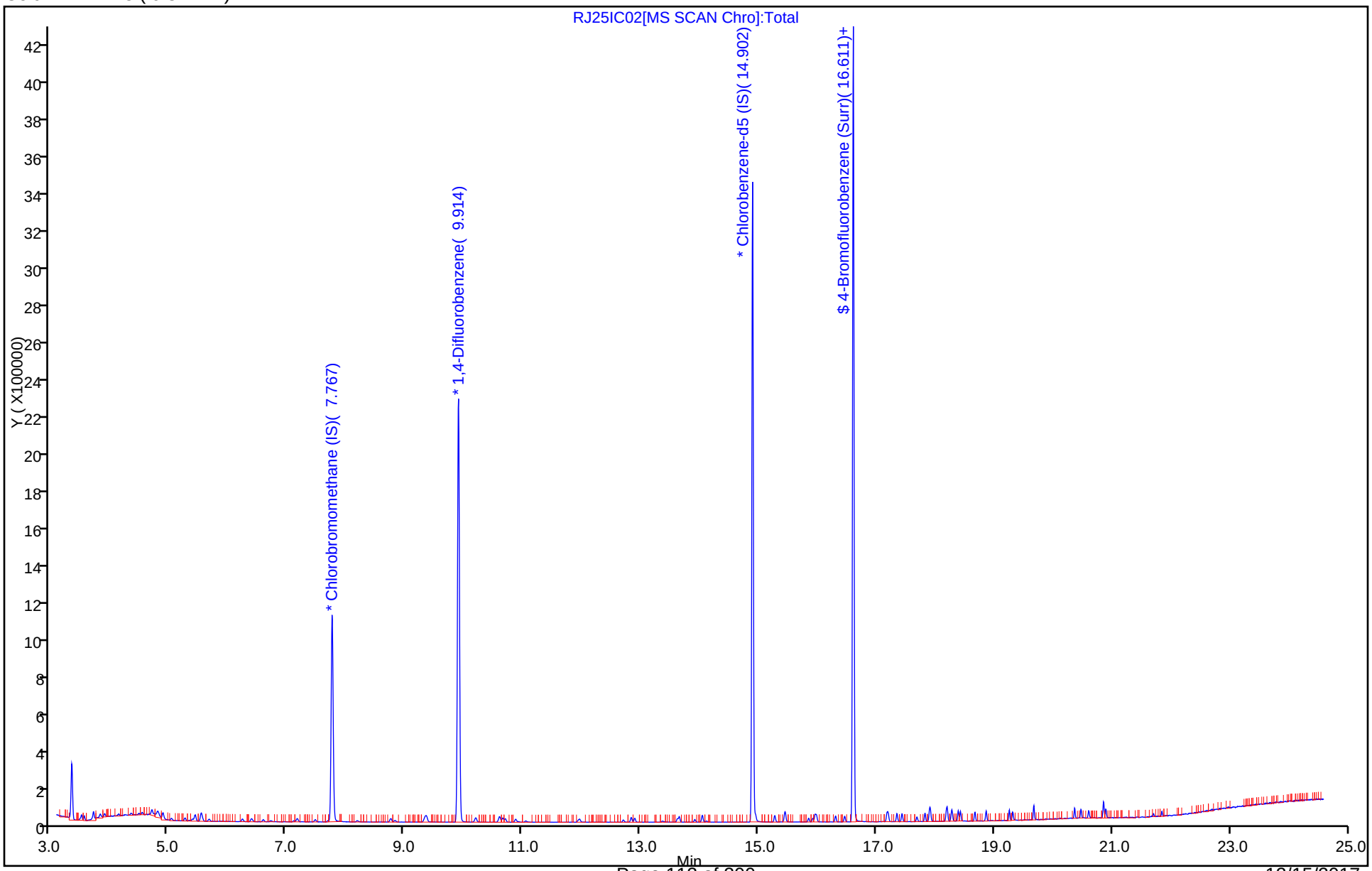
Report Date: 27-Oct-2017 11:55:55 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC02.D

Injection Date:	25-Oct-2017 13:46:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L2			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC03.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 25-Oct-2017 14:33:30 ALS Bottle#: 2 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-005
Misc. Info.: 123608
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 11:55:58 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 25-Oct-2017 15:13:17

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.778	7.779	-0.001	82	385990	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.919	9.918	0.001	94	2245350	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.901	14.903	-0.002	88	1955968	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.611	16.610	0.001	92	1493098	4.00	4.17	
6 Chlorodifluoromethane	67	3.523	3.505	0.018	97	4125	0.0793	0.0851	
7 Propene	41	3.529	3.509	0.020	83	9681	0.0793	0.0891	
8 Dichlorodifluoromethane	85	3.572	3.554	0.018	100	35205	0.0793	0.0931	
9 Chloromethane	52	3.707	3.690	0.017	98	3924	0.0793	0.1081	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.728	3.713	0.015	91	23285	0.0793	0.0841	
11 Vinyl chloride	62	3.842	3.827	0.015	90	8923	0.0793	0.0814	
13 Butadiene	54	3.917	3.900	0.017	71	6581	0.0793	0.0920	
12 Butane	43	3.917	3.904	0.013	82	10745	0.0793	0.0891	
14 Bromomethane	94	4.154	4.140	0.014	96	9224	0.0793	0.0822	
15 Chloroethane	64	4.268	4.254	0.014	96	4627	0.0793	0.0918	
16 Ethanol	31	4.365	4.368	-0.003	92	16054	0.3967	0.4553	
17 Vinyl bromide	106	4.500	4.488	0.012	98	10715	0.0793	0.0917	
18 2-Methylbutane	43	4.559	4.546	0.013	83	7022	0.0793	0.0853	
19 Acrolein	56	4.721	4.709	0.012	31	3432	0.0793	0.1097	
20 Trichlorofluoromethane	101	4.721	4.710	0.011	99	33275	0.0793	0.0876	
21 Acetonitrile	40	4.764	4.782	-0.018	93	2611	0.0793	0.0994	
22 Acetone	58	4.818	4.807	0.011	99	15256	0.2380	0.3586	
24 Pentane	72	4.909	4.899	0.010	75	2509	0.0793	0.0952	
23 Isopropyl alcohol	45	4.904	4.906	-0.002	83	41818	0.2380	0.2540	
25 Ethyl ether	31	5.044	5.033	0.011	90	9616	0.0793	0.0851	
26 1,1-Dichloroethene	96	5.281	5.274	0.007	97	12334	0.0793	0.0802	
27 Acrylonitrile	53	5.352	5.349	0.003	92	7410	0.0793	0.0773	
28 2-Methyl-2-propanol	59	5.400	5.393	0.007	92	22812	0.0793	0.0786	
29 1,1,2-Trichloro-1,2,2-trif	101	5.454	5.446	0.008	96	27125	0.0793	0.0820	
30 Methylene Chloride	84	5.556	5.552	0.004	90	25644	0.0793	0.1632	
31 3-Chloro-1-propene	39	5.578	5.572	0.006	98	9664	0.0793	0.0782	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.691	5.683	0.008	98	34146	0.0793	0.0819	
33 trans-1,2-Dichloroethene	96	6.257	6.253	0.004	98	12444	0.0793	0.0786	
34 Methyl tert-butyl ether	73	6.403	6.392	0.011	95	34942	0.0793	0.0778	
36 1,1-Dichloroethane	63	6.608	6.609	-0.001	99	22768	0.0793	0.0813	
37 Vinyl acetate	43	6.732	6.727	0.005	99	20411	0.0793	0.0670	
38 2-Butanone (MEK)	72	7.120	7.107	0.013	98	4817	0.0793	0.0701	
39 Hexane	56	7.180	7.179	0.001	84	9150	0.0793	0.0833	
40 cis-1,2-Dichloroethene	96	7.492	7.492	0.000	94	12775	0.0793	0.0790	
41 Ethyl acetate	43	7.697	7.688	0.009	99	20914	0.0793	0.0776	
42 Chloroform	83	7.805	7.811	-0.006	93	29068	0.0793	0.0797	
43 Tetrahydrofuran	42	8.199	8.178	0.021	87	10359	0.0793	0.0778	
44 1,1,1-Trichloroethane	97	8.770	8.769	0.001	95	29529	0.0793	0.0778	
45 1,2-Dichloroethane	62	8.840	8.840	0.000	99	19447	0.0793	0.0804	
47 Benzene	78	9.342	9.341	0.001	97	35648	0.0793	0.0792	
48 Cyclohexane	69	9.369	9.362	0.007	92	4928	0.0793	0.0730	
46 n-Butanol	31	9.412	9.365	0.047	58	1291	0.0793	0.0346	
50 Carbon tetrachloride	117	9.374	9.378	-0.004	99	29168	0.0793	0.0759	
52 Isooctane	57	10.210	10.206	0.004	98	49738	0.0793	0.0774	
53 1,2-Dichloropropane	63	10.604	10.602	0.002	85	12751	0.0793	0.0819	
54 n-Heptane	71	10.620	10.617	0.003	84	10970	0.0793	0.0726	
55 Trichloroethene	130	10.668	10.667	0.001	93	16538	0.0793	0.0762	
56 Dibromomethane	93	10.712	10.711	0.001	85	15629	0.0793	0.0812	
57 Dichlorobromomethane	83	10.889	10.886	0.003	98	24729	0.0793	0.0721	
58 1,4-Dioxane	88	10.922	10.912	0.010	87	5002	0.0793	0.0721	
59 Methyl methacrylate	41	11.051	11.045	0.006	97	8710	0.0793	0.0572	
61 4-Methyl-2-pentanone (MIBK	43	11.941	11.931	0.010	93	17085	0.0793	0.0637	
62 cis-1,3-Dichloropropene	75	11.968	11.968	0.000	96	16952	0.0793	0.0676	
63 trans-1,3-Dichloropropene	75	12.712	12.709	0.003	97	16117	0.0793	0.0681	
64 Toluene	91	12.842	12.845	-0.003	93	40799	0.0793	0.0745	
65 1,1,2-Trichloroethane	83	12.901	12.904	-0.003	98	11956	0.0793	0.0760	
66 2-Hexanone	58	13.365	13.355	0.010	95	6841	0.0793	0.0494	
67 Chlorodibromomethane	129	13.629	13.628	0.001	97	21241	0.0793	0.0655	
68 n-Octane	85	13.656	13.658	-0.002	86	12011	0.0793	0.0685	
69 Ethylene Dibromide	107	13.920	13.923	-0.003	97	20134	0.0793	0.0690	
70 Tetrachloroethene	129	14.049	14.048	0.001	96	16381	0.0793	0.0764	
71 Chlorobenzene	112	14.950	14.952	-0.002	94	36005	0.0793	0.0784	
72 Ethylbenzene	91	15.279	15.278	0.001	99	53935	0.0793	0.0753	
73 m-Xylene & p-Xylene	91	15.451	15.452	-0.001	0	83030	0.1587	0.1510	
74 Bromoform	173	15.856	15.854	0.002	95	18219	0.0793	0.0627	
75 Styrene	104	15.926	15.923	0.003	98	21890	0.0793	0.0568	
76 n-Nonane	57	15.964	15.961	0.003	82	21365	0.0793	0.0705	
77 o-Xylene	91	15.985	15.986	-0.001	98	45094	0.0793	0.0768	
78 1,1,2,2-Tetrachloroethane	83	16.309	16.308	0.001	97	28316	0.0793	0.0733	
79 1,2,3-Trichloropropane	110	16.460	16.464	-0.004	97	10316	0.0793	0.0760	
80 Isopropylbenzene	105	16.605	16.605	0.000	91	69017	0.0793	0.0814	
81 N-Propylbenzene	120	17.182	17.182	0.000	99	15756	0.0793	0.0693	
82 2-Chlorotoluene	126	17.204	17.203	0.001	94	15941	0.0793	0.0757	
83 4-Ethyltoluene	105	17.350	17.351	-0.001	99	59901	0.0793	0.0712	
84 1,3,5-Trimethylbenzene	120	17.436	17.436	0.000	92	24343	0.0793	0.0706	
85 Alpha Methyl Styrene	118	17.689	17.691	-0.002	87	15980	0.0793	0.0495	
86 n-Decane	57	17.829	17.826	0.003	94	28000	0.0793	0.0657	
87 tert-Butylbenzene	119	17.905	17.906	-0.001	93	58391	0.0793	0.0725	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.921	17.921	0.000	96	53619	0.0793	0.0746	
89 1,3-Dichlorobenzene	146	18.185	18.189	-0.004	99	36601	0.0793	0.0747	
90 sec-Butylbenzene	105	18.207	18.206	0.001	98	74524	0.0793	0.0723	
91 Benzyl chloride	91	18.272	18.273	-0.001	98	36422	0.0793	0.0576	
92 1,4-Dichlorobenzene	146	18.288	18.287	0.001	93	37641	0.0793	0.0760	
93 4-Isopropyltoluene	119	18.390	18.391	-0.001	97	63969	0.0793	0.0691	
94 1,2,3-Trimethylbenzene	105	18.428	18.429	-0.001	97	59053	0.0793	0.0734	
95 1,2-Dichlorobenzene	146	18.671	18.672	-0.001	93	35383	0.0793	0.0737	
98 n-Butylbenzene	91	18.865	18.865	0.000	98	55892	0.0793	0.0660	
99 Undecane	57	19.258	19.259	-0.001	93	29862	0.0793	0.0602	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	90	19265	0.0793	0.0536	
101 1,2,4,5-Tetramethylbenzene	119	19.674	19.674	0.000	96	75221	0.0793	0.0613	
104 Dodecane	57	20.364	20.366	-0.002	97	29017	0.0793	0.0584	
105 1,2,4-Trichlorobenzene	180	20.472	20.474	-0.002	93	24821	0.0793	0.0621	
106 Naphthalene	128	20.601	20.603	-0.002	99	59288	0.0793	0.0641	
107 Hexachlorobutadiene	225	20.860	20.859	0.001	94	27942	0.0793	0.0680	
108 1,2,3-Trichlorobenzene	180	20.898	20.897	0.001	96	26665	0.0793	0.0675	
109 2-Methylnaphthalene	142	21.701	21.702	-0.001	100	21947	0.1825	0.0905	
110 1-Methylnaphthalene	142	21.847	21.847	0.000	98	23773	0.1825	0.1127	
S 111 Xylenes, Total	100				0		0.2380	0.2278	
S 112 1,2-Dichloroethene, Total	1				0		0.1587	0.1576	

Reagents:

40L3DNP_00016	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

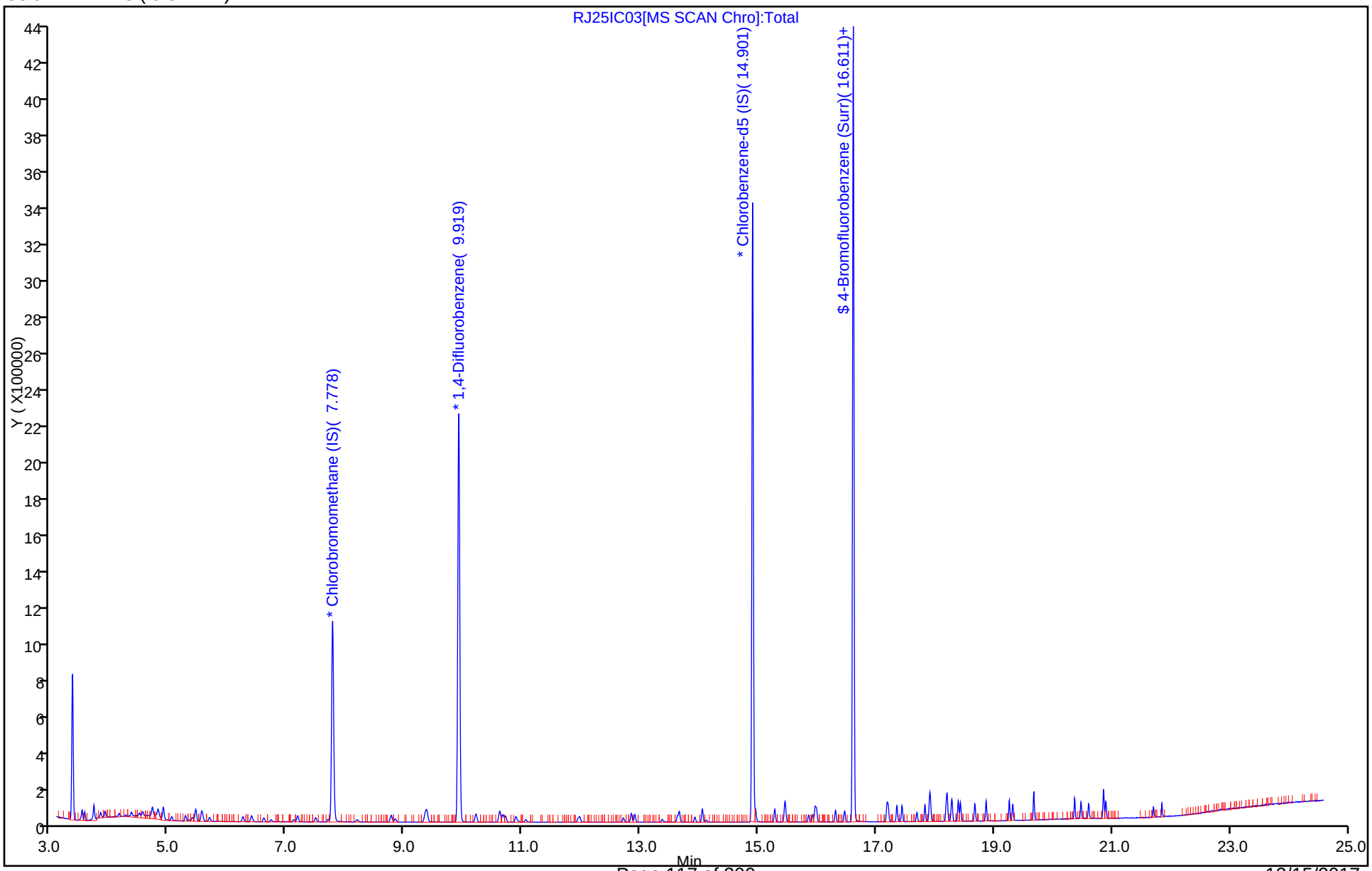
Report Date: 27-Oct-2017 11:55:59 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC03.D

Injection Date:	25-Oct-2017 14:33:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L3			Worklist Smp#:	5
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC04.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 25-Oct-2017 15:20:30 ALS Bottle#: 2 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-006
Misc. Info.: 123608
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 11:56:01 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 25-Oct-2017 16:00:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.773	7.779	-0.006	83	386822	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.914	9.918	-0.004	94	2261393	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.901	14.903	-0.002	88	1948400	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.611	16.610	0.001	92	1483356	4.00	4.15	
6 Chlorodifluoromethane	67	3.507	3.505	0.002	97	8460	0.1587	0.1741	
7 Propene	41	3.507	3.509	-0.002	97	19529	0.1587	0.1794	
8 Dichlorodifluoromethane	85	3.556	3.554	0.002	100	62139	0.1587	0.1639	
9 Chloromethane	52	3.691	3.690	0.001	100	6308	0.1587	0.1734	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.712	3.713	-0.001	92	46108	0.1587	0.1662	
11 Vinyl chloride	62	3.826	3.827	-0.001	99	17927	0.1587	0.1632	
13 Butadiene	54	3.901	3.900	0.001	73	12301	0.1587	0.1715	
12 Butane	43	3.901	3.904	-0.003	82	21079	0.1587	0.1745	
14 Bromomethane	94	4.138	4.140	-0.002	98	19034	0.1587	0.1692	
15 Chloroethane	64	4.246	4.254	-0.008	98	9016	0.1587	0.1786	
16 Ethanol	31	4.359	4.368	-0.009	94	31352	0.7933	0.8873	
17 Vinyl bromide	106	4.483	4.488	-0.005	97	20071	0.1587	0.1714	
18 2-Methylbutane	43	4.543	4.546	-0.003	85	14919	0.1587	0.1809	
19 Acrolein	56	4.710	4.709	0.001	30	6928	0.1587	0.2209	
20 Trichlorofluoromethane	101	4.704	4.710	-0.006	99	65362	0.1587	0.1717	
21 Acetonitrile	40	4.753	4.778	-0.025	98	4087	0.1587	0.1553	
22 Acetone	58	4.802	4.807	-0.005	99	27350	0.4760	0.6415	
24 Pentane	72	4.893	4.899	-0.006	92	4515	0.1587	0.1710	
23 Isopropyl alcohol	45	4.899	4.906	-0.007	92	83694	0.4760	0.5073	
25 Ethyl ether	31	5.033	5.033	0.000	87	19044	0.1587	0.1681	
26 1,1-Dichloroethene	96	5.265	5.274	-0.009	97	24340	0.1587	0.1579	
27 Acrylonitrile	53	5.346	5.349	-0.003	97	16250	0.1587	0.1691	
28 2-Methyl-2-propanol	59	5.389	5.393	-0.004	94	47215	0.1587	0.1623	
29 1,1,2-Trichloro-1,2,2-trif	101	5.443	5.446	-0.003	97	54365	0.1587	0.1641	
30 Methylene Chloride	84	5.540	5.552	-0.012	92	37091	0.1587	0.2355	
31 3-Chloro-1-propene	39	5.567	5.572	-0.005	98	20059	0.1587	0.1620	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.675	5.683	-0.008	98	66894	0.1587	0.1601	
33 trans-1,2-Dichloroethene	96	6.241	6.253	-0.012	99	24460	0.1587	0.1542	
34 Methyl tert-butyl ether	73	6.392	6.392	0.000	96	70570	0.1587	0.1568	
36 1,1-Dichloroethane	63	6.603	6.609	-0.006	100	46409	0.1587	0.1654	
37 Vinyl acetate	43	6.727	6.727	0.000	99	43939	0.1587	0.1439	
38 2-Butanone (MEK)	72	7.109	7.107	0.002	98	11306	0.1587	0.1642	
39 Hexane	56	7.180	7.179	0.001	85	18279	0.1587	0.1660	
40 cis-1,2-Dichloroethene	96	7.487	7.492	-0.005	94	25412	0.1587	0.1568	
41 Ethyl acetate	43	7.686	7.688	-0.002	99	41937	0.1587	0.1553	
42 Chloroform	83	7.805	7.811	-0.006	94	59087	0.1587	0.1617	
43 Tetrahydrofuran	42	8.183	8.178	0.005	87	20608	0.1587	0.1544	
44 1,1,1-Trichloroethane	97	8.765	8.769	-0.004	95	60460	0.1587	0.1589	
45 1,2-Dichloroethane	62	8.835	8.840	-0.005	98	38556	0.1587	0.1582	
47 Benzene	78	9.337	9.341	-0.004	97	71904	0.1587	0.1586	
48 Cyclohexane	69	9.363	9.362	0.001	93	10422	0.1587	0.1533	
46 n-Butanol	31	9.380	9.365	0.015	57	3605	0.1587	0.0959	
50 Carbon tetrachloride	117	9.374	9.378	-0.004	97	60470	0.1587	0.1562	
52 Isooctane	57	10.205	10.206	-0.001	98	102839	0.1587	0.1589	
53 1,2-Dichloropropane	63	10.604	10.602	0.002	80	24970	0.1587	0.1591	
54 n-Heptane	71	10.615	10.617	-0.002	81	23448	0.1587	0.1541	
55 Trichloroethene	130	10.663	10.667	-0.004	94	34011	0.1587	0.1556	
56 Dibromomethane	93	10.706	10.711	-0.005	95	30101	0.1587	0.1553	
57 Dichlorobromomethane	83	10.884	10.886	-0.002	98	51286	0.1587	0.1486	
58 1,4-Dioxane	88	10.917	10.912	0.004	86	10114	0.1587	0.1448	
59 Methyl methacrylate	41	11.051	11.045	0.006	96	19860	0.1587	0.1295	
61 4-Methyl-2-pentanone (MIBK	43	11.936	11.931	0.005	93	36640	0.1587	0.1356	
62 cis-1,3-Dichloropropene	75	11.968	11.968	0.000	93	37708	0.1587	0.1493	
63 trans-1,3-Dichloropropene	75	12.707	12.709	-0.002	96	34823	0.1587	0.1477	
64 Toluene	91	12.847	12.845	0.002	94	84708	0.1587	0.1553	
65 1,1,2-Trichloroethane	83	12.901	12.904	-0.003	99	24681	0.1587	0.1574	
66 2-Hexanone	58	13.359	13.355	0.004	95	17103	0.1587	0.1239	
67 Chlorodibromomethane	129	13.629	13.628	0.001	98	45494	0.1587	0.1408	
68 n-Octane	85	13.661	13.658	0.003	85	26281	0.1587	0.1505	
69 Ethylene Dibromide	107	13.925	13.923	0.002	98	42511	0.1587	0.1463	
70 Tetrachloroethene	129	14.049	14.048	0.001	95	33774	0.1587	0.1580	
71 Chlorobenzene	112	14.950	14.952	-0.002	94	72632	0.1587	0.1588	
72 Ethylbenzene	91	15.279	15.278	0.001	99	112376	0.1587	0.1574	
73 m-Xylene & p-Xylene	91	15.451	15.452	-0.001	0	176975	0.3173	0.3232	
74 Bromoform	173	15.851	15.854	-0.003	95	38228	0.1587	0.1320	
75 Styrene	104	15.926	15.923	0.003	98	49897	0.1587	0.1299	
76 n-Nonane	57	15.964	15.961	0.003	85	48143	0.1587	0.1595	
77 o-Xylene	91	15.985	15.986	-0.001	98	96395	0.1587	0.1647	
78 1,1,2,2-Tetrachloroethane	83	16.309	16.308	0.001	98	61062	0.1587	0.1586	
79 1,2,3-Trichloropropane	110	16.465	16.464	0.001	97	22255	0.1587	0.1646	
80 Isopropylbenzene	105	16.605	16.605	0.000	96	141062	0.1587	0.1670	
81 N-Propylbenzene	120	17.182	17.182	0.000	99	35494	0.1587	0.1568	
82 2-Chlorotoluene	126	17.204	17.203	0.001	97	35064	0.1587	0.1672	
83 4-Ethyltoluene	105	17.350	17.351	-0.001	99	132375	0.1587	0.1580	
84 1,3,5-Trimethylbenzene	120	17.436	17.436	0.000	92	55107	0.1587	0.1605	
85 Alpha Methyl Styrene	118	17.689	17.691	-0.002	89	37420	0.1587	0.1165	
86 n-Decane	57	17.824	17.826	-0.002	93	67062	0.1587	0.1579	
87 tert-Butylbenzene	119	17.905	17.906	-0.001	91	131776	0.1587	0.1643	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.921	17.921	0.000	96	121401	0.1587	0.1695	
89 1,3-Dichlorobenzene	146	18.191	18.189	0.002	99	80846	0.1587	0.1656	
90 sec-Butylbenzene	105	18.202	18.206	-0.004	98	167950	0.1587	0.1635	
91 Benzyl chloride	91	18.272	18.273	-0.001	98	87519	0.1587	0.1389	
92 1,4-Dichlorobenzene	146	18.288	18.287	0.001	93	82059	0.1587	0.1664	
93 4-Isopropyltoluene	119	18.390	18.391	-0.001	96	148906	0.1587	0.1614	
94 1,2,3-Trimethylbenzene	105	18.428	18.429	-0.001	98	135710	0.1587	0.1693	
95 1,2-Dichlorobenzene	146	18.671	18.672	-0.001	94	79606	0.1587	0.1664	
98 n-Butylbenzene	91	18.865	18.865	0.000	99	132390	0.1587	0.1570	
99 Undecane	57	19.259	19.259	-0.001	93	73775	0.1587	0.1493	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	94	47048	0.1587	0.1313	
101 1,2,4,5-Tetramethylbenzene	119	19.674	19.674	0.000	96	180933	0.1587	0.1481	
104 Dodecane	57	20.364	20.366	-0.002	96	73006	0.1587	0.1475	
105 1,2,4-Trichlorobenzene	180	20.472	20.474	-0.002	94	60667	0.1587	0.1525	
106 Naphthalene	128	20.601	20.603	-0.002	99	147471	0.1587	0.1602	
107 Hexachlorobutadiene	225	20.855	20.859	-0.004	94	63860	0.1587	0.1559	
108 1,2,3-Trichlorobenzene	180	20.898	20.897	0.001	95	63574	0.1587	0.1617	
109 2-Methylnaphthalene	142	21.701	21.702	-0.001	100	78912	0.3649	0.3268	
110 1-Methylnaphthalene	142	21.847	21.847	0.000	99	80019	0.3649	0.3810	
S 111 Xylenes, Total	100				0		0.4760	0.4879	
S 112 1,2-Dichloroethene, Total	1				0		0.3173	0.3110	

Reagents:

40L3DNP_00016	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

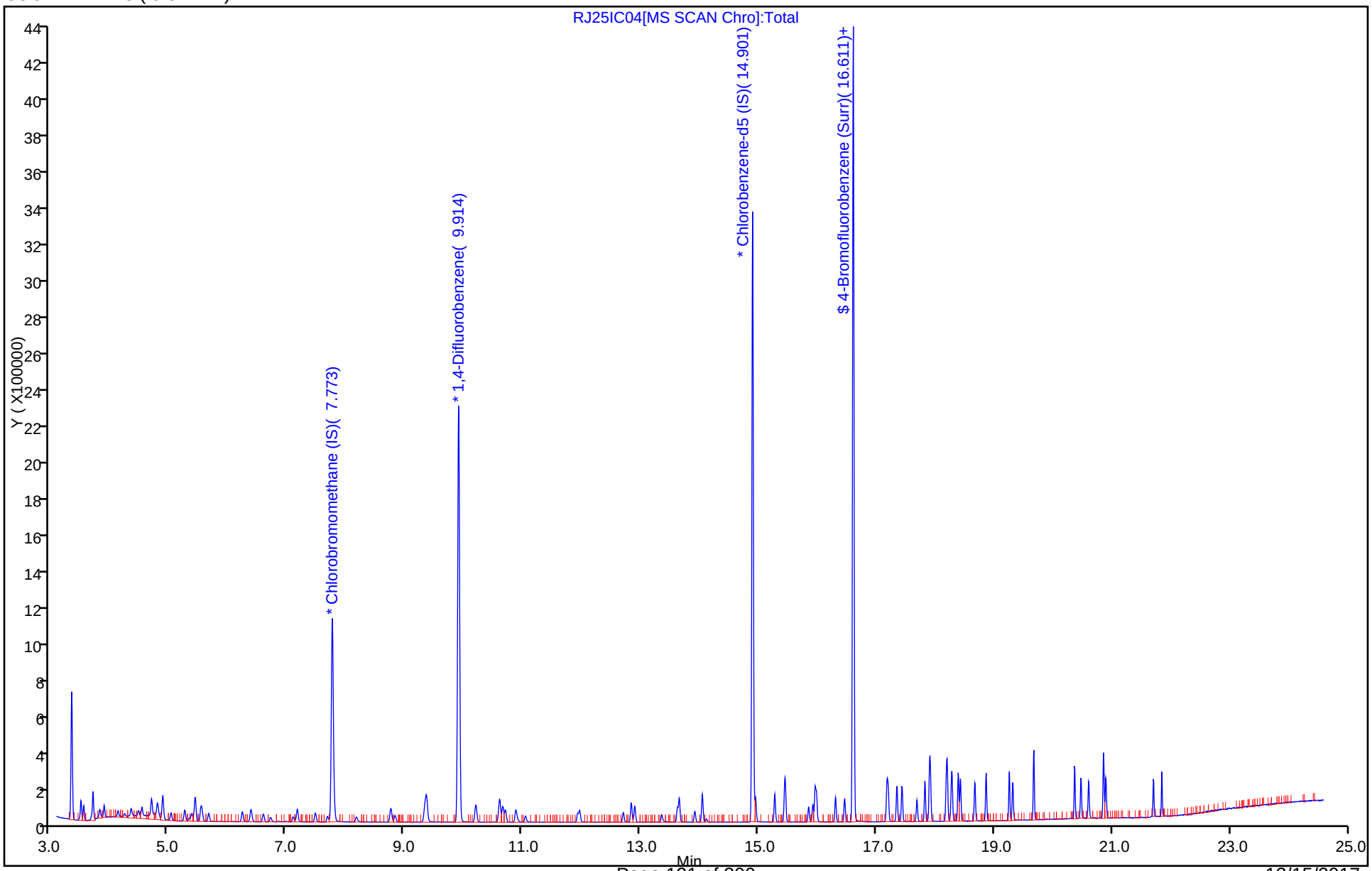
Report Date: 27-Oct-2017 11:56:02 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC04.D

Injection Date:	25-Oct-2017 15:20:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L4			Worklist Smp#:	6
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC05.D
Lims ID: IC L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 25-Oct-2017 16:08:30 ALS Bottle#: 3 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-007
Misc. Info.: 123607
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 11:56:05 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 26-Oct-2017 12:07:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.768	7.779	-0.011	84	392388	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.914	9.918	-0.004	94	2292620	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.902	14.903	-0.001	88	1960520	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.606	16.610	-0.004	91	1499096	4.00	4.17	
6 Chlorodifluoromethane	67	3.497	3.505	-0.008	96	20097	0.4000	0.4078	
7 Propene	41	3.502	3.509	-0.007	99	45765	0.4000	0.4145	
8 Dichlorodifluoromethane	85	3.545	3.554	-0.009	100	157459	0.4000	0.4094	
9 Chloromethane	52	3.680	3.690	-0.010	99	15895	0.4000	0.4308	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.707	3.713	-0.006	92	113975	0.4000	0.4050	
11 Vinyl chloride	62	3.820	3.827	-0.007	99	44332	0.4000	0.3977	
13 Butadiene	54	3.890	3.900	-0.010	90	29563	0.4000	0.4064	
12 Butane	43	3.896	3.904	-0.008	90	50692	0.4000	0.4136	
14 Bromomethane	94	4.128	4.140	-0.012	98	46848	0.4000	0.4106	
15 Chloroethane	64	4.241	4.254	-0.013	98	21026	0.4000	0.4106	
16 Ethanol	31	4.354	4.368	-0.014	96	73720	2.00	2.06	
17 Vinyl bromide	106	4.478	4.488	-0.010	98	48964	0.4000	0.4121	
18 2-Methylbutane	43	4.537	4.546	-0.009	84	33713	0.4000	0.4029	
19 Acrolein	56	4.694	4.709	-0.015	30	12474	0.4000	0.3921	
20 Trichlorofluoromethane	101	4.699	4.710	-0.011	99	162753	0.4000	0.4214	
21 Acetonitrile	40	4.748	4.774	-0.026	98	10434	0.4000	0.3907	
22 Acetone	58	4.802	4.807	-0.005	99	55570	1.20	1.28	
24 Pentane	72	4.893	4.899	-0.006	95	11065	0.4000	0.4130	
23 Isopropyl alcohol	45	4.893	4.906	-0.013	97	206847	1.20	1.24	
25 Ethyl ether	31	5.023	5.033	-0.010	86	47384	0.4000	0.4124	
26 1,1-Dichloroethene	96	5.265	5.274	-0.009	97	60569	0.4000	0.3874	
27 Acrylonitrile	53	5.341	5.349	-0.008	95	37581	0.4000	0.3856	
28 2-Methyl-2-propanol	59	5.379	5.393	-0.014	95	117160	0.4000	0.3969	
29 1,1,2-Trichloro-1,2,2-trif	101	5.438	5.446	-0.008	97	136304	0.4000	0.4055	
30 Methylene Chloride	84	5.535	5.552	-0.017	90	70360	0.4000	0.4404	
31 3-Chloro-1-propene	39	5.562	5.572	-0.010	98	51135	0.4000	0.4070	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.670	5.683	-0.013	98	171741	0.4000	0.4052	
33 trans-1,2-Dichloroethene	96	6.241	6.253	-0.012	99	61556	0.4000	0.3826	
34 Methyl tert-butyl ether	73	6.382	6.392	-0.010	95	180474	0.4000	0.3953	
36 1,1-Dichloroethane	63	6.597	6.609	-0.012	100	113245	0.4000	0.3979	
37 Vinyl acetate	43	6.716	6.727	-0.011	99	116793	0.4000	0.3771	
38 2-Butanone (MEK)	72	7.093	7.107	-0.014	99	27179	0.4000	0.3892	
39 Hexane	56	7.174	7.179	-0.005	85	45026	0.4000	0.4031	
40 cis-1,2-Dichloroethene	96	7.482	7.492	-0.010	94	63056	0.4000	0.3834	
41 Ethyl acetate	43	7.676	7.688	-0.012	99	105925	0.4000	0.3868	
42 Chloroform	83	7.805	7.811	-0.006	95	146303	0.4000	0.3948	
43 Tetrahydrofuran	42	8.172	8.178	-0.006	87	51471	0.4000	0.3802	
44 1,1,1-Trichloroethane	97	8.765	8.769	-0.004	95	152300	0.4000	0.3946	
45 1,2-Dichloroethane	62	8.835	8.840	-0.005	99	98892	0.4000	0.4003	
47 Benzene	78	9.337	9.341	-0.004	97	180361	0.4000	0.3923	
48 Cyclohexane	69	9.358	9.362	-0.004	94	27883	0.4000	0.4044	
46 n-Butanol	31	9.353	9.365	-0.012	63	12391	0.4000	0.3251	
50 Carbon tetrachloride	117	9.369	9.378	-0.009	96	153437	0.4000	0.3910	
52 Isooctane	57	10.199	10.206	-0.007	98	264556	0.4000	0.4032	
53 1,2-Dichloropropane	63	10.599	10.602	-0.004	84	64112	0.4000	0.4031	
54 n-Heptane	71	10.609	10.617	-0.008	84	61428	0.4000	0.3981	
55 Trichloroethene	130	10.663	10.667	-0.004	94	87248	0.4000	0.3937	
56 Dibromomethane	93	10.706	10.711	-0.005	95	74912	0.4000	0.3812	
57 Dichlorobromomethane	83	10.879	10.886	-0.007	99	133067	0.4000	0.3802	
58 1,4-Dioxane	88	10.906	10.912	-0.006	85	27703	0.4000	0.3913	
59 Methyl methacrylate	41	11.041	11.045	-0.004	97	56707	0.4000	0.3648	
61 4-Methyl-2-pentanone (MIBK	43	11.925	11.931	-0.006	95	100514	0.4000	0.3669	
62 cis-1,3-Dichloropropene	75	11.963	11.968	-0.005	92	99963	0.4000	0.3904	
63 trans-1,3-Dichloropropene	75	12.707	12.709	-0.002	96	92653	0.4000	0.3906	
64 Toluene	91	12.842	12.845	-0.003	93	217615	0.4000	0.3965	
65 1,1,2-Trichloroethane	83	12.901	12.904	-0.003	98	62680	0.4000	0.3973	
66 2-Hexanone	58	13.349	13.355	-0.006	96	50215	0.4000	0.3615	
67 Chlorodibromomethane	129	13.629	13.628	0.001	98	122286	0.4000	0.3761	
68 n-Octane	85	13.656	13.658	-0.002	88	69565	0.4000	0.3959	
69 Ethylene Dibromide	107	13.920	13.923	-0.003	98	111812	0.4000	0.3825	
70 Tetrachloroethene	129	14.044	14.048	-0.004	96	85007	0.4000	0.3953	
71 Chlorobenzene	112	14.950	14.952	-0.002	93	183593	0.4000	0.3988	
72 Ethylbenzene	91	15.279	15.278	0.001	98	291382	0.4000	0.4056	
73 m-Xylene & p-Xylene	91	15.452	15.452	0.000	0	463595	0.8000	0.8413	
74 Bromoform	173	15.851	15.854	-0.003	95	102577	0.4000	0.3521	
75 Styrene	104	15.921	15.923	-0.002	99	141877	0.4000	0.3672	
76 n-Nonane	57	15.959	15.961	-0.002	85	130104	0.4000	0.4284	
77 o-Xylene	91	15.985	15.986	-0.001	98	248316	0.4000	0.4217	
78 1,1,2,2-Tetrachloroethane	83	16.309	16.308	0.001	99	158018	0.4000	0.4079	
79 1,2,3-Trichloropropane	110	16.460	16.464	-0.004	98	55328	0.4000	0.4066	
80 Isopropylbenzene	105	16.606	16.605	0.001	97	354883	0.4000	0.4175	
81 N-Propylbenzene	120	17.177	17.182	-0.005	99	94728	0.4000	0.4158	
82 2-Chlorotoluene	126	17.199	17.203	-0.004	94	88647	0.4000	0.4201	
83 4-Ethyltoluene	105	17.350	17.351	-0.001	99	355685	0.4000	0.4218	
84 1,3,5-Trimethylbenzene	120	17.436	17.436	0.000	92	146542	0.4000	0.4242	
85 Alpha Methyl Styrene	118	17.689	17.691	-0.002	89	109602	0.4000	0.3390	
86 n-Decane	57	17.824	17.826	-0.002	93	180060	0.4000	0.4213	
87 tert-Butylbenzene	119	17.905	17.906	-0.001	92	341330	0.4000	0.4229	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.916	17.921	-0.005	96	317818	0.4000	0.4410	
89 1,3-Dichlorobenzene	146	18.186	18.189	-0.003	99	204946	0.4000	0.4171	
90 sec-Butylbenzene	105	18.202	18.206	-0.004	99	446997	0.4000	0.4324	
91 Benzyl chloride	91	18.272	18.273	-0.001	98	241503	0.4000	0.3809	
92 1,4-Dichlorobenzene	146	18.283	18.287	-0.004	93	206120	0.4000	0.4154	
93 4-Isopropyltoluene	119	18.390	18.391	-0.001	97	392846	0.4000	0.4232	
94 1,2,3-Trimethylbenzene	105	18.428	18.429	-0.001	97	350369	0.4000	0.4345	
95 1,2-Dichlorobenzene	146	18.671	18.672	-0.001	94	197633	0.4000	0.4105	
98 n-Butylbenzene	91	18.865	18.865	0.000	98	357490	0.4000	0.4213	
99 Undecane	57	19.259	19.259	0.000	94	198846	0.4000	0.4000	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	97	128407	0.4000	0.3561	
101 1,2,4,5-Tetramethylbenzene	119	19.674	19.674	0.000	97	477440	0.4000	0.3884	
104 Dodecane	57	20.364	20.366	-0.002	97	175178	0.4000	0.3518	
105 1,2,4-Trichlorobenzene	180	20.472	20.474	-0.002	94	139886	0.4000	0.3493	
106 Naphthalene	128	20.601	20.603	-0.002	99	330933	0.4000	0.3572	
107 Hexachlorobutadiene	225	20.860	20.859	0.001	95	147591	0.4000	0.3582	
108 1,2,3-Trichlorobenzene	180	20.898	20.897	0.001	95	131520	0.4000	0.3324	
109 2-Methylnaphthalene	142	21.701	21.702	-0.001	100	110967	0.9200	0.4567	
110 1-Methylnaphthalene	142	21.847	21.847	0.000	100	99268	0.9200	0.4697	
S 111 Xylenes, Total	100				0		1.20	1.26	
S 112 1,2-Dichloroethene, Total	1				0		0.8000	0.7660	

Reagents:

40L4DNP_00015	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

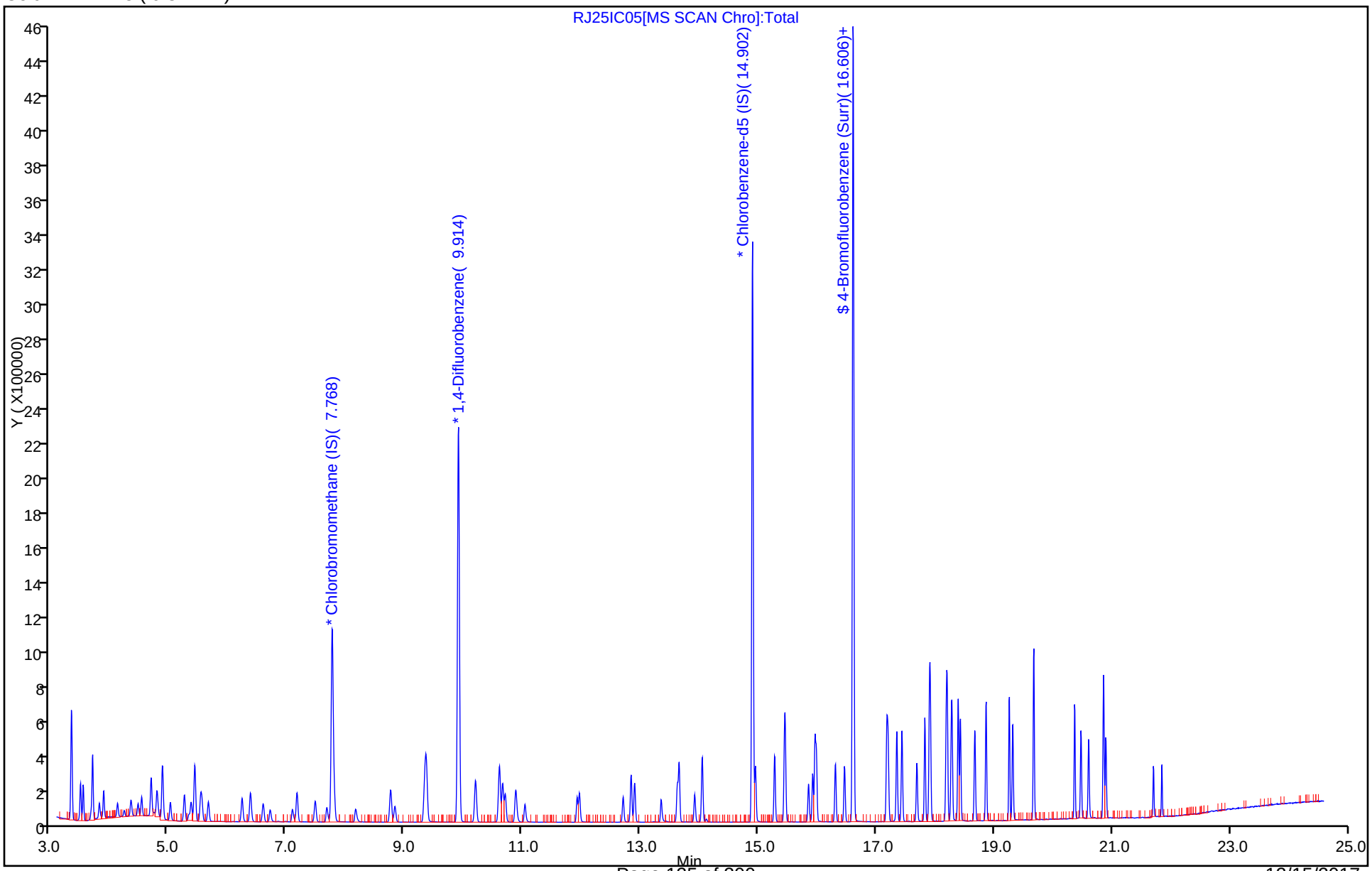
Report Date: 27-Oct-2017 11:56:06 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC05.D

Injection Date:	25-Oct-2017 16:08:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L5			Worklist Smp#:	7
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC06.D
Lims ID: IC L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 25-Oct-2017 16:56:30 ALS Bottle#: 4 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-008
Misc. Info.: 123606
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 11:56:09 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 26-Oct-2017 09:01:51

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.767	7.779	-0.012	82	398052	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.908	9.918	-0.010	94	2299462	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.902	14.903	-0.001	87	1987679	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.606	16.610	-0.004	92	1469194	4.00	4.03	
6 Chlorodifluoromethane	67	3.486	3.505	-0.019	96	52665	1.00	1.05	
7 Propene	41	3.491	3.509	-0.018	98	120415	1.00	1.08	
8 Dichlorodifluoromethane	85	3.534	3.554	-0.020	100	397784	1.00	1.02	
9 Chloromethane	52	3.669	3.690	-0.021	100	41021	1.00	1.10	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.691	3.713	-0.022	93	304153	1.00	1.07	
11 Vinyl chloride	62	3.804	3.827	-0.023	99	114161	1.00	1.01	
13 Butadiene	54	3.880	3.900	-0.020	94	77662	1.00	1.05	
12 Butane	43	3.885	3.904	-0.019	91	131312	1.00	1.06	
14 Bromomethane	94	4.117	4.140	-0.023	99	123066	1.00	1.06	
15 Chloroethane	64	4.230	4.254	-0.024	99	52144	1.00	1.00	
16 Ethanol	31	4.354	4.368	-0.014	94	189667	5.01	5.22	
17 Vinyl bromide	106	4.462	4.488	-0.026	98	124308	1.00	1.03	
18 2-Methylbutane	43	4.527	4.546	-0.019	84	87697	1.00	1.03	
19 Acrolein	56	4.688	4.709	-0.021	30	32362	1.00	1.00	
20 Trichlorofluoromethane	101	4.688	4.710	-0.022	99	419611	1.00	1.07	
21 Acetonitrile	40	4.737	4.770	-0.033	92	28679	1.00	1.06	
22 Acetone	58	4.785	4.807	-0.022	98	131209	3.01	2.99	
24 Pentane	72	4.877	4.899	-0.022	96	27851	1.00	1.02	
23 Isopropyl alcohol	45	4.888	4.906	-0.018	96	536958	3.01	3.16	
25 Ethyl ether	31	5.007	5.033	-0.026	86	124053	1.00	1.06	
26 1,1-Dichloroethene	96	5.255	5.274	-0.019	97	160338	1.00	1.01	
27 Acrylonitrile	53	5.330	5.349	-0.019	95	105280	1.00	1.06	
28 2-Methyl-2-propanol	59	5.373	5.393	-0.020	92	318549	1.00	1.06	
29 1,1,2-Trichloro-1,2,2-trif	101	5.427	5.446	-0.019	97	355686	1.00	1.04	
30 Methylene Chloride	84	5.530	5.552	-0.022	90	163357	1.00	1.01	
31 3-Chloro-1-propene	39	5.551	5.572	-0.021	98	139966	1.00	1.10	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.659	5.683	-0.024	98	454130	1.00	1.06	
33 trans-1,2-Dichloroethene	96	6.236	6.253	-0.017	99	166711	1.00	1.02	
34 Methyl tert-butyl ether	73	6.371	6.392	-0.021	95	487791	1.00	1.05	
36 1,1-Dichloroethane	63	6.597	6.609	-0.012	100	297732	1.00	1.03	
37 Vinyl acetate	43	6.711	6.727	-0.017	99	336347	1.00	1.07	
38 2-Butanone (MEK)	72	7.088	7.107	-0.019	98	73837	1.00	1.04	
39 Hexane	56	7.163	7.179	-0.016	86	119227	1.00	1.05	
40 cis-1,2-Dichloroethene	96	7.482	7.492	-0.010	94	170867	1.00	1.02	
41 Ethyl acetate	43	7.670	7.688	-0.018	99	297748	1.00	1.07	
42 Chloroform	83	7.800	7.811	-0.011	97	387346	1.00	1.03	
43 Tetrahydrofuran	42	8.156	8.178	-0.022	87	139063	1.00	1.01	
44 1,1,1-Trichloroethane	97	8.754	8.769	-0.015	95	408931	1.00	1.04	
45 1,2-Dichloroethane	62	8.830	8.840	-0.010	99	261684	1.00	1.06	
47 Benzene	78	9.331	9.341	-0.010	97	482364	1.00	1.05	
48 Cyclohexane	69	9.353	9.362	-0.009	95	76338	1.00	1.10	
46 n-Butanol	31	9.342	9.365	-0.023	69	38505	1.00	1.01	
50 Carbon tetrachloride	117	9.369	9.378	-0.009	96	423680	1.00	1.08	
52 Isooctane	57	10.194	10.206	-0.012	98	716205	1.00	1.09	
53 1,2-Dichloropropane	63	10.593	10.602	-0.009	86	170193	1.00	1.07	
54 n-Heptane	71	10.609	10.617	-0.008	86	167936	1.00	1.09	
55 Trichloroethene	130	10.658	10.667	-0.009	98	235437	1.00	1.06	
56 Dibromomethane	93	10.701	10.711	-0.010	95	200653	1.00	1.02	
57 Dichlorobromomethane	83	10.879	10.886	-0.007	99	377939	1.00	1.08	
58 1,4-Dioxane	88	10.895	10.912	-0.017	84	77269	1.00	1.09	
59 Methyl methacrylate	41	11.035	11.045	-0.010	98	168681	1.00	1.08	
61 4-Methyl-2-pentanone (MIBK	43	11.920	11.931	-0.011	95	295912	1.00	1.08	
62 cis-1,3-Dichloropropene	75	11.963	11.968	-0.005	92	284232	1.00	1.11	
63 trans-1,3-Dichloropropene	75	12.707	12.709	-0.002	96	264230	1.00	1.10	
64 Toluene	91	12.842	12.845	-0.003	94	601460	1.00	1.08	
65 1,1,2-Trichloroethane	83	12.901	12.904	-0.003	98	172853	1.00	1.08	
66 2-Hexanone	58	13.343	13.355	-0.012	96	155983	1.00	1.11	
67 Chlorodibromomethane	129	13.624	13.628	-0.004	98	362871	1.00	1.10	
68 n-Octane	85	13.656	13.658	-0.002	87	195933	1.00	1.10	
69 Ethylene Dibromide	107	13.920	13.923	-0.003	98	317987	1.00	1.07	
70 Tetrachloroethene	129	14.044	14.048	-0.004	96	231568	1.00	1.06	
71 Chlorobenzene	112	14.950	14.952	-0.002	94	490951	1.00	1.05	
72 Ethylbenzene	91	15.274	15.278	-0.004	99	810050	1.00	1.11	
73 m-Xylene & p-Xylene	91	15.452	15.452	0.000	0	1276477	2.00	2.28	
74 Bromoform	173	15.851	15.854	-0.003	96	318253	1.00	1.08	
75 Styrene	104	15.921	15.923	-0.002	98	441338	1.00	1.13	
76 n-Nonane	57	15.958	15.961	-0.003	85	358631	1.00	1.16	
77 o-Xylene	91	15.980	15.986	-0.006	98	674160	1.00	1.13	
78 1,1,2,2-Tetrachloroethane	83	16.304	16.308	-0.004	99	445782	1.00	1.14	
79 1,2,3-Trichloropropane	110	16.460	16.464	-0.004	98	152327	1.00	1.10	
80 Isopropylbenzene	105	16.600	16.605	-0.005	97	941474	1.00	1.09	
81 N-Propylbenzene	120	17.177	17.182	-0.005	99	266687	1.00	1.15	
82 2-Chlorotoluene	126	17.199	17.203	-0.004	94	238746	1.00	1.12	
83 4-Ethyltoluene	105	17.350	17.351	-0.001	99	1006964	1.00	1.18	
84 1,3,5-Trimethylbenzene	120	17.436	17.436	0.000	93	410670	1.00	1.17	
85 Alpha Methyl Styrene	118	17.689	17.691	-0.002	88	360064	1.00	1.10	
86 n-Decane	57	17.824	17.826	-0.002	93	516714	1.00	1.19	
87 tert-Butylbenzene	119	17.905	17.906	-0.001	93	951442	1.00	1.16	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.916	17.921	-0.005	96	883002	1.00	1.21	
89 1,3-Dichlorobenzene	146	18.185	18.189	-0.004	99	571936	1.00	1.15	
90 sec-Butylbenzene	105	18.202	18.206	-0.004	98	1256189	1.00	1.20	
91 Benzyl chloride	91	18.272	18.273	-0.001	98	734076	1.00	1.14	
92 1,4-Dichlorobenzene	146	18.283	18.287	-0.004	96	579460	1.00	1.15	
93 4-Isopropyltoluene	119	18.390	18.391	-0.001	97	1125379	1.00	1.20	
94 1,2,3-Trimethylbenzene	105	18.428	18.429	-0.001	97	975263	1.00	1.19	
95 1,2-Dichlorobenzene	146	18.671	18.672	-0.001	95	560747	1.00	1.15	
98 n-Butylbenzene	91	18.865	18.865	0.000	98	1047935	1.00	1.22	
99 Undecane	57	19.259	19.259	0.000	94	606307	1.00	1.20	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	99	423136	1.00	1.16	
101 1,2,4,5-Tetramethylbenzene	119	19.674	19.674	0.000	97	1458763	1.00	1.17	
104 Dodecane	57	20.364	20.366	-0.002	98	622152	1.00	1.23	
105 1,2,4-Trichlorobenzene	180	20.472	20.474	-0.002	94	469912	1.00	1.16	
106 Naphthalene	128	20.601	20.603	-0.002	99	1139353	1.00	1.21	
107 Hexachlorobutadiene	225	20.860	20.859	0.001	96	460520	1.00	1.10	
108 1,2,3-Trichlorobenzene	180	20.892	20.897	-0.005	95	454418	1.00	1.13	
109 2-Methylnaphthalene	142	21.701	21.702	-0.001	100	656625	2.30	2.67	
110 1-Methylnaphthalene	142	21.847	21.847	0.000	100	572233	2.30	2.67	
S 111 Xylenes, Total	100				0		3.00	3.41	
S 112 1,2-Dichloroethene, Total	1				0		2.00	2.05	

Reagents:

40L5DNP_00015	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

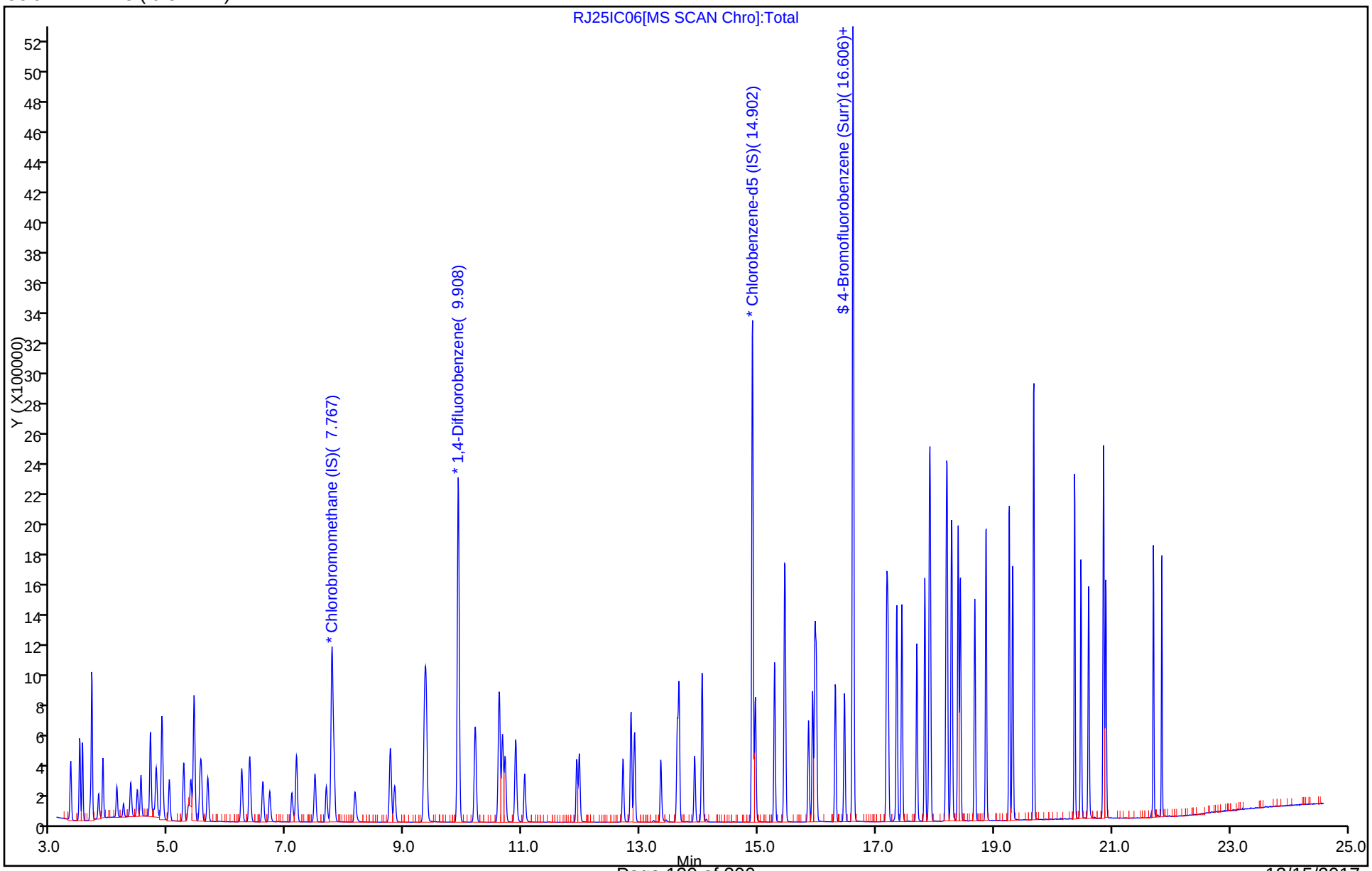
Report Date: 27-Oct-2017 11:56:10 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC06.D

Injection Date:	25-Oct-2017 16:56:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L6			Worklist Smp#:	8
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC07.D
Lims ID: ICIS L7
Client ID:
Sample Type: ICIS Calib Level: 7
Inject. Date: 25-Oct-2017 17:43:30 ALS Bottle#: 5 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-009
Misc. Info.: 123605
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 11:56:13 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 26-Oct-2017 08:58:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.789	7.779	0.010	85	418613	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.924	9.918	0.006	94	2428422	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.901	14.903	-0.002	87	2105490	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.611	16.610	0.001	90	1544010	4.00	4.00	
6 Chlorodifluoromethane	67	3.513	3.505	0.008	96	101769	2.00	1.94	
7 Propene	41	3.518	3.509	0.009	97	232191	2.00	1.97	
8 Dichlorodifluoromethane	85	3.567	3.554	0.013	100	797253	2.00	1.94	
9 Chloromethane	52	3.701	3.690	0.011	100	75586	2.00	1.92	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.723	3.713	0.010	92	588597	2.00	1.96	
11 Vinyl chloride	62	3.836	3.827	0.009	99	228480	2.00	1.92	
13 Butadiene	54	3.912	3.900	0.012	95	153951	2.00	1.98	
12 Butane	43	3.912	3.904	0.008	90	263673	2.00	2.02	
14 Bromomethane	94	4.149	4.140	0.009	99	243878	2.00	2.00	
15 Chloroethane	64	4.262	4.254	0.008	99	106239	2.00	1.94	
16 Ethanol	31	4.375	4.368	0.007	95	382186	9.99	10.0	
17 Vinyl bromide	106	4.499	4.488	0.011	98	247129	2.00	1.95	
18 2-Methylbutane	43	4.559	4.546	0.013	85	180708	2.00	2.02	
19 Acrolein	56	4.715	4.709	0.006	96	67963	2.00	2.00	
20 Trichlorofluoromethane	101	4.720	4.710	0.010	99	825311	2.00	2.00	
21 Acetonitrile	40	4.764	4.770	-0.006	96	56588	2.00	1.99	M
22 Acetone	58	4.812	4.807	0.005	99	270718	5.99	5.87	
24 Pentane	72	4.909	4.899	0.010	95	59347	2.00	2.08	
23 Isopropyl alcohol	45	4.909	4.906	0.003	93	1107259	5.99	6.20	
25 Ethyl ether	31	5.039	5.033	0.006	85	246725	2.00	2.01	
26 1,1-Dichloroethene	96	5.287	5.274	0.013	97	319852	2.00	1.92	
27 Acrylonitrile	53	5.357	5.349	0.008	94	205776	2.00	1.98	
28 2-Methyl-2-propanol	59	5.389	5.393	-0.004	94	640820	2.00	2.03	
29 1,1,2-Trichloro-1,2,2-trif	101	5.459	5.446	0.013	97	702951	2.00	1.96	
30 Methylene Chloride	84	5.567	5.552	0.015	90	305658	2.00	1.79	
31 3-Chloro-1-propene	39	5.583	5.572	0.011	98	270102	2.00	2.02	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.697	5.683	0.013	98	892511	2.00	1.97	
33 trans-1,2-Dichloroethene	96	6.268	6.253	0.015	99	332139	2.00	1.94	
34 Methyl tert-butyl ether	73	6.392	6.392	0.000	95	981395	2.00	2.02	
36 1,1-Dichloroethane	63	6.624	6.609	0.015	100	588426	2.00	1.94	
37 Vinyl acetate	43	6.732	6.727	0.005	99	692559	2.00	2.10	
38 2-Butanone (MEK)	72	7.104	7.107	-0.003	98	150957	2.00	2.03	
39 Hexane	56	7.185	7.179	0.006	86	236625	2.00	1.99	
40 cis-1,2-Dichloroethene	96	7.503	7.492	0.011	94	342438	2.00	1.95	
41 Ethyl acetate	43	7.686	7.688	-0.002	99	592846	2.00	2.03	
42 Chloroform	83	7.821	7.811	0.010	96	766644	2.00	1.94	
43 Tetrahydrofuran	42	8.172	8.178	-0.006	87	284558	2.00	1.97	
44 1,1,1-Trichloroethane	97	8.776	8.769	0.007	95	817496	2.00	1.99	
45 1,2-Dichloroethane	62	8.846	8.840	0.006	99	517134	2.00	1.98	
47 Benzene	78	9.347	9.341	0.006	96	963873	2.00	1.98	
48 Cyclohexane	69	9.369	9.362	0.007	95	153538	2.00	2.10	
46 n-Butanol	31	9.347	9.365	-0.018	61	83873	2.00	2.08	
50 Carbon tetrachloride	117	9.385	9.378	0.007	97	857647	2.00	2.06	
52 Isooctane	57	10.210	10.206	0.004	98	1423496	2.00	2.05	
53 1,2-Dichloropropane	63	10.604	10.602	0.002	86	337441	2.00	2.00	
54 n-Heptane	71	10.620	10.617	0.003	85	340822	2.00	2.09	
55 Trichloroethene	130	10.668	10.667	0.001	97	474722	2.00	2.02	
56 Dibromomethane	93	10.717	10.711	0.006	96	406474	2.00	1.95	
57 Dichlorobromomethane	83	10.889	10.886	0.003	98	776763	2.00	2.10	
58 1,4-Dioxane	88	10.906	10.912	-0.006	84	155698	2.00	2.08	
59 Methyl methacrylate	41	11.040	11.045	-0.005	98	362703	2.00	2.20	
61 4-Methyl-2-pentanone (MIBK	43	11.925	11.931	-0.006	94	611907	2.00	2.11	
62 cis-1,3-Dichloropropene	75	11.968	11.968	0.000	92	590333	2.00	2.18	
63 trans-1,3-Dichloropropene	75	12.712	12.709	0.003	96	550671	2.00	2.16	
64 Toluene	91	12.847	12.845	0.002	94	1209692	2.00	2.05	
65 1,1,2-Trichloroethane	83	12.906	12.904	0.002	98	346900	2.00	2.05	
66 2-Hexanone	58	13.348	13.355	-0.007	97	340754	2.00	2.28	
67 Chlorodibromomethane	129	13.629	13.628	0.001	98	776008	2.00	2.22	
68 n-Octane	85	13.661	13.658	0.003	86	399529	2.00	2.12	
69 Ethylene Dibromide	107	13.925	13.923	0.002	99	650482	2.00	2.07	
70 Tetrachloroethene	129	14.049	14.048	0.001	96	465829	2.00	2.02	
71 Chlorobenzene	112	14.950	14.952	-0.002	94	982434	2.00	1.99	
72 Ethylbenzene	91	15.279	15.278	0.001	98	1619183	2.00	2.10	
73 m-Xylene & p-Xylene	91	15.451	15.452	-0.001	0	2542321	3.99	4.30	
74 Bromoform	173	15.856	15.854	0.002	97	714603	2.00	2.28	
75 Styrene	104	15.920	15.923	-0.003	98	928423	2.00	2.24	
76 n-Nonane	57	15.958	15.961	-0.003	85	699319	2.00	2.14	
77 o-Xylene	91	15.985	15.986	-0.001	98	1321857	2.00	2.09	
78 1,1,2,2-Tetrachloroethane	83	16.309	16.308	0.001	100	879160	2.00	2.11	
79 1,2,3-Trichloropropane	110	16.465	16.464	0.001	97	299434	2.00	2.05	
80 Isopropylbenzene	105	16.605	16.605	0.000	97	1846740	2.00	2.02	
81 N-Propylbenzene	120	17.182	17.182	0.000	99	528723	2.00	2.16	
82 2-Chlorotoluene	126	17.204	17.203	0.001	95	469063	2.00	2.07	
83 4-Ethyltoluene	105	17.349	17.351	-0.002	99	1984214	2.00	2.19	
84 1,3,5-Trimethylbenzene	120	17.436	17.436	0.000	93	812865	2.00	2.19	
85 Alpha Methyl Styrene	118	17.689	17.691	-0.002	88	768512	2.00	2.21	
86 n-Decane	57	17.824	17.826	-0.002	93	1015986	2.00	2.21	
87 tert-Butylbenzene	119	17.905	17.906	-0.001	93	1868713	2.00	2.16	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.921	17.921	0.000	96	1705234	2.00	2.20	
89 1,3-Dichlorobenzene	146	18.191	18.189	0.002	99	1125927	2.00	2.13	
90 sec-Butylbenzene	105	18.207	18.206	0.001	98	2471421	2.00	2.23	
91 Benzyl chloride	91	18.272	18.273	-0.001	98	1513870	2.00	2.22	
92 1,4-Dichlorobenzene	146	18.288	18.287	0.001	93	1134967	2.00	2.13	
93 4-Isopropyltoluene	119	18.390	18.391	-0.001	97	2260739	2.00	2.27	
94 1,2,3-Trimethylbenzene	105	18.428	18.429	-0.001	98	1905721	2.00	2.20	
95 1,2-Dichlorobenzene	146	18.671	18.672	-0.001	95	1099439	2.00	2.13	
98 n-Butylbenzene	91	18.865	18.865	0.000	99	2097682	2.00	2.30	
99 Undecane	57	19.258	19.259	-0.001	93	1225234	2.00	2.30	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	99	910820	2.00	2.35	
101 1,2,4,5-Tetramethylbenzene	119	19.674	19.674	0.000	97	2935017	2.00	2.22	
104 Dodecane	57	20.364	20.366	-0.002	97	1246644	2.00	2.33	
105 1,2,4-Trichlorobenzene	180	20.472	20.474	-0.002	94	992300	2.00	2.31	
106 Naphthalene	128	20.601	20.603	-0.002	99	2348566	2.00	2.36	
107 Hexachlorobutadiene	225	20.860	20.859	0.001	96	942489	2.00	2.13	
108 1,2,3-Trichlorobenzene	180	20.898	20.897	0.001	95	941154	2.00	2.21	
109 2-Methylnaphthalene	142	21.701	21.702	-0.001	100	1378404	4.59	5.28	
110 1-Methylnaphthalene	142	21.847	21.847	0.000	100	1131655	4.59	4.99	
S 111 Xylenes, Total	100				0		5.99	6.39	
S 112 1,2-Dichloroethene, Total	1				0		3.99	3.89	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40L6DNP_00016	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

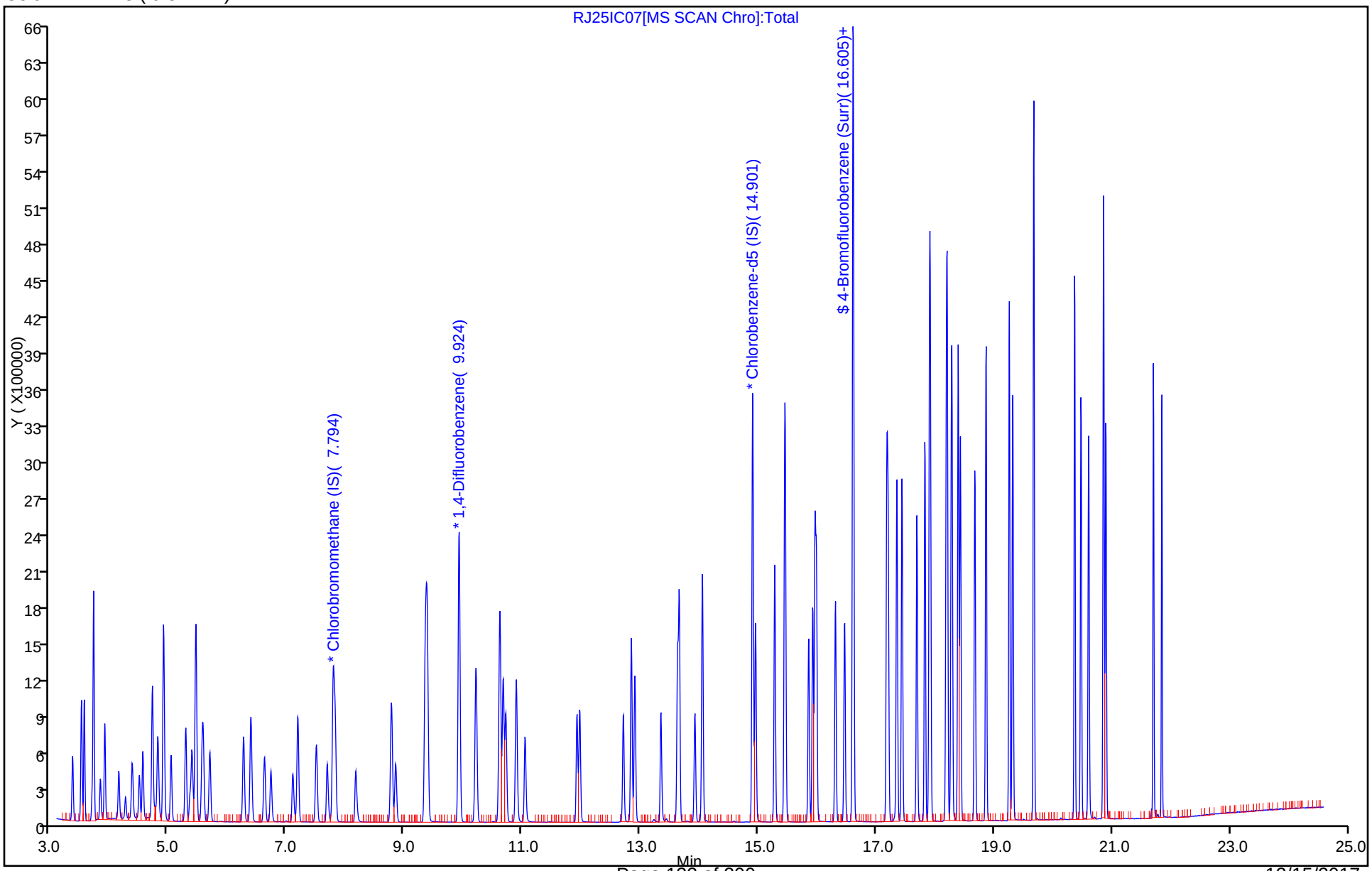
Report Date: 27-Oct-2017 11:56:14 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC07.D

Injection Date:	25-Oct-2017 17:43:30	Instrument ID:	MR	Operator ID:	
Lims ID:	ICIS L7			Worklist Smp#:	9
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

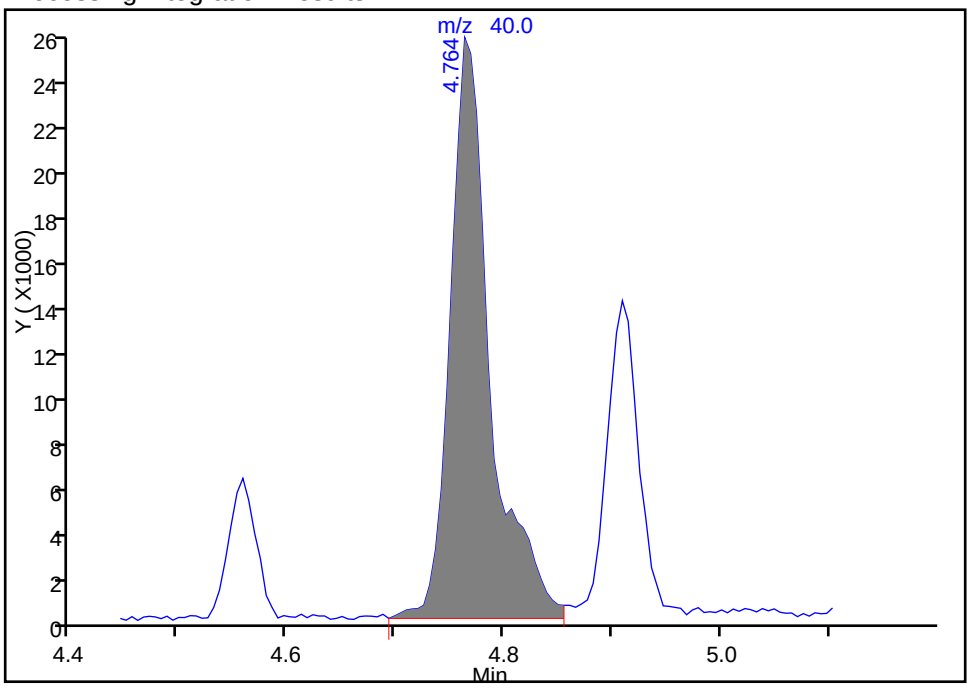
Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC07.D
Injection Date: 25-Oct-2017 17:43:30 Instrument ID: MR
Lims ID: ICIS L7
Client ID:
Operator ID: ALS Bottle#: 5 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

21 Acetonitrile, CAS: 75-05-8

Signal: 1

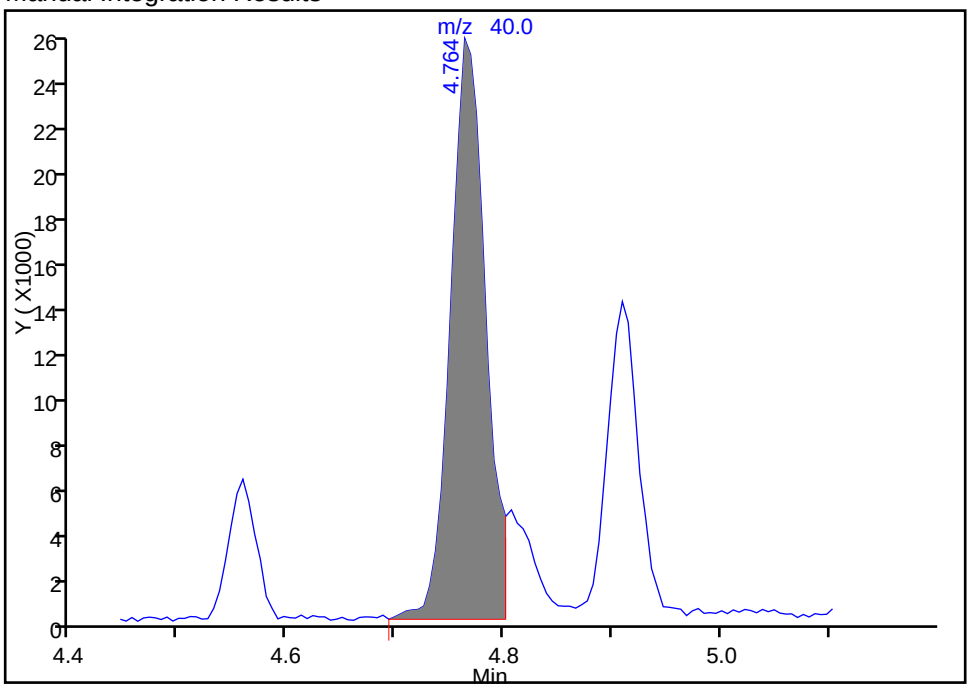
Processing Integration Results

RT: 4.76
Area: 64164
Amount: 2.173212
Amount Units: ppb v/v



Manual Integration Results

RT: 4.76
Area: 56588
Amount: 1.986431
Amount Units: ppb v/v



Reviewer: tajh, 26-Oct-2017 12:13:07
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC08.D
Lims ID: IC L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 25-Oct-2017 18:31:30 ALS Bottle#: 6 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-010
Misc. Info.: 123604
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 11:56:16 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 26-Oct-2017 12:14:17

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.783	7.779	0.004	80	423549	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.919	9.918	0.001	94	2429379	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.901	14.903	-0.002	87	2100763	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.611	16.610	0.001	91	1492736	4.00	3.88	
6 Chlorodifluoromethane	67	3.486	3.505	-0.019	96	202279	4.00	3.80	
7 Propene	41	3.491	3.509	-0.018	97	459626	4.00	3.86	
8 Dichlorodifluoromethane	85	3.534	3.554	-0.020	100	1691282	4.00	4.07	
9 Chloromethane	52	3.674	3.690	-0.016	100	164958	4.00	4.14	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.696	3.713	-0.017	92	1231703	4.00	4.05	
11 Vinyl chloride	62	3.809	3.827	-0.018	99	447334	4.00	3.72	
13 Butadiene	54	3.885	3.900	-0.015	95	301083	4.00	3.83	
12 Butane	43	3.890	3.904	-0.014	90	511458	4.00	3.87	
14 Bromomethane	94	4.127	4.140	-0.013	99	488872	4.00	3.97	
15 Chloroethane	64	4.241	4.254	-0.013	98	212019	4.00	3.84	
16 Ethanol	31	4.370	4.368	0.002	95	761181	20.0	19.7	
17 Vinyl bromide	106	4.478	4.488	-0.010	98	490166	4.00	3.82	
18 2-Methylbutane	43	4.537	4.546	-0.009	84	350900	4.00	3.88	
19 Acrolein	56	4.699	4.709	-0.010	92	131136	4.00	3.82	
20 Trichlorofluoromethane	101	4.699	4.710	-0.011	99	1619197	4.00	3.88	
21 Acetonitrile	40	4.753	4.770	-0.017	97	111432	4.00	3.87	M
22 Acetone	58	4.796	4.807	-0.011	98	513231	12.0	11.0	
24 Pentane	72	4.888	4.899	-0.011	99	111955	4.00	3.87	
23 Isopropyl alcohol	45	4.904	4.906	-0.002	97	2145485	12.0	11.9	
25 Ethyl ether	31	5.017	5.033	-0.016	84	482585	4.00	3.89	
26 1,1-Dichloroethene	96	5.265	5.274	-0.009	98	655584	4.00	3.89	
27 Acrylonitrile	53	5.346	5.349	-0.003	94	422684	4.00	4.02	
28 2-Methyl-2-propanol	59	5.384	5.393	-0.009	92	1295192	4.00	4.06	
29 1,1,2-Trichloro-1,2,2-trif	101	5.438	5.446	-0.008	97	1424722	4.00	3.93	
30 Methylene Chloride	84	5.551	5.552	-0.001	89	602192	4.00	3.49	
31 3-Chloro-1-propene	39	5.567	5.572	-0.005	98	545029	4.00	4.02	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.675	5.683	-0.008	98	1838624	4.00	4.02	
33 trans-1,2-Dichloroethene	96	6.252	6.253	-0.001	99	683800	4.00	3.94	
34 Methyl tert-butyl ether	73	6.376	6.392	-0.016	95	2014267	4.00	4.09	
36 1,1-Dichloroethane	63	6.608	6.609	-0.001	100	1188290	4.00	3.87	
37 Vinyl acetate	43	6.721	6.727	-0.006	99	1456065	4.00	4.36	
38 2-Butanone (MEK)	72	7.093	7.107	-0.014	98	312840	4.00	4.15	
39 Hexane	56	7.174	7.179	-0.005	86	482705	4.00	4.00	
40 cis-1,2-Dichloroethene	96	7.492	7.492	0.000	93	712388	4.00	4.01	
41 Ethyl acetate	43	7.676	7.688	-0.012	99	1232791	4.00	4.17	
42 Chloroform	83	7.810	7.811	-0.001	96	1553122	4.00	3.88	
43 Tetrahydrofuran	42	8.161	8.178	-0.017	86	580107	4.00	3.97	
44 1,1,1-Trichloroethane	97	8.765	8.769	-0.004	94	1680641	4.00	4.03	
45 1,2-Dichloroethane	62	8.840	8.840	0.000	99	1044848	4.00	3.99	
47 Benzene	78	9.342	9.341	0.001	96	1974761	4.00	4.05	
48 Cyclohexane	69	9.358	9.362	-0.004	95	309783	4.00	4.24	
46 n-Butanol	31	9.336	9.365	-0.029	60	175085	4.00	4.34	
50 Carbon tetrachloride	117	9.380	9.378	0.002	97	1751616	4.00	4.21	
52 Isooctane	57	10.205	10.206	-0.001	98	2885411	4.00	4.15	
53 1,2-Dichloropropane	63	10.604	10.602	0.002	86	682983	4.00	4.05	
54 n-Heptane	71	10.614	10.617	-0.003	84	695938	4.00	4.26	
55 Trichloroethene	130	10.668	10.667	0.001	95	973448	4.00	4.15	
56 Dibromomethane	93	10.712	10.711	0.001	95	831073	4.00	3.99	
57 Dichlorobromomethane	83	10.889	10.886	0.003	98	1611990	4.00	4.35	
58 1,4-Dioxane	88	10.900	10.912	-0.012	83	319197	4.00	4.25	
59 Methyl methacrylate	41	11.040	11.045	-0.005	98	761754	4.00	4.62	
61 4-Methyl-2-pentanone (MIBK	43	11.919	11.931	-0.012	94	1259401	4.00	4.34	
62 cis-1,3-Dichloropropene	75	11.968	11.968	0.000	92	1228466	4.00	4.53	
63 trans-1,3-Dichloropropene	75	12.707	12.709	-0.002	96	1169692	4.00	4.60	
64 Toluene	91	12.842	12.845	-0.003	94	2501333	4.00	4.25	
65 1,1,2-Trichloroethane	83	12.906	12.904	0.002	98	705972	4.00	4.18	
66 2-Hexanone	58	13.343	13.355	-0.012	97	714062	4.00	4.80	
67 Chlorodibromomethane	129	13.629	13.628	0.001	98	1664137	4.00	4.78	
68 n-Octane	85	13.656	13.658	-0.002	86	815331	4.00	4.33	
69 Ethylene Dibromide	107	13.920	13.923	-0.003	98	1358421	4.00	4.34	
70 Tetrachloroethene	129	14.049	14.048	0.001	97	954469	4.00	4.14	
71 Chlorobenzene	112	14.950	14.952	-0.002	94	1994464	4.00	4.04	
72 Ethylbenzene	91	15.279	15.278	0.001	98	3290297	4.00	4.27	
73 m-Xylene & p-Xylene	91	15.451	15.452	-0.001	0	5046733	8.00	8.55	
74 Bromoform	173	15.856	15.854	0.002	97	1559205	4.00	5.00	
75 Styrene	104	15.921	15.923	-0.002	98	1920288	4.00	4.64	
76 n-Nonane	57	15.958	15.961	-0.003	84	1364959	4.00	4.19	
77 o-Xylene	91	15.985	15.986	-0.001	98	2630168	4.00	4.17	
78 1,1,2,2-Tetrachloroethane	83	16.309	16.308	0.001	100	1758724	4.00	4.24	
79 1,2,3-Trichloropropane	110	16.465	16.464	0.001	97	591665	4.00	4.06	
80 Isopropylbenzene	105	16.605	16.605	0.000	96	3643421	4.00	4.00	
81 N-Propylbenzene	120	17.182	17.182	0.000	99	1049883	4.00	4.30	
82 2-Chlorotoluene	126	17.204	17.203	0.001	96	928581	4.00	4.11	
83 4-Ethyltoluene	105	17.350	17.351	-0.001	99	3912288	4.00	4.33	
84 1,3,5-Trimethylbenzene	120	17.436	17.436	0.000	93	1620384	4.00	4.38	
85 Alpha Methyl Styrene	118	17.689	17.691	-0.002	88	1590809	4.00	4.59	
86 n-Decane	57	17.824	17.826	-0.002	93	1993844	4.00	4.35	
87 tert-Butylbenzene	119	17.905	17.906	-0.001	93	3691545	4.00	4.27	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.921	17.921	0.000	96	3292671	4.00	4.26	
89 1,3-Dichlorobenzene	146	18.191	18.189	0.002	99	2217431	4.00	4.21	
90 sec-Butylbenzene	105	18.207	18.206	0.001	98	4814563	4.00	4.35	
91 Benzyl chloride	91	18.272	18.273	-0.001	98	3018732	4.00	4.44	
92 1,4-Dichlorobenzene	146	18.288	18.287	0.001	95	2222060	4.00	4.18	
93 4-Isopropyltoluene	119	18.390	18.391	-0.001	97	4473245	4.00	4.50	
94 1,2,3-Trimethylbenzene	105	18.428	18.429	-0.001	98	3720027	4.00	4.30	
95 1,2-Dichlorobenzene	146	18.671	18.672	-0.001	95	2160064	4.00	4.19	
98 n-Butylbenzene	91	18.865	18.865	0.000	99	4159498	4.00	4.57	
99 Undecane	57	19.258	19.259	-0.001	92	2432418	4.00	4.57	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	99	1901418	4.00	4.92	
101 1,2,4,5-Tetramethylbenzene	119	19.674	19.674	0.000	97	5868924	4.00	4.46	
104 Dodecane	57	20.369	20.366	0.003	97	2542680	4.00	4.77	
105 1,2,4-Trichlorobenzene	180	20.477	20.474	0.003	94	2148606	4.00	5.01	
106 Naphthalene	128	20.607	20.603	0.004	99	4921580	4.00	4.96	
107 Hexachlorobutadiene	225	20.860	20.859	0.001	97	1997835	4.00	4.52	
108 1,2,3-Trichlorobenzene	180	20.898	20.897	0.001	95	2025469	4.00	4.78	
109 2-Methylnaphthalene	142	21.701	21.702	-0.001	100	3367217	9.20	12.9	
110 1-Methylnaphthalene	142	21.847	21.847	0.000	100	2775316	9.20	12.3	
S 111 Xylenes, Total	100				0		12.0	12.7	
S 112 1,2-Dichloroethene, Total	1				0		8.00	7.95	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40L7DNP_00015	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

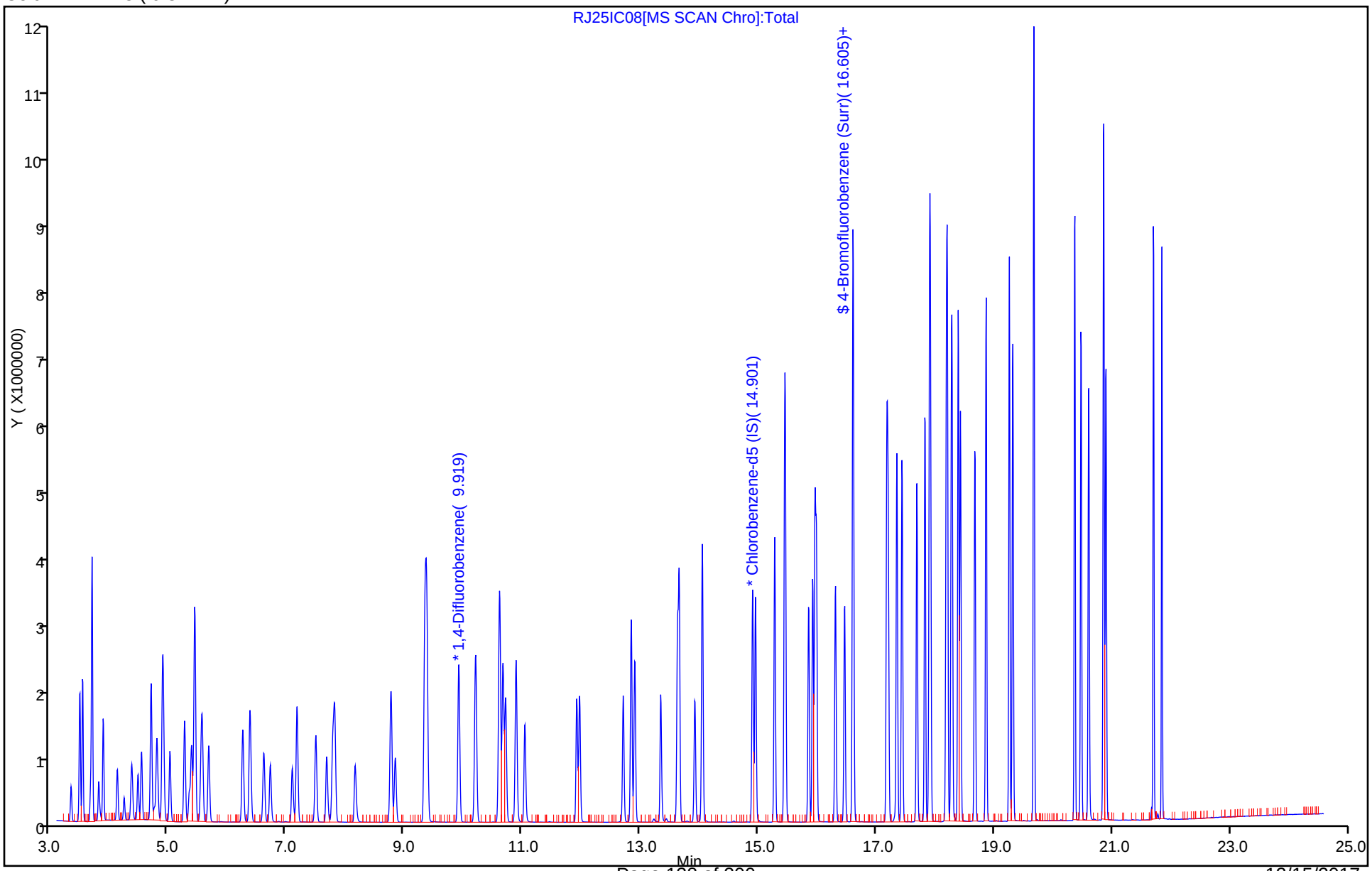
Report Date: 27-Oct-2017 11:56:17 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC08.D

Injection Date:	25-Oct-2017 18:31:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L8			Worklist Smp#:	10
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

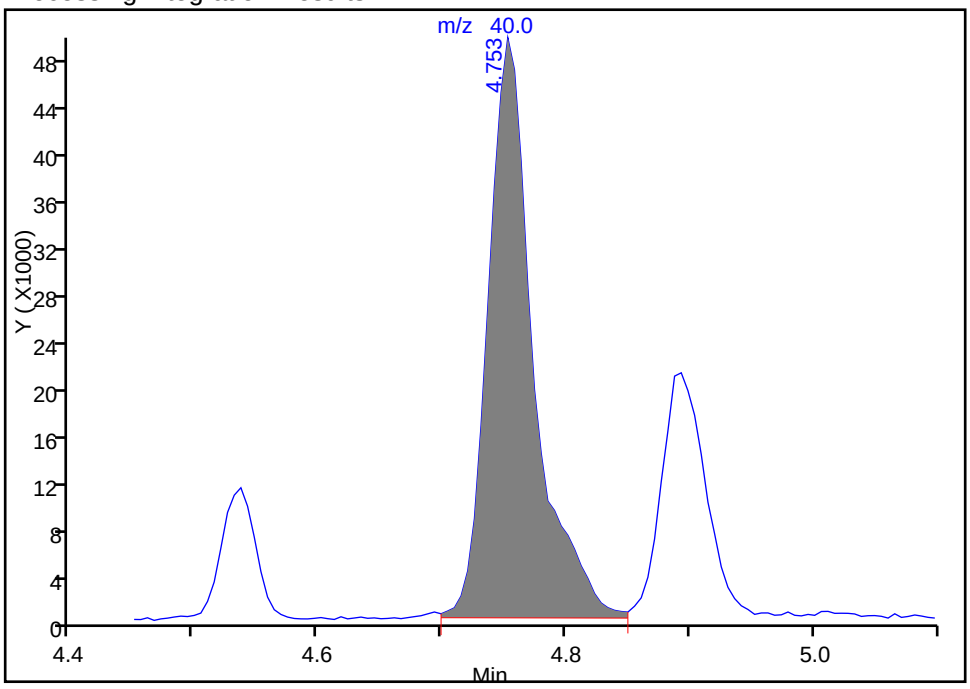
Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC08.D
Injection Date: 25-Oct-2017 18:31:30 Instrument ID: MR
Lims ID: IC L8
Client ID:
Operator ID: ALS Bottle#: 6 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

21 Acetonitrile, CAS: 75-05-8

Signal: 1

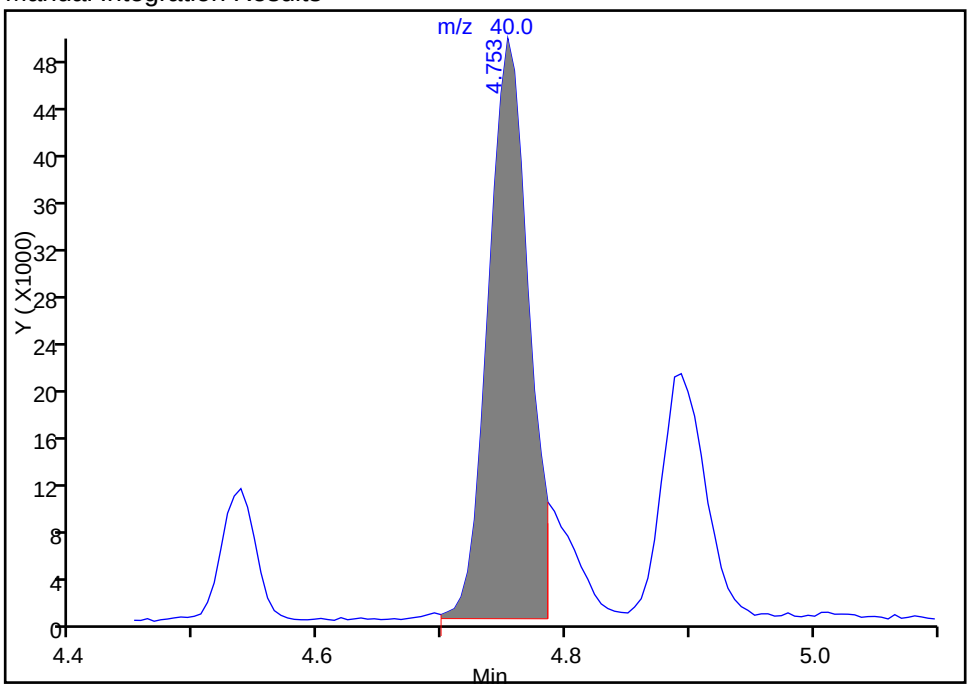
Processing Integration Results

RT: 4.75
Area: 125479
Amount: 4.278931
Amount Units: ppb v/v



Manual Integration Results

RT: 4.75
Area: 111432
Amount: 3.866056
Amount Units: ppb v/v



Reviewer: tajh, 26-Oct-2017 12:13:57
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC09.D
Lims ID: IC L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 25-Oct-2017 19:18:30 ALS Bottle#: 7 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-011
Misc. Info.: 123603
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 11:56:19 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 26-Oct-2017 12:16:35

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.794	7.779	0.015	82	450605	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.930	9.918	0.012	94	2591948	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.907	14.903	0.004	86	2258863	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.611	16.610	0.001	94	1563108	4.00	3.78	
6 Chlorodifluoromethane	67	3.507	3.505	0.002	96	399853	8.00	7.06	
7 Propene	41	3.518	3.509	0.009	97	884721	8.00	6.98	
8 Dichlorodifluoromethane	85	3.561	3.554	0.007	100	3324893	8.00	7.53	
9 Chloromethane	52	3.701	3.690	0.011	100	301993	8.00	7.13	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.723	3.713	0.010	91	2405230	8.00	7.44	
11 Vinyl chloride	62	3.836	3.827	0.009	99	888956	8.00	6.95	
13 Butadiene	54	3.912	3.900	0.012	90	599027	8.00	7.17	
12 Butane	43	3.917	3.904	0.013	90	999430	8.00	7.10	
14 Bromomethane	94	4.154	4.140	0.014	98	964057	8.00	7.36	
15 Chloroethane	64	4.268	4.254	0.014	98	421811	8.00	7.17	
16 Ethanol	31	4.386	4.368	0.018	94	1460090	40.0	35.5	
17 Vinyl bromide	106	4.505	4.488	0.017	98	983817	8.00	7.21	
18 2-Methylbutane	43	4.559	4.546	0.013	84	696681	8.00	7.25	
19 Acrolein	56	4.721	4.709	0.012	51	245571	8.00	6.72	
20 Trichlorofluoromethane	101	4.726	4.710	0.016	99	3168243	8.00	7.14	
21 Acetonitrile	40	4.775	4.770	0.005	97	255539	8.00	8.33	
22 Acetone	58	4.818	4.807	0.011	98	1043967	24.0	21.0	
24 Pentane	72	4.915	4.899	0.016	98	234577	8.00	7.63	
23 Isopropyl alcohol	45	4.920	4.906	0.014	97	4278764	24.0	22.3	
25 Ethyl ether	31	5.039	5.033	0.006	83	964411	8.00	7.31	
26 1,1-Dichloroethene	96	5.292	5.274	0.018	98	1337323	8.00	7.45	
27 Acrylonitrile	53	5.368	5.349	0.019	95	870731	8.00	7.78	
28 2-Methyl-2-propanol	59	5.400	5.393	0.007	93	2641518	8.00	7.79	
29 1,1,2-Trichloro-1,2,2-trif	101	5.459	5.446	0.013	97	2860127	8.00	7.41	
30 Methylene Chloride	84	5.573	5.552	0.021	88	1214064	8.00	6.62	
31 3-Chloro-1-propene	39	5.589	5.572	0.017	98	1096804	8.00	7.60	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.702	5.683	0.019	98	3728924	8.00	7.66	
33 trans-1,2-Dichloroethene	96	6.274	6.253	0.021	98	1412134	8.00	7.64	
34 Methyl tert-butyl ether	73	6.392	6.392	0.000	95	4095585	8.00	7.81	
36 1,1-Dichloroethane	63	6.629	6.609	0.020	100	2399193	8.00	7.34	
37 Vinyl acetate	43	6.737	6.727	0.010	99	2998874	8.00	8.43	
38 2-Butanone (MEK)	72	7.104	7.107	-0.003	98	648132	8.00	8.08	
39 Hexane	56	7.190	7.179	0.011	86	967848	8.00	7.55	
40 cis-1,2-Dichloroethene	96	7.508	7.492	0.016	92	1456970	8.00	7.72	
41 Ethyl acetate	43	7.686	7.688	-0.002	99	2476675	8.00	7.88	
42 Chloroform	83	7.827	7.811	0.016	97	3123300	8.00	7.34	
43 Tetrahydrofuran	42	8.172	8.178	-0.006	86	1176753	8.00	7.57	
44 1,1,1-Trichloroethane	97	8.781	8.769	0.012	95	3393282	8.00	7.66	
45 1,2-Dichloroethane	62	8.851	8.840	0.011	99	2085161	8.00	7.47	
47 Benzene	78	9.353	9.341	0.012	96	3909074	8.00	7.52	
48 Cyclohexane	69	9.369	9.362	0.007	94	608419	8.00	7.81	
46 n-Butanol	31	9.342	9.365	-0.023	66	369245	8.00	8.57	
50 Carbon tetrachloride	117	9.390	9.378	0.012	97	3498240	8.00	7.88	
52 Isooctane	57	10.210	10.206	0.004	98	5699452	8.00	7.68	
53 1,2-Dichloropropane	63	10.609	10.602	0.007	86	1342220	8.00	7.46	
54 n-Heptane	71	10.625	10.617	0.008	82	1381937	8.00	7.92	
55 Trichloroethene	130	10.674	10.667	0.007	97	1983769	8.00	7.92	
56 Dibromomethane	93	10.717	10.711	0.006	94	1685672	8.00	7.59	
57 Dichlorobromomethane	83	10.895	10.886	0.009	98	3280388	8.00	8.29	
58 1,4-Dioxane	88	10.900	10.912	-0.012	81	635939	8.00	7.94	
59 Methyl methacrylate	41	11.040	11.045	-0.005	98	1560531	8.00	8.88	
61 4-Methyl-2-pentanone (MIBK	43	11.925	11.931	-0.006	94	2547644	8.00	8.22	
62 cis-1,3-Dichloropropene	75	11.973	11.968	0.005	92	2495678	8.00	8.62	
63 trans-1,3-Dichloropropene	75	12.712	12.709	0.003	96	2418731	8.00	8.85	
64 Toluene	91	12.847	12.845	0.002	94	5000244	8.00	7.91	
65 1,1,2-Trichloroethane	83	12.906	12.904	0.002	98	1421474	8.00	7.82	
66 2-Hexanone	58	13.348	13.355	-0.007	97	1457582	8.00	9.11	
67 Chlorodibromomethane	129	13.634	13.628	0.006	97	3404955	8.00	9.09	
68 n-Octane	85	13.661	13.658	0.003	85	1619656	8.00	8.00	
69 Ethylene Dibromide	107	13.925	13.923	0.002	98	2777984	8.00	8.25	
70 Tetrachloroethene	129	14.049	14.048	0.001	97	1934461	8.00	7.81	
71 Chlorobenzene	112	14.955	14.952	0.003	94	3997886	8.00	7.54	
72 Ethylbenzene	91	15.279	15.278	0.001	98	6456253	8.00	7.80	
73 m-Xylene & p-Xylene	91	15.451	15.452	-0.001	0	9680607	16.0	15.2	
74 Bromoform	173	15.856	15.854	0.002	99	3245877	8.00	9.67	
75 Styrene	104	15.926	15.923	0.003	98	3870267	8.00	8.69	
76 n-Nonane	57	15.964	15.961	0.003	83	2584312	8.00	7.39	
77 o-Xylene	91	15.985	15.986	-0.001	98	5131084	8.00	7.56	
78 1,1,2,2-Tetrachloroethane	83	16.309	16.308	0.001	100	3446997	8.00	7.72	
79 1,2,3-Trichloropropane	110	16.465	16.464	0.001	97	1168938	8.00	7.46	
80 Isopropylbenzene	105	16.605	16.605	0.000	97	6996543	8.00	7.14	
81 N-Propylbenzene	120	17.182	17.182	0.000	98	2035261	8.00	7.75	
82 2-Chlorotoluene	126	17.204	17.203	0.001	97	1794004	8.00	7.38	
83 4-Ethyltoluene	105	17.350	17.351	-0.001	98	7418547	8.00	7.64	
84 1,3,5-Trimethylbenzene	120	17.436	17.436	0.000	93	3145506	8.00	7.90	
85 Alpha Methyl Styrene	118	17.689	17.691	-0.002	89	3163348	8.00	8.49	
86 n-Decane	57	17.829	17.826	0.003	94	3697959	8.00	7.51	
87 tert-Butylbenzene	119	17.905	17.906	-0.001	92	6958642	8.00	7.48	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.921	17.921	0.000	95	6104034	8.00	7.35	
89 1,3-Dichlorobenzene	146	18.191	18.189	0.002	99	4216783	8.00	7.45	
90 sec-Butylbenzene	105	18.207	18.206	0.001	99	8700337	8.00	7.30	
91 Benzyl chloride	91	18.272	18.273	-0.001	98	5648570	8.00	7.73	
92 1,4-Dichlorobenzene	146	18.288	18.287	0.001	94	4227916	8.00	7.40	
93 4-Isopropyltoluene	119	18.390	18.391	-0.001	96	8172682	8.00	7.64	
94 1,2,3-Trimethylbenzene	105	18.428	18.429	-0.001	98	6961070	8.00	7.49	
95 1,2-Dichlorobenzene	146	18.676	18.672	0.004	96	4093958	8.00	7.38	
98 n-Butylbenzene	91	18.865	18.865	0.000	99	7568750	8.00	7.74	
99 Undecane	57	19.258	19.259	-0.001	91	4523930	8.00	7.90	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	99	3591223	8.00	8.64	
101 1,2,4,5-Tetramethylbenzene	119	19.674	19.674	0.000	97	10496588	8.00	7.41	
104 Dodecane	57	20.369	20.366	0.003	96	4689410	8.00	8.17	
105 1,2,4-Trichlorobenzene	180	20.477	20.474	0.003	95	4331499	8.00	9.39	
106 Naphthalene	128	20.607	20.603	0.004	98	9478899	8.00	8.88	
107 Hexachlorobutadiene	225	20.860	20.859	0.001	96	4054563	8.00	8.54	
108 1,2,3-Trichlorobenzene	180	20.898	20.897	0.001	95	4075342	8.00	8.94	
109 2-Methylnaphthalene	142	21.707	21.702	0.005	99	6499587	18.4	23.2	
110 1-Methylnaphthalene	142	21.847	21.847	0.000	99	5249732	18.4	21.6	
S 111 Xylenes, Total	100				0		24.0	22.8	
S 112 1,2-Dichloroethene, Total	1				0		16.0	15.4	

Reagents:

40L8DNP_00015	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

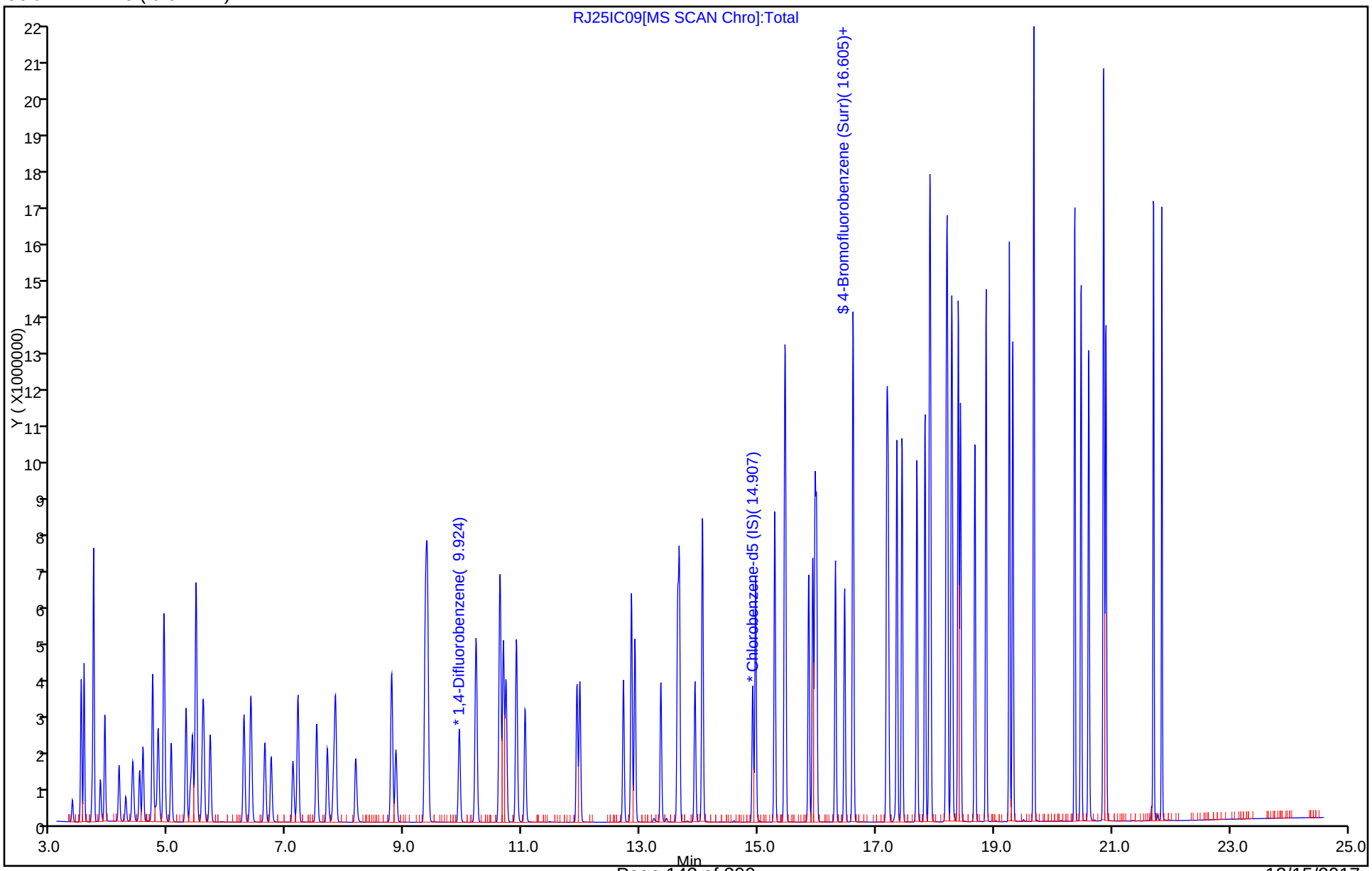
Report Date: 27-Oct-2017 11:56:20 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC09.D

Injection Date:	25-Oct-2017 19:18:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L9			Worklist Smp#:	11
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D
Lims ID: IC L10
Client ID:
Sample Type: IC Calib Level: 10
Inject. Date: 25-Oct-2017 20:06:30 ALS Bottle#: 8 Worklist Smp#: 12
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-012
Misc. Info.: 123602
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 11:56:23 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 26-Oct-2017 12:17:31

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.800	7.779	0.021	93	463451	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.930	9.918	0.012	94	2631400	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.907	14.903	0.004	86	2270324	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.616	16.610	0.006	95	1494682	4.00	3.59	
6 Chlorodifluoromethane	67	3.502	3.505	-0.003	96	803086	16.0	13.8	
7 Propene	41	3.507	3.509	-0.002	97	1695857	16.0	13.0	
8 Dichlorodifluoromethane	85	3.556	3.554	0.002	99	5963801	16.0	13.1	
9 Chloromethane	52	3.691	3.690	0.001	99	590896	16.0	13.6	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.718	3.713	0.005	91	4741073	16.0	14.3	
11 Vinyl chloride	62	3.831	3.827	0.004	99	1751141	16.0	13.3	
13 Butadiene	54	3.907	3.900	0.007	77	1162419	16.0	13.5	
12 Butane	43	3.907	3.904	0.003	80	1909389	16.0	13.2	
14 Bromomethane	94	4.149	4.140	0.009	99	1928308	16.0	14.3	
15 Chloroethane	64	4.262	4.254	0.008	98	831792	16.0	13.8	
16 Ethanol	31	4.392	4.368	0.024	94	2683051	80.0	63.4	
17 Vinyl bromide	106	4.500	4.488	0.012	98	1957010	16.0	13.9	
18 2-Methylbutane	43	4.554	4.546	0.008	83	1352243	16.0	13.7	
19 Acrolein	56	4.721	4.709	0.012	86	497887	16.0	13.3	
20 Trichlorofluoromethane	101	4.721	4.710	0.011	99	6022956	16.0	13.2	
21 Acetonitrile	40	4.775	4.770	0.005	97	496965	16.0	15.8	
22 Acetone	58	4.818	4.807	0.011	98	1999735	48.0	39.1	
24 Pentane	72	4.910	4.899	0.011	97	458645	16.0	14.5	
23 Isopropyl alcohol	45	4.926	4.906	0.020	98	7900031	48.0	40.0	
25 Ethyl ether	31	5.039	5.033	0.006	82	1911537	16.0	14.1	
26 1,1-Dichloroethene	96	5.287	5.274	0.013	99	2771817	16.0	15.0	
27 Acrylonitrile	53	5.368	5.349	0.019	94	1776662	16.0	15.4	
28 2-Methyl-2-propanol	59	5.406	5.393	0.013	93	5152924	16.0	14.8	
29 1,1,2-Trichloro-1,2,2-trif	101	5.460	5.446	0.014	96	5674605	16.0	14.3	
30 Methylene Chloride	84	5.573	5.552	0.021	87	2447809	16.0	13.0	
31 3-Chloro-1-propene	39	5.589	5.572	0.017	97	2172614	16.0	14.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.697	5.683	0.014	98	7538407	16.0	15.1	
33 trans-1,2-Dichloroethene	96	6.274	6.253	0.021	97	2897432	16.0	15.2	
34 Methyl tert-butyl ether	73	6.392	6.392	0.000	95	8173520	16.0	15.2	
36 1,1-Dichloroethane	63	6.630	6.609	0.021	100	4822750	16.0	14.3	
37 Vinyl acetate	43	6.738	6.727	0.011	99	6118655	16.0	16.7	
38 2-Butanone (MEK)	72	7.110	7.107	0.003	98	1326766	16.0	16.1	
39 Hexane	56	7.190	7.179	0.011	85	1914109	16.0	14.5	
40 cis-1,2-Dichloroethene	96	7.509	7.492	0.017	92	2990205	16.0	15.4	
41 Ethyl acetate	43	7.692	7.688	0.004	99	4979960	16.0	15.4	
42 Chloroform	83	7.827	7.811	0.016	97	6252680	16.0	14.3	
43 Tetrahydrofuran	42	8.172	8.178	-0.006	85	2361471	16.0	14.8	
44 1,1,1-Trichloroethane	97	8.781	8.769	0.012	95	6808210	16.0	14.9	
45 1,2-Dichloroethane	62	8.851	8.840	0.011	99	4238188	16.0	14.9	
47 Benzene	78	9.353	9.341	0.012	96	7444515	16.0	14.1	
48 Cyclohexane	69	9.374	9.362	0.012	92	1155065	16.0	14.6	
46 n-Butanol	31	9.342	9.365	-0.023	64	690517	16.0	15.8	
50 Carbon tetrachloride	117	9.391	9.378	0.013	97	6918118	16.0	15.4	
52 Isooctane	57	10.216	10.206	0.010	98	10894189	16.0	14.5	
53 1,2-Dichloropropane	63	10.609	10.602	0.007	86	2579606	16.0	14.1	
54 n-Heptane	71	10.625	10.617	0.008	81	2653569	16.0	15.0	
55 Trichloroethene	130	10.679	10.667	0.012	97	4015133	16.0	15.8	
56 Dibromomethane	93	10.722	10.711	0.011	93	3407808	16.0	15.1	
57 Dichlorobromomethane	83	10.895	10.886	0.009	99	6527638	16.0	16.3	
58 1,4-Dioxane	88	10.906	10.912	-0.006	82	1204443	16.0	14.8	
59 Methyl methacrylate	41	11.046	11.045	0.001	96	3144744	16.0	17.6	
61 4-Methyl-2-pentanone (MIBK	43	11.925	11.931	-0.006	93	4956312	16.0	15.8	
62 cis-1,3-Dichloropropene	75	11.974	11.968	0.006	91	5036601	16.0	17.1	
63 trans-1,3-Dichloropropene	75	12.712	12.709	0.003	96	4954997	16.0	18.0	
64 Toluene	91	12.852	12.845	0.007	95	9732782	16.0	15.3	
65 1,1,2-Trichloroethane	83	12.912	12.904	0.008	98	2818197	16.0	15.4	
66 2-Hexanone	58	13.349	13.355	-0.006	98	2849200	16.0	17.7	
67 Chlorodibromomethane	129	13.634	13.628	0.006	97	6733481	16.0	17.9	
68 n-Octane	85	13.661	13.658	0.003	82	3115693	16.0	15.3	
69 Ethylene Dibromide	107	13.931	13.923	0.008	99	5559926	16.0	16.4	
70 Tetrachloroethene	129	14.055	14.048	0.007	98	3841103	16.0	15.4	
71 Chlorobenzene	112	14.955	14.952	0.003	94	7825995	16.0	14.7	
72 Ethylbenzene	91	15.279	15.278	0.001	98	12015013	16.0	14.4	
73 m-Xylene & p-Xylene	91	15.457	15.452	0.005	0	17160895	32.0	26.9	
74 Bromoform	173	15.856	15.854	0.002	97	6558869	16.0	19.4	
75 Styrene	104	15.926	15.923	0.003	98	7560228	16.0	16.9	
76 n-Nonane	57	15.964	15.961	0.003	81	4652330	16.0	13.2	
77 o-Xylene	91	15.991	15.986	0.005	99	9535161	16.0	14.0	
78 1,1,2,2-Tetrachloroethane	83	16.309	16.308	0.001	99	6530374	16.0	14.6	
79 1,2,3-Trichloropropane	110	16.465	16.464	0.001	96	2302436	16.0	14.6	
80 Isopropylbenzene	105	16.606	16.605	0.001	97	12663589	16.0	12.9	
81 N-Propylbenzene	120	17.183	17.182	0.001	98	3819742	16.0	14.5	
82 2-Chlorotoluene	126	17.204	17.203	0.001	95	3423413	16.0	14.0	
83 4-Ethyltoluene	105	17.355	17.351	0.004	97	13244430	16.0	13.6	
84 1,3,5-Trimethylbenzene	120	17.441	17.436	0.005	94	5947640	16.0	14.9	
85 Alpha Methyl Styrene	118	17.695	17.691	0.004	89	6018724	16.0	16.1	
86 n-Decane	57	17.830	17.826	0.004	94	6320845	16.0	12.8	
87 tert-Butylbenzene	119	17.911	17.906	0.004	92	12330820	16.0	13.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.927	17.921	0.006	95	10587367	16.0	12.7	
89 1,3-Dichlorobenzene	146	18.191	18.189	0.002	99	7759848	16.0	13.6	
90 sec-Butylbenzene	105	18.212	18.206	0.006	98	14464983	16.0	12.1	
91 Benzyl chloride	91	18.277	18.273	0.004	99	9882812	16.0	13.5	
92 1,4-Dichlorobenzene	146	18.293	18.287	0.006	93	7788742	16.0	13.6	
93 4-Isopropyltoluene	119	18.396	18.391	0.005	94	13583476	16.0	12.6	
94 1,2,3-Trimethylbenzene	105	18.434	18.429	0.005	97	12212729	16.0	13.1	
95 1,2-Dichlorobenzene	146	18.676	18.672	0.004	94	7481468	16.0	13.4	
98 n-Butylbenzene	91	18.865	18.865	0.000	98	12271794	16.0	12.5	
99 Undecane	57	19.259	19.259	0.000	88	7559425	16.0	13.1	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	98	6432249	16.0	15.4	
104 Dodecane	57	20.369	20.366	0.003	93	7775809	16.0	13.5	
105 1,2,4-Trichlorobenzene	180	20.477	20.474	0.003	95	8252878	16.0	17.8	
107 Hexachlorobutadiene	225	20.860	20.859	0.001	96	7676608	16.0	16.1	
108 1,2,3-Trichlorobenzene	180	20.898	20.897	0.001	95	8089214	16.0	17.7	
109 2-Methylnaphthalene	142	21.707	21.702	0.005	98	11773396	36.8	41.8	e
110 1-Methylnaphthalene	142	21.847	21.847	0.000	97	9724344	36.8	39.7	
S 111 Xylenes, Total	100				0		48.0	40.9	
S 112 1,2-Dichloroethene, Total	1				0		32.0	30.6	

QC Flag Legend

Processing Flags

e - Potential Peak Saturated

Reagents:

40L9DNP_00018	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

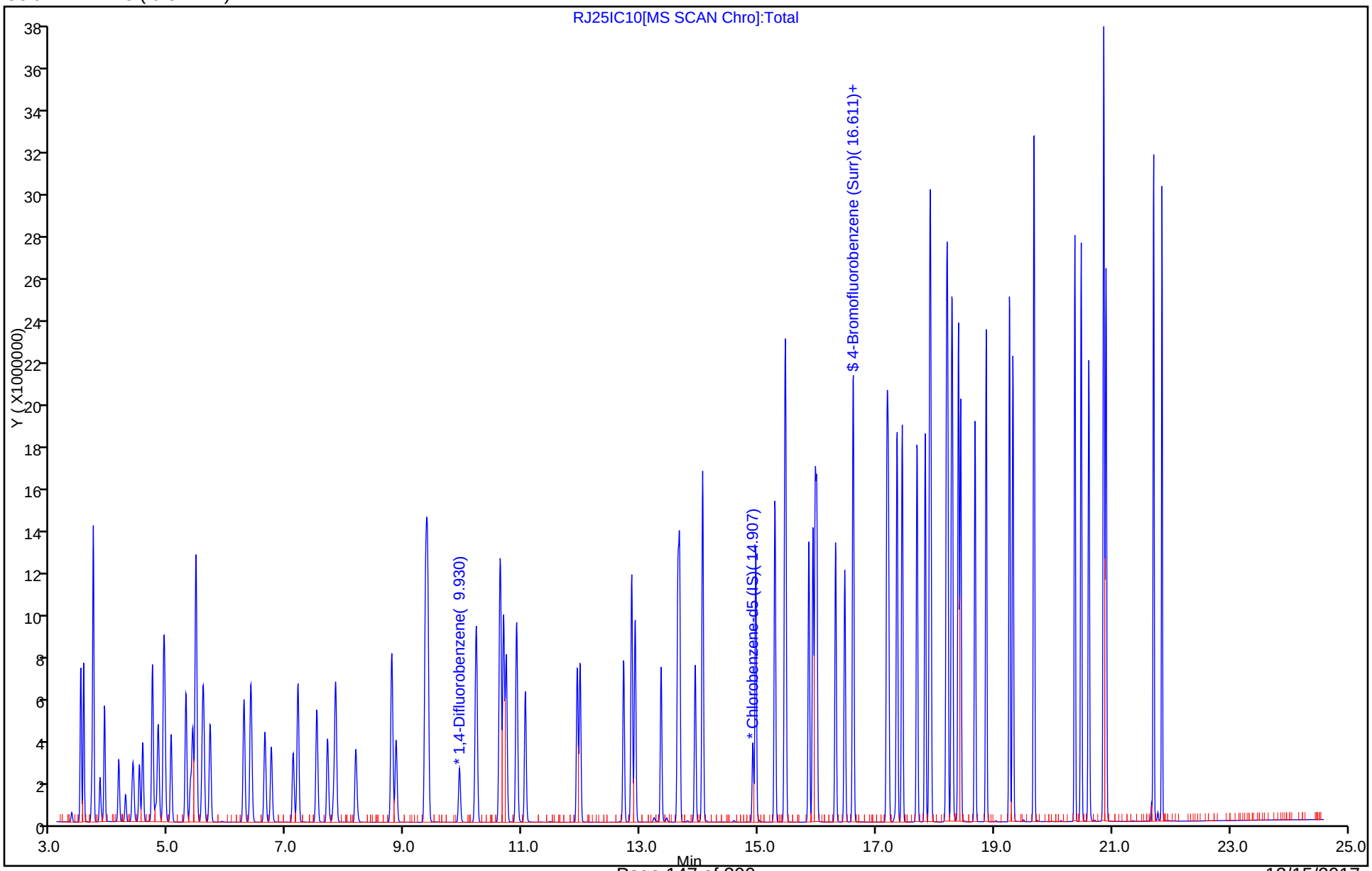
Report Date: 27-Oct-2017 11:56:24 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Injection Date:	25-Oct-2017 20:06:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L10			Worklist Smp#:	12
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1

SDG No.:

Lab Sample ID: ICV 140-15542/14 Calibration Date: 10/25/2017 21:40

Instrument ID: MR Calib Start Date: 10/25/2017 13:00

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/25/2017 20:06

Lab File ID: RJ25ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.5024	0.4937		1.97	2.00	-1.7	35.0
Propene	Ave	1.126	1.072		1.91	2.00	-4.7	35.0
Dichlorodifluoromethane	Ave	3.921	4.337		2.21	2.00	10.6	35.0
Chloromethane	Ave	0.3761	0.3556		1.89	2.00	-5.4	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.869	3.034		2.12	2.00	5.8	35.0
Vinyl chloride	Ave	1.136	1.115		1.96	2.00	-1.9	35.0
1,3-Butadiene	Ave	0.7416	0.7346		1.98	2.00	-1.0	35.0
Butane	Ave	1.249	1.270		2.03	2.00	1.6	35.0
Bromomethane	Ave	1.163	1.161		2.00	2.00	-0.2	35.0
Chloroethane	Ave	0.5221	0.5167		1.98	2.00	-1.0	35.0
Ethanol	Ave	0.3654	0.3418		9.35	10.0	-6.5	35.0
Vinyl bromide	Ave	1.211	1.259		2.08	2.00	4.0	35.0
2-Methylbutane	Ave	0.8530	0.8925		2.09	2.00	4.6	35.0
Acrolein	Ave	0.3243	0.3377		2.08	2.00	4.1	35.0
Trichlorofluoromethane	Ave	3.937	3.974		2.02	2.00	0.9	35.0
Acetonitrile	Ave	0.2722	0.2698		1.98	2.00	-0.9	35.0
Acetone	Ave	0.4409	0.4235		5.76	6.00	-4.0	35.0
Isopropyl alcohol	Ave	1.706	1.717		6.04	6.00	0.7	35.0
Pentane	Ave	0.2731	0.3034		2.22	2.00	11.1	35.0
Ethyl ether	Ave	1.171	1.204		2.06	2.00	2.8	35.0
1,1-Dichloroethene	Ave	1.594	1.652		2.07	2.00	3.7	35.0
Acrylonitrile	Ave	0.9935	1.076		2.17	2.00	8.3	35.0
tert-Butyl alcohol	Ave	3.009	3.177		2.11	2.00	5.6	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.426	3.609		2.11	2.00	5.3	35.0
Methylene Chloride	Ave	1.629	1.559		1.91	2.00	-4.3	35.0
3-Chloropropene	Ave	1.281	1.296		2.02	2.00	1.2	35.0
Carbon disulfide	Ave	4.321	4.473		2.07	2.00	3.5	35.0
trans-1,2-Dichloroethene	Ave	1.640	1.693		2.06	2.00	3.2	35.0
Methyl tert-butyl ether	Ave	4.654	5.005		2.15	2.00	7.6	35.0
1,1-Dichloroethane	Ave	2.901	2.966		2.04	2.00	2.2	35.0
Vinyl acetate	Ave	3.158	3.512		2.22	2.00	11.2	35.0
2-Butanone (MEK)	Ave	0.7119	0.7566		2.13	2.00	6.3	35.0
Hexane	Ave	1.139	1.188		2.09	2.00	4.3	35.0
cis-1,2-Dichloroethene	Ave	1.676	1.787		2.13	2.00	6.6	35.0
Ethyl acetate	Ave	2.792	2.766		1.98	2.00	-0.9	35.0
Chloroform	Ave	3.778	3.815		2.02	2.00	1.0	35.0
Tetrahydrofuran	Ave	1.380	1.400		2.03	2.00	1.4	35.0
1,1,1-Trichloroethane	Ave	3.935	4.084		2.08	2.00	3.8	35.0
1,2-Dichloroethane	Ave	0.4310	0.4469		2.07	2.00	3.7	35.0
1-Butanol	Ave	0.0665	0.0711		2.14	2.00	6.9	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1

SDG No.:

Lab Sample ID: ICV 140-15542/14 Calibration Date: 10/25/2017 21:40

Instrument ID: MR Calib Start Date: 10/25/2017 13:00

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/25/2017 20:06

Lab File ID: RJ25ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzene	Ave	0.8022	0.8707		2.17	2.00	8.5	35.0
Cyclohexane	Ave	0.1203	0.1349		2.24	2.00	12.1	35.0
Carbon tetrachloride	Ave	0.6847	0.7570		2.21	2.00	10.6	35.0
2,2,4-Trimethylpentane	Ave	1.145	1.245		2.18	2.00	8.8	35.0
1,2-Dichloropropane	Ave	0.2775	0.2923		2.11	2.00	5.3	35.0
Heptane	Ave	0.2692	0.2970		2.21	2.00	10.3	35.0
Trichloroethene	Ave	0.3866	0.4296		2.22	2.00	11.1	35.0
Dibromomethane	Ave	0.3429	0.3605		2.10	2.00	5.2	35.0
Bromodichloromethane	Ave	0.6106	0.6771		2.22	2.00	10.9	35.0
1,4-Dioxane	Ave	0.1235	0.1303		2.11	2.00	5.5	35.0
Methyl methacrylate	Ave	0.2712	0.3023		2.23	2.00	11.5	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4780	0.5199		2.18	2.00	8.8	35.0
cis-1,3-Dichloropropene	Ave	0.4468	0.5272		2.36	2.00	18.0	35.0
trans-1,3-Dichloropropene	Ave	0.4839	0.5824		2.41	2.00	20.3	35.0
Toluene	Ave	1.120	1.274		2.28	2.00	13.8	35.0
1,1,2-Trichloroethane	Ave	0.3219	0.3526		2.19	2.00	9.5	35.0
2-Hexanone	Ave	0.2834	0.3423		2.42	2.00	20.8	35.0
Dibromochloromethane	Ave	0.6633	0.8095		2.44	2.00	22.0	35.0
Octane	Ave	0.3585	0.4196		2.34	2.00	17.0	35.0
1,2-Dibromoethane (EDB)	Ave	0.5963	0.6724		2.26	2.00	12.8	35.0
Tetrachloroethene	Ave	0.4387	0.4921		2.24	2.00	12.2	35.0
Chlorobenzene	Ave	0.9392	1.039		2.21	2.00	10.6	35.0
Ethylbenzene	Ave	1.466	1.674		2.29	2.00	14.3	35.0
m-Xylene & p-Xylene	Ave	1.124	1.318		4.69	4.00	17.2	35.0
Bromoform	Ave	0.5943	0.7337		2.47	2.00	23.5	35.0
Styrene	Ave	0.7883	0.9806		2.49	2.00	24.4	35.0
Nonane	Ave	0.6196	0.7116		2.30	2.00	14.8	35.0
o-Xylene	Ave	1.201	1.334		2.22	2.00	11.1	35.0
1,1,2,2-Tetrachloroethane	Ave	0.7903	0.8918		2.26	2.00	12.8	35.0
1,2,3-Trichloropropane	Ave	0.2776	0.3071		2.21	2.00	10.6	35.0
Isopropylbenzene	Ave	1.734	1.949		2.25	2.00	12.4	35.0
Propylbenzene	Ave	0.4649	0.5737		2.47	2.00	23.4	35.0
2-Chlorotoluene	Ave	0.4305	0.5036		2.34	2.00	17.0	35.0
4-Ethyltoluene	Ave	1.720	2.009		2.34	2.00	16.8	35.0
1,3,5-Trimethylbenzene	Ave	0.7048	0.8695		2.47	2.00	23.4	35.0
Alpha Methyl Styrene	Ave	0.6597	0.8303		2.52	2.00	25.9	35.0
Decane	Ave	0.8720	1.042		2.39	2.00	19.5	35.0
tert-Butylbenzene	Ave	1.647	1.983		2.41	2.00	20.4	35.0
1,2,4-Trimethylbenzene	Ave	1.470	1.794		2.44	2.00	22.0	35.0
1,3-Dichlorobenzene	Ave	1.002	1.207		2.41	2.00	20.4	35.0
sec-Butylbenzene	Ave	2.109	2.605		2.47	2.00	23.5	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1

SDG No.:

Lab Sample ID: ICV 140-15542/14 Calibration Date: 10/25/2017 21:40

Instrument ID: MR Calib Start Date: 10/25/2017 13:00

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/25/2017 20:06

Lab File ID: RJ25ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzyl chloride	Ave	1.294	1.591		2.46	2.00	23.0	35.0
1,4-Dichlorobenzene	Ave	1.012	1.203		2.38	2.00	18.9	35.0
4-Isopropyltoluene	Ave	1.894	2.367		2.50	2.00	25.0	35.0
1,2,3-Trimethylbenzene	Ave	1.645	1.832		2.23	2.00	11.3	35.0
1,2-Dichlorobenzene	Ave	0.9822	1.171		2.38	2.00	19.2	35.0
Butylbenzene	Ave	1.731	2.150		2.48	2.00	24.2	35.0
Undecane	Ave	1.014	1.195		2.36	2.00	17.8	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.7356	0.5132		1.40	2.00	-30.2	35.0
1,2,4,5-Tetramethylbenzene	Ave	2.508	2.188		1.74	2.00	-12.8	35.0
Dodecane	Ave	1.016	1.155		2.27	2.00	13.7	35.0
1,2,4-Trichlorobenzene	Ave	0.8170	0.9785		2.40	2.00	19.8	35.0
Naphthalene	Ave	1.890	2.219		2.35	2.00	17.4	35.0
Hexachlorobutadiene	Ave	0.8407	0.9267		2.20	2.00	10.2	35.0
1,2,3-Trichlorobenzene	Ave	0.8074	0.9215		2.28	2.00	14.1	35.0
2-Methylnaphthalene	Ave	0.4957	0.2665		2.47	4.59	-46.2	50.0
1-Methylnaphthalene	Ave	0.4312	0.2477		2.64	4.60	-42.6	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7330	0.7231		3.95	4.00	-1.3	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25ICV.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 25-Oct-2017 21:40:30 ALS Bottle#: 9 Worklist Smp#: 14
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-014
Misc. Info.: 123596
Operator ID: Instrument ID: MR
Sublist:

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 14:02:36 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: liul Date: 27-Oct-2017 14:02:36

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.789	7.779	0.010	83	425799	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.924	9.918	0.006	94	2437587	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.907	14.903	0.004	86	2075967	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.611	16.610	0.001	94	1501202	4.00	3.95	
6 Chlorodifluoromethane	67	3.513	3.505	0.008	96	105098	2.00	1.97	
7 Propene	41	3.518	3.509	0.009	98	228332	2.00	1.91	
8 Dichlorodifluoromethane	85	3.561	3.554	0.007	100	923412	2.00	2.21	
9 Chloromethane	52	3.702	3.690	0.012	100	75707	2.00	1.89	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.723	3.713	0.010	93	645990	2.00	2.12	
11 Vinyl chloride	62	3.836	3.827	0.009	99	237402	2.00	1.96	
13 Butadiene	54	3.912	3.900	0.012	95	156385	2.00	1.98	
12 Butane	43	3.912	3.904	0.008	90	270321	2.00	2.03	
14 Bromomethane	94	4.149	4.140	0.009	98	247179	2.00	2.00	
15 Chloroethane	64	4.268	4.254	0.014	98	109999	2.00	1.98	
16 Ethanol	31	4.376	4.368	0.008	95	363822	10.0	9.35	
17 Vinyl bromide	106	4.500	4.488	0.012	98	268094	2.00	2.08	
18 2-Methylbutane	43	4.559	4.546	0.013	84	190003	2.00	2.09	
19 Acrolein	56	4.721	4.709	0.012	31	71895	2.00	2.08	
20 Trichlorofluoromethane	101	4.721	4.710	0.011	99	846071	2.00	2.02	
21 Acetonitrile	40	4.769	4.770	-0.001	93	57440	2.00	1.98	
22 Acetone	58	4.812	4.807	0.005	98	270478	6.00	5.76	
24 Pentane	72	4.910	4.899	0.011	74	64589	2.00	2.22	
23 Isopropyl alcohol	45	4.910	4.906	0.004	81	1096926	6.00	6.04	
25 Ethyl ether	31	5.039	5.033	0.006	84	256412	2.00	2.06	
26 1,1-Dichloroethene	96	5.287	5.274	0.013	98	351693	2.00	2.07	
27 Acrylonitrile	53	5.357	5.349	0.008	94	229018	2.00	2.17	
28 2-Methyl-2-propanol	59	5.389	5.393	-0.004	93	676352	2.00	2.11	
29 1,1,2-Trichloro-1,2,2-trif	101	5.460	5.446	0.014	97	768313	2.00	2.11	
30 Methylene Chloride	84	5.567	5.552	0.015	88	331870	2.00	1.91	
31 3-Chloro-1-propene	39	5.584	5.572	0.012	98	275975	2.00	2.02	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.697	5.683	0.014	98	952380	2.00	2.07	
33 trans-1,2-Dichloroethene	96	6.268	6.253	0.015	98	360482	2.00	2.06	
34 Methyl tert-butyl ether	73	6.392	6.392	0.000	95	1065614	2.00	2.15	
36 1,1-Dichloroethane	63	6.624	6.609	0.015	100	631412	2.00	2.04	
37 Vinyl acetate	43	6.732	6.727	0.005	99	747694	2.00	2.22	
38 2-Butanone (MEK)	72	7.104	7.107	-0.003	98	161074	2.00	2.13	
39 Hexane	56	7.191	7.179	0.011	86	252826	2.00	2.09	
40 cis-1,2-Dichloroethene	96	7.503	7.492	0.011	92	380495	2.00	2.13	
41 Ethyl acetate	43	7.687	7.688	-0.001	99	588852	2.00	1.98	
42 Chloroform	83	7.821	7.811	0.010	96	812263	2.00	2.02	
43 Tetrahydrofuran	42	8.172	8.178	-0.006	86	298009	2.00	2.03	
44 1,1,1-Trichloroethane	97	8.776	8.769	0.007	95	869460	2.00	2.08	
45 1,2-Dichloroethane	62	8.851	8.840	0.011	99	544654	2.00	2.07	
47 Benzene	78	9.347	9.341	0.006	96	1061203	2.00	2.17	
48 Cyclohexane	69	9.369	9.362	0.007	96	164393	2.00	2.24	
46 n-Butanol	31	9.347	9.365	-0.018	60	86652	2.00	2.14	
50 Carbon tetrachloride	117	9.385	9.378	0.007	96	922634	2.00	2.21	
52 Isooctane	57	10.210	10.206	0.004	98	1517905	2.00	2.18	
53 1,2-Dichloropropane	63	10.604	10.602	0.002	87	356206	2.00	2.11	
54 n-Heptane	71	10.620	10.617	0.003	83	362014	2.00	2.21	
55 Trichloroethene	130	10.674	10.667	0.007	97	523627	2.00	2.22	
56 Dibromomethane	93	10.717	10.711	0.006	94	439427	2.00	2.10	
57 Dichlorobromomethane	83	10.890	10.886	0.004	98	825211	2.00	2.22	
58 1,4-Dioxane	88	10.906	10.912	-0.006	82	158829	2.00	2.11	
59 Methyl methacrylate	41	11.041	11.045	-0.004	98	368468	2.00	2.23	
61 4-Methyl-2-pentanone (MIBK	43	11.925	11.931	-0.006	94	633670	2.00	2.18	
62 cis-1,3-Dichloropropene	75	11.974	11.968	0.006	91	642513	2.00	2.36	
63 trans-1,3-Dichloropropene	75	12.712	12.709	0.003	96	604527	2.00	2.41	
64 Toluene	91	12.847	12.845	0.002	94	1322493	2.00	2.28	
65 1,1,2-Trichloroethane	83	12.906	12.904	0.002	98	365978	2.00	2.19	
66 2-Hexanone	58	13.349	13.355	-0.006	97	355289	2.00	2.42	
67 Chlorodibromomethane	129	13.629	13.628	0.001	98	840212	2.00	2.44	
68 n-Octane	85	13.661	13.658	0.003	86	435481	2.00	2.34	
69 Ethylene Dibromide	107	13.926	13.923	0.003	99	697922	2.00	2.26	
70 Tetrachloroethene	129	14.050	14.048	0.002	97	510757	2.00	2.24	
71 Chlorobenzene	112	14.956	14.952	0.004	95	1078454	2.00	2.21	
72 Ethylbenzene	91	15.279	15.278	0.001	98	1738067	2.00	2.29	
73 m-Xylene & p-Xylene	91	15.452	15.452	0.000	0	2736075	4.00	4.69	
74 Bromoform	173	15.856	15.854	0.002	97	761612	2.00	2.47	
75 Styrene	104	15.921	15.923	-0.002	97	1017828	2.00	2.49	
76 n-Nonane	57	15.964	15.961	0.003	84	738650	2.00	2.30	
77 o-Xylene	91	15.985	15.986	-0.001	98	1384915	2.00	2.22	
78 1,1,2,2-Tetrachloroethane	83	16.309	16.308	0.001	100	925712	2.00	2.26	
79 1,2,3-Trichloropropane	110	16.465	16.464	0.001	97	318763	2.00	2.21	
80 Isopropylbenzene	105	16.606	16.605	0.001	96	2023051	2.00	2.25	
81 N-Propylbenzene	120	17.183	17.182	0.001	99	595507	2.00	2.47	
82 2-Chlorotoluene	126	17.204	17.203	0.001	95	522694	2.00	2.34	
83 4-Ethyltoluene	105	17.350	17.351	-0.001	99	2085318	2.00	2.34	
84 1,3,5-Trimethylbenzene	120	17.436	17.436	0.000	93	902524	2.00	2.47	
85 Alpha Methyl Styrene	118	17.689	17.691	-0.002	89	861835	2.00	2.52	
86 n-Decane	57	17.824	17.826	-0.002	93	1081688	2.00	2.39	
87 tert-Butylbenzene	119	17.905	17.906	-0.001	93	2057995	2.00	2.41	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.921	17.921	0.000	96	1862380	2.00	2.44	
89 1,3-Dichlorobenzene	146	18.191	18.189	0.002	98	1252673	2.00	2.41	
90 sec-Butylbenzene	105	18.207	18.206	0.001	98	2704036	2.00	2.47	
91 Benzyl chloride	91	18.272	18.273	-0.001	98	1651585	2.00	2.46	
92 1,4-Dichlorobenzene	146	18.288	18.287	0.001	95	1248974	2.00	2.38	
93 4-Isopropyltoluene	119	18.390	18.391	-0.001	97	2457226	2.00	2.50	
94 1,2,3-Trimethylbenzene	105	18.428	18.429	-0.001	99	1901252	2.00	2.23	
95 1,2-Dichlorobenzene	146	18.671	18.672	-0.001	95	1215165	2.00	2.38	
98 n-Butylbenzene	91	18.865	18.865	0.000	98	2231747	2.00	2.48	
99 Undecane	57	19.259	19.259	0.000	92	1240507	2.00	2.36	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	99	532660	2.00	1.40	
101 1,2,4,5-Tetramethylbenzene	119	19.674	19.674	0.000	97	2270927	2.00	1.74	
104 Dodecane	57	20.364	20.366	-0.002	98	1199296	2.00	2.27	
105 1,2,4-Trichlorobenzene	180	20.472	20.474	-0.002	94	1015706	2.00	2.40	
106 Naphthalene	128	20.601	20.603	-0.002	99	2302961	2.00	2.35	
107 Hexachlorobutadiene	225	20.855	20.859	-0.004	96	961869	2.00	2.20	
108 1,2,3-Trichlorobenzene	180	20.893	20.897	-0.004	96	956513	2.00	2.28	
109 2-Methylnaphthalene	142	21.701	21.702	-0.001	100	634900	4.59	2.47	
110 1-Methylnaphthalene	142	21.847	21.847	0.000	100	591277	4.60	2.64	
S 111 Xylenes, Total	100				0		6.00	6.91	
S 112 1,2-Dichloroethene, Total	1				0		4.00	4.20	

Reagents:

40CV101S_00051	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

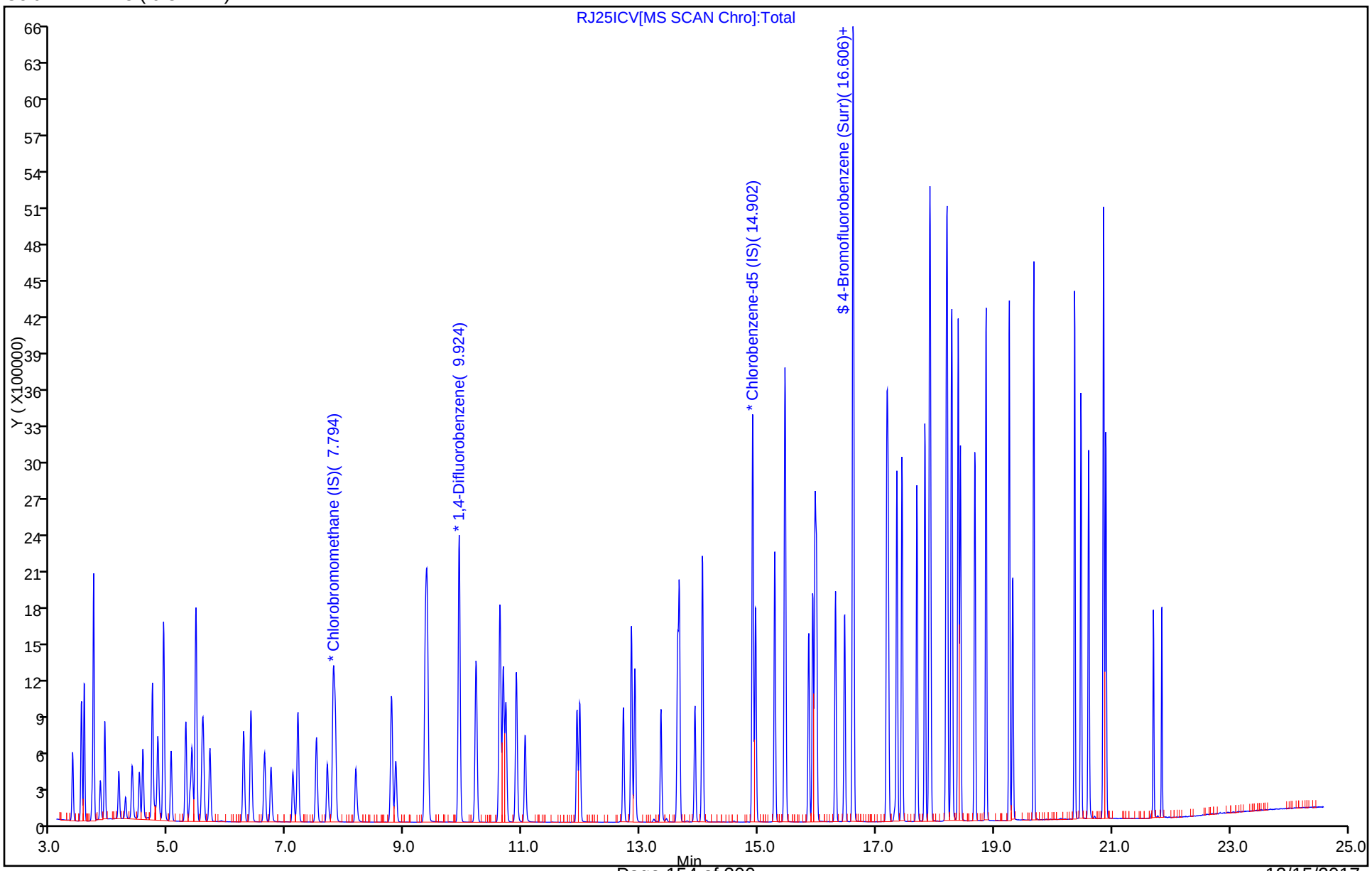
Report Date: 27-Oct-2017 14:02:44 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25ICV.D

Injection Date:	25-Oct-2017 21:40:30	Instrument ID:	MR	Operator ID:	
Lims ID:	ICV			Worklist Smp#:	14
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1

SDG No.:

Lab Sample ID: CCVIS 140-16560/8 Calibration Date: 12/06/2017 12:14

Instrument ID: MR Calib Start Date: 10/25/2017 13:00

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/25/2017 20:06

Lab File ID: RCCVL06A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.5024	0.5588		2.23	2.00	11.2	30.0
Propene	Ave	1.126	1.076		1.91	2.00	-4.4	30.0
Dichlorodifluoromethane	Ave	3.921	4.439		2.27	2.00	13.2	30.0
Chloromethane	Ave	0.3761	0.3543		1.88	2.00	-5.8	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.869	2.858		1.99	2.00	-0.4	30.0
Vinyl chloride	Ave	1.136	1.125		1.98	2.00	-1.0	30.0
1,3-Butadiene	Ave	0.7416	0.7875		2.12	2.00	6.2	30.0
Butane	Ave	1.249	1.333		2.14	2.00	6.7	30.0
Bromomethane	Ave	1.163	1.184		2.04	2.00	1.8	30.0
Chloroethane	Ave	0.5221	0.5601		2.15	2.00	7.3	30.0
Ethanol	Ave	0.3654	0.3760		10.3	10.0	2.9	30.0
Vinyl bromide	Ave	1.211	1.208		2.00	2.00	-0.3	30.0
2-Methylbutane	Ave	0.8530	0.9559		2.24	2.00	12.1	30.0
Acrolein	Ave	0.3243	0.3307		2.04	2.00	2.0	30.0
Trichlorofluoromethane	Ave	3.937	4.292		2.18	2.00	9.0	30.0
Acetonitrile	Ave	0.2722	0.3476		2.56	2.00	27.7	30.0
Acetone	Ave	0.4409	0.4604		6.27	6.00	4.4	30.0
Isopropyl alcohol	Ave	1.706	1.762		6.20	6.00	3.3	30.0
Pentane	Ave	0.2731	0.2860		2.10	2.00	4.7	30.0
Ethyl ether	Ave	1.171	1.154		1.97	2.00	-1.5	30.0
1,1-Dichloroethene	Ave	1.594	1.633		2.05	2.00	2.5	30.0
Acrylonitrile	Ave	0.9935	1.044		2.10	2.00	5.0	30.0
tert-Butyl alcohol	Ave	3.009	3.277		2.18	2.00	8.9	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.426	3.629		2.12	2.00	5.9	30.0
Methylene Chloride	Ave	1.629	1.547		1.90	2.00	-5.0	30.0
3-Chloropropene	Ave	1.281	1.168		1.83	2.00	-8.8	30.0
Carbon disulfide	Ave	4.321	4.553		2.11	2.00	5.4	30.0
trans-1,2-Dichloroethene	Ave	1.640	1.672		2.04	2.00	2.0	30.0
Methyl tert-butyl ether	Ave	4.654	5.162		2.22	2.00	10.9	30.0
1,1-Dichloroethane	Ave	2.901	3.058		2.11	2.00	5.4	30.0
Vinyl acetate	Ave	3.158	3.496		2.22	2.00	10.7	30.0
2-Butanone (MEK)	Ave	0.7119	0.7547		2.12	2.00	6.0	30.0
Hexane	Ave	1.139	1.245		2.19	2.00	9.4	30.0
cis-1,2-Dichloroethene	Ave	1.676	1.714		2.05	2.00	2.3	30.0
Ethyl acetate	Ave	2.792	3.013		2.16	2.00	7.9	30.0
Chloroform	Ave	3.778	4.012		2.13	2.00	6.2	30.0
Tetrahydrofuran	Ave	1.380	1.395		2.02	2.00	1.1	30.0
1,1,1-Trichloroethane	Ave	3.935	4.311		2.19	2.00	9.6	30.0
1,2-Dichloroethane	Ave	0.4310	0.4826		2.24	2.00	12.0	30.0
1-Butanol	Ave	0.0665	0.0662		1.99	2.00	-0.4	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1

SDG No.:

Lab Sample ID: CCVIS 140-16560/8 Calibration Date: 12/06/2017 12:14

Instrument ID: MR Calib Start Date: 10/25/2017 13:00

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/25/2017 20:06

Lab File ID: RCCVL06A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzene	Ave	0.8022	0.8302		2.07	2.00	3.5	30.0
Cyclohexane	Ave	0.1203	0.1358		2.26	2.00	12.9	30.0
Carbon tetrachloride	Ave	0.6847	0.7515		2.20	2.00	9.7	30.0
2,2,4-Trimethylpentane	Ave	1.145	1.237		2.16	2.00	8.1	30.0
1,2-Dichloropropane	Ave	0.2775	0.2899		2.09	2.00	4.5	30.0
Heptane	Ave	0.2692	0.2949		2.19	2.00	9.5	30.0
Trichloroethene	Ave	0.3866	0.4037		2.09	2.00	4.4	30.0
Dibromomethane	Ave	0.3429	0.3578		2.09	2.00	4.4	30.0
Bromodichloromethane	Ave	0.6106	0.6951		2.28	2.00	13.8	30.0
1,4-Dioxane	Ave	0.1235	0.1240		2.01	2.00	0.3	30.0
Methyl methacrylate	Ave	0.2712	0.3209		2.37	2.00	18.3	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4780	0.5272		2.21	2.00	10.3	30.0
cis-1,3-Dichloropropene	Ave	0.4468	0.5147		2.31	2.00	15.2	30.0
trans-1,3-Dichloropropene	Ave	0.4839	0.5400		2.23	2.00	11.6	30.0
Toluene	Ave	1.120	1.217		2.18	2.00	8.7	30.0
1,1,2-Trichloroethane	Ave	0.3219	0.3489		2.17	2.00	8.4	30.0
2-Hexanone	Ave	0.2834	0.3394		2.40	2.00	19.7	30.0
Dibromochloromethane	Ave	0.6633	0.7647		2.31	2.00	15.3	30.0
Octane	Ave	0.3585	0.4075		2.27	2.00	13.7	30.0
1,2-Dibromoethane (EDB)	Ave	0.5963	0.6418		2.15	2.00	7.6	30.0
Tetrachloroethene	Ave	0.4387	0.4635		2.11	2.00	5.6	30.0
Chlorobenzene	Ave	0.9392	0.9607		2.05	2.00	2.3	30.0
Ethylbenzene	Ave	1.466	1.614		2.20	2.00	10.1	30.0
m-Xylene & p-Xylene	Ave	1.124	1.285		4.57	4.00	14.3	30.0
Bromoform	Ave	0.5943	0.6669		2.25	2.00	12.2	30.0
Styrene	Ave	0.7883	0.8987		2.28	2.00	14.0	30.0
Nonane	Ave	0.6196	0.7291		2.35	2.00	17.7	30.0
o-Xylene	Ave	1.201	1.339		2.23	2.00	11.5	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7903	0.8800		2.23	2.00	11.3	30.0
1,2,3-Trichloropropane	Ave	0.2776	0.2926		2.11	2.00	5.4	30.0
Isopropylbenzene	Ave	1.734	1.790		2.06	2.00	3.2	30.0
Propylbenzene	Ave	0.4649	0.5156		2.22	2.00	10.9	30.0
2-Chlorotoluene	Ave	0.4305	0.4570		2.12	2.00	6.1	30.0
4-Ethyltoluene	Ave	1.720	1.987		2.31	2.00	15.5	30.0
1,3,5-Trimethylbenzene	Ave	0.7048	0.8105		2.30	2.00	15.0	30.0
Alpha Methyl Styrene	Ave	0.6597	0.7836		2.38	2.00	18.8	30.0
Decane	Ave	0.8720	1.079		2.48	2.00	23.8	30.0
tert-Butylbenzene	Ave	1.647	1.864		2.26	2.00	13.2	30.0
1,2,4-Trimethylbenzene	Ave	1.470	1.745		2.37	2.00	18.6	30.0
1,3-Dichlorobenzene	Ave	1.002	1.101		2.20	2.00	9.8	30.0
sec-Butylbenzene	Ave	2.109	2.520		2.39	2.00	19.5	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1

SDG No.:

Lab Sample ID: CCVIS 140-16560/8 Calibration Date: 12/06/2017 12:14

Instrument ID: MR Calib Start Date: 10/25/2017 13:00

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/25/2017 20:06

Lab File ID: RCCVL06A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzyl chloride	Ave	1.294	1.512		2.34	2.00	16.9	30.0
1,4-Dichlorobenzene	Ave	1.012	1.114		2.20	2.00	10.0	30.0
4-Isopropyltoluene	Ave	1.894	2.253		2.38	2.00	19.0	30.0
1,2,3-Trimethylbenzene	Ave	1.645	1.973		2.40	2.00	19.9	30.0
1,2-Dichlorobenzene	Ave	0.9822	1.091		2.22	2.00	11.1	30.0
Butylbenzene	Ave	1.731	2.149		2.48	2.00	24.1	30.0
Undecane	Ave	1.014	1.281		2.53	2.00	26.3	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.7356	0.8539		2.32	2.00	16.1	30.0
1,2,4,5-Tetramethylbenzene	Ave	2.508	2.910		2.32	2.00	16.0	30.0
Dodecane	Ave	1.016	1.247		2.46	2.00	22.8	30.0
1,2,4-Trichlorobenzene	Ave	0.8170	0.9083		2.22	2.00	11.2	30.0
Naphthalene	Ave	1.890	2.134		2.26	2.00	12.9	30.0
Hexachlorobutadiene	Ave	0.8407	0.8862		2.11	2.00	5.4	30.0
1,2,3-Trichlorobenzene	Ave	0.8074	0.8557		2.12	2.00	6.0	30.0
2-Methylnaphthalene	Ave	0.4957	0.4241		3.94	4.60	-14.4	50.0
1-Methylnaphthalene	Ave	0.4312	0.3496		3.73	4.60	-18.9	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7330	0.7696		4.20	4.00	5.0	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RCCVL06A.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 06-Dec-2017 12:14:30 ALS Bottle#: 15 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006818-002
Misc. Info.: P49
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 07-Dec-2017 10:16:08 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: tajh Date: 06-Dec-2017 14:56:13

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.768	7.768	0.000	82	256602	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.897	9.897	0.000	95	1521494	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.885	14.885	0.000	88	1316691	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.589	16.589	0.000	97	1013352	4.00	4.20	
6 Chlorodifluoromethane	67	3.518	3.518	0.000	95	71734	2.00	2.23	
7 Propene	41	3.524	3.524	0.000	96	138163	2.00	1.91	
8 Dichlorodifluoromethane	85	3.567	3.567	0.000	100	569792	2.00	2.27	
9 Chloromethane	52	3.702	3.702	0.000	100	45475	2.00	1.88	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.723	3.723	0.000	92	366879	2.00	1.99	
11 Vinyl chloride	62	3.836	3.836	0.000	99	144431	2.00	1.98	
13 Butadiene	54	3.912	3.912	0.000	94	101084	2.00	2.12	
12 Butane	43	3.917	3.917	0.000	91	171115	2.00	2.14	
14 Bromomethane	94	4.149	4.149	0.000	98	151965	2.00	2.04	
15 Chloroethane	64	4.262	4.262	0.000	100	71900	2.00	2.15	
16 Ethanol	31	4.370	4.370	0.000	94	241339	10.0	10.3	
17 Vinyl bromide	106	4.494	4.494	0.000	98	155083	2.00	2.00	
18 2-Methylbutane	43	4.554	4.554	0.000	83	122714	2.00	2.24	
19 Acrolein	56	4.710	4.710	0.000	95	42445	2.00	2.04	
20 Trichlorofluoromethane	101	4.715	4.715	0.000	99	550904	2.00	2.18	
21 Acetonitrile	40	4.753	4.753	0.000	96	44621	2.00	2.56	
22 Acetone	58	4.802	4.802	0.000	99	177325	6.00	6.27	
23 Isopropyl alcohol	45	4.899	4.899	0.000	81	678476	6.00	6.20	
24 Pentane	72	4.904	4.904	0.000	74	36717	2.00	2.10	
25 Ethyl ether	31	5.028	5.028	0.000	81	148129	2.00	1.97	
26 1,1-Dichloroethene	96	5.276	5.276	0.000	96	209685	2.00	2.05	
27 Acrylonitrile	53	5.346	5.346	0.000	93	133958	2.00	2.10	
28 2-Methyl-2-propanol	59	5.379	5.379	0.000	93	420659	2.00	2.18	
29 1,1,2-Trichloro-1,2,2-trif	101	5.443	5.443	0.000	97	465904	2.00	2.12	
30 Methylene Chloride	84	5.551	5.551	0.000	90	198601	2.00	1.90	
31 3-Chloro-1-propene	39	5.573	5.573	0.000	96	149975	2.00	1.83	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.681	5.681	0.000	98	584450	2.00	2.11	
33 trans-1,2-Dichloroethene	96	6.252	6.252	0.000	98	214693	2.00	2.04	
34 Methyl tert-butyl ether	73	6.376	6.376	0.000	95	662587	2.00	2.22	
36 1,1-Dichloroethane	63	6.603	6.603	0.000	100	392599	2.00	2.11	
37 Vinyl acetate	43	6.711	6.711	0.000	99	448803	2.00	2.22	
38 2-Butanone (MEK)	72	7.083	7.083	0.000	98	96881	2.00	2.12	
39 Hexane	56	7.169	7.169	0.000	85	159826	2.00	2.19	
40 cis-1,2-Dichloroethene	96	7.482	7.482	0.000	95	220069	2.00	2.05	
41 Ethyl acetate	43	7.660	7.660	0.000	99	386789	2.00	2.16	
42 Chloroform	83	7.800	7.800	0.000	97	515017	2.00	2.13	
43 Tetrahydrofuran	42	8.145	8.145	0.000	85	179062	2.00	2.02	
44 1,1,1-Trichloroethane	97	8.749	8.749	0.000	95	553423	2.00	2.19	
45 1,2-Dichloroethane	62	8.824	8.824	0.000	99	367322	2.00	2.24	
48 Benzene	78	9.321	9.321	0.000	97	631876	2.00	2.07	
47 n-Butanol	31	9.321	9.321	0.000	61	50396	2.00	1.99	
49 Cyclohexane	69	9.347	9.347	0.000	95	103352	2.00	2.26	
51 Carbon tetrachloride	117	9.358	9.358	0.000	97	571983	2.00	2.20	
52 Isooctane	57	10.183	10.183	0.000	97	941650	2.00	2.16	
53 1,2-Dichloropropane	63	10.582	10.582	0.000	84	220666	2.00	2.09	
54 n-Heptane	71	10.598	10.598	0.000	84	224448	2.00	2.19	
55 Trichloroethene	130	10.647	10.647	0.000	96	307249	2.00	2.09	
56 Dibromomethane	93	10.690	10.690	0.000	96	272356	2.00	2.09	
57 Dichlorobromomethane	83	10.868	10.868	0.000	98	529059	2.00	2.28	
58 1,4-Dioxane	88	10.879	10.879	0.000	85	94343	2.00	2.01	
59 Methyl methacrylate	41	11.019	11.019	0.000	97	244258	2.00	2.37	
61 4-Methyl-2-pentanone (MIBK	43	11.898	11.898	0.000	94	401271	2.00	2.21	
62 cis-1,3-Dichloropropene	75	11.947	11.947	0.000	93	391729	2.00	2.31	
63 trans-1,3-Dichloropropene	75	12.685	12.685	0.000	96	355676	2.00	2.23	
64 Toluene	91	12.826	12.826	0.000	94	801950	2.00	2.18	
65 1,1,2-Trichloroethane	83	12.879	12.879	0.000	99	229789	2.00	2.17	
66 2-Hexanone	58	13.327	13.327	0.000	96	223527	2.00	2.40	
67 Chlorodibromomethane	129	13.607	13.607	0.000	98	503731	2.00	2.31	
68 n-Octane	85	13.640	13.640	0.000	86	268401	2.00	2.27	
69 Ethylene Dibromide	107	13.899	13.899	0.000	98	422776	2.00	2.15	
70 Tetrachloroethene	129	14.028	14.028	0.000	95	305291	2.00	2.11	
71 Chlorobenzene	112	14.934	14.934	0.000	92	632795	2.00	2.05	
72 Ethylbenzene	91	15.258	15.258	0.000	99	1063002	2.00	2.20	
73 m-Xylene & p-Xylene	91	15.430	15.430	0.000	100	1692912	4.00	4.57	
74 Bromoform	173	15.834	15.834	0.000	96	439298	2.00	2.25	
75 Styrene	104	15.905	15.905	0.000	98	591950	2.00	2.28	
76 n-Nonane	57	15.942	15.942	0.000	84	480237	2.00	2.35	
77 o-Xylene	91	15.964	15.964	0.000	98	882126	2.00	2.23	
78 1,1,2,2-Tetrachloroethane	83	16.287	16.287	0.000	99	579637	2.00	2.23	
79 1,2,3-Trichloropropane	110	16.444	16.444	0.000	98	192702	2.00	2.11	
80 Isopropylbenzene	105	16.584	16.584	0.000	97	1178875	2.00	2.06	
81 N-Propylbenzene	120	17.161	17.161	0.000	99	339603	2.00	2.22	
82 2-Chlorotoluene	126	17.183	17.183	0.000	97	300989	2.00	2.12	
83 4-Ethyltoluene	105	17.334	17.334	0.000	99	1309095	2.00	2.31	
84 1,3,5-Trimethylbenzene	120	17.420	17.420	0.000	92	533890	2.00	2.30	
85 Alpha Methyl Styrene	118	17.673	17.673	0.000	87	516129	2.00	2.38	
86 n-Decane	57	17.808	17.808	0.000	93	711005	2.00	2.48	
87 tert-Butylbenzene	119	17.889	17.889	0.000	91	1227601	2.00	2.26	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.900	17.900	0.000	96	1149121	2.00	2.37	
89 1,3-Dichlorobenzene	146	18.169	18.169	0.000	99	725079	2.00	2.20	
90 sec-Butylbenzene	105	18.186	18.186	0.000	98	1660009	2.00	2.39	
91 Benzyl chloride	91	18.256	18.256	0.000	98	995998	2.00	2.34	
92 1,4-Dichlorobenzene	146	18.266	18.266	0.000	96	733694	2.00	2.20	
93 4-Isopropyltoluene	119	18.374	18.374	0.000	96	1484146	2.00	2.38	
94 1,2,3-Trimethylbenzene	105	18.412	18.412	0.000	98	1299646	2.00	2.40	
95 1,2-Dichlorobenzene	146	18.655	18.655	0.000	94	718868	2.00	2.22	
98 n-Butylbenzene	91	18.849	18.849	0.000	98	1415462	2.00	2.48	
99 Undecane	57	19.242	19.242	0.000	93	843584	2.00	2.53	
100 1,2-Dibromo-3-Chloropropan	157	19.302	19.302	0.000	98	562432	2.00	2.32	
101 1,2,4,5-Tetramethylbenzene	119	19.658	19.658	0.000	96	1917029	2.00	2.32	
104 Dodecane	57	20.353	20.353	0.000	98	821486	2.00	2.46	
105 1,2,4-Trichlorobenzene	180	20.461	20.461	0.000	94	598280	2.00	2.22	
106 Naphthalene	128	20.591	20.591	0.000	99	1405926	2.00	2.26	
107 Hexachlorobutadiene	225	20.844	20.844	0.000	95	583707	2.00	2.11	
108 1,2,3-Trichlorobenzene	180	20.882	20.882	0.000	94	563634	2.00	2.12	
109 2-Methylnaphthalene	142	21.691	21.691	0.000	100	642522	4.60	3.94	
110 1-Methylnaphthalene	142	21.836	21.836	0.000	99	529620	4.60	3.73	
S 111 Xylenes, Total	100				0		6.00	6.81	
S 112 1,2-Dichloroethene, Total	1				0		4.00	4.09	

Reagents:

40CV101P_00049	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

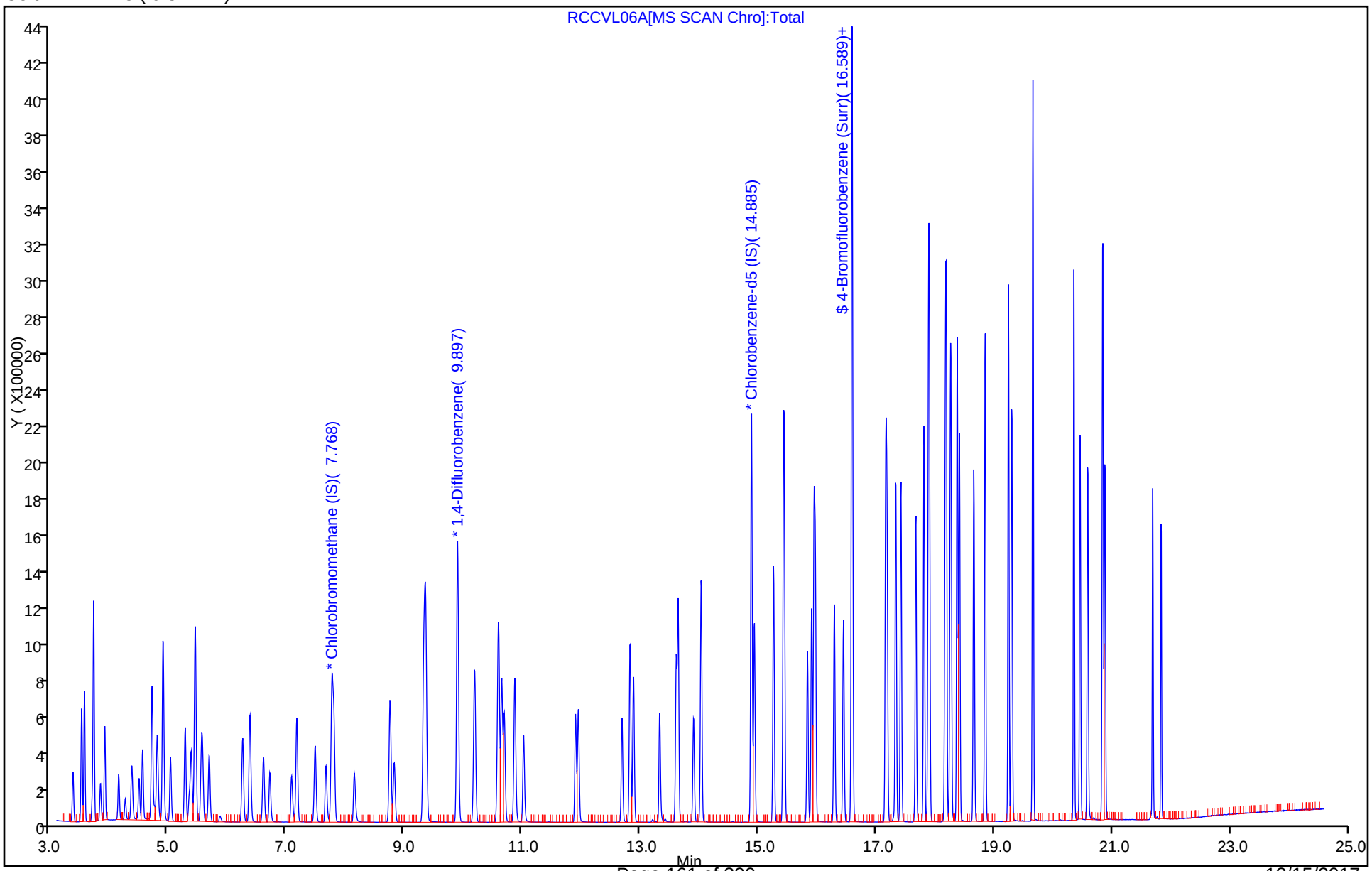
Report Date: 07-Dec-2017 10:16:10 Chrom Revision: 2.2 05-Dec-2017 07:36:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RCCVL06A.D

Injection Date:	06-Dec-2017 12:14:30	Instrument ID:	MR	Operator ID:	
Lims ID:	CCVIS			Worklist Smp#:	8
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RBFBJ25.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	25-Oct-2017 11:43:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006453-001				
Misc. Info.:	TUNE				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	27-Oct-2017 11:55:49	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				
First Level Reviewer: tajh		Date:	26-Oct-2017 09:16:17		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.340	4.340	0.000	0	1559366	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

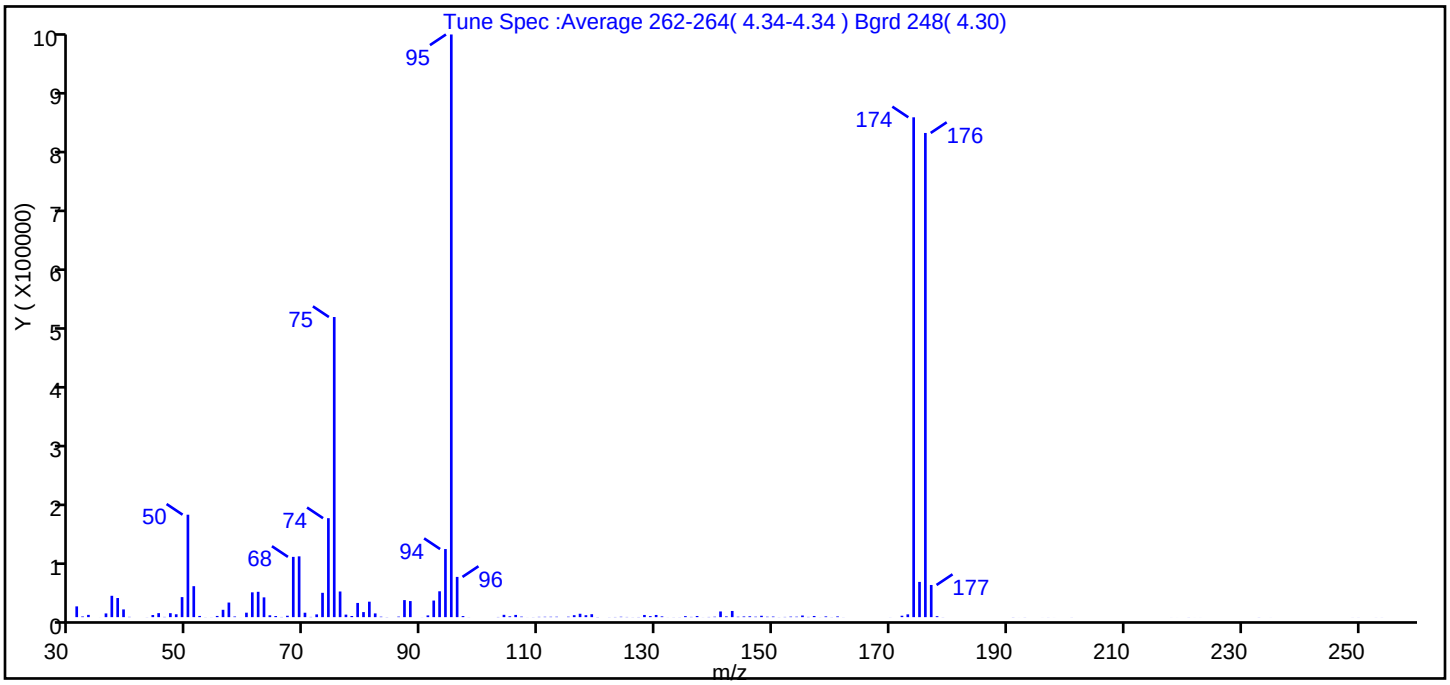
40MXSUR_00002 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RBFBJ25.D
Injection Date: 25-Oct-2017 11:43:30 Instrument ID: MR
Lims ID: BFB
Client ID:
Operator ID: ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	17.6
75	30 to 60% of m/z 95	51.5
96	5 to 9% of m/z 95	6.9
173	Less than 2% of m/z 174	0.5 (0.6)
174	50 to 120% of m/z 95	85.8
175	5 to 9% of m/z 174	6.0 (7.1)
176	Greater than 95% but less than 101% of m/z 174	83.1 (96.9)
177	5 to 9% of m/z 176	5.5 (6.6)

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RBFBJ25.D\MR_TO15.rslt\spectra.d
Injection Date: 25-Oct-2017 11:43:30
Spectrum: Tune Spec :Average 262-264(4.34-4.34) Bgrd 248(4.30)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 148

m/z	Y	m/z	Y	m/z	Y	m/z	Y
31.00	18480	71.00	383	115.00	753	153.00	902
32.00	1144	72.00	4718	116.00	3350	154.00	773
33.00	3880	73.00	41752	117.00	5823	155.00	2792
35.00	57	74.00	169856	118.00	3325	156.00	409
36.00	6392	75.00	515072	119.00	5054	157.00	1980
37.00	36648	76.00	44040	120.00	245	158.00	83
38.00	32824	77.00	4326	122.00	143	159.00	1286
39.00	13275	78.00	1962	123.00	287	160.00	164
40.00	467	79.00	24368	124.00	669	161.00	1263
43.00	130	80.00	8656	125.00	335	162.00	104
44.00	3621	81.00	26536	126.00	149	170.00	86
45.00	6874	82.00	6400	127.00	269	172.00	2407
46.00	391	83.00	771	128.00	3739	173.00	4794
47.00	6822	84.00	221	129.00	1727	174.00	857856
48.00	4926	86.00	909	130.00	3738	175.00	60496
49.00	34368	87.00	29232	131.00	1312	176.00	830976
50.00	175808	88.00	27576	132.00	79	177.00	55208
51.00	53160	90.00	91	133.00	141	178.00	1646
52.00	2069	91.00	2969	134.00	148	179.00	145
53.00	142	92.00	28480	135.00	1744	191.00	182
54.00	110	93.00	44376	136.00	404	192.00	36
55.00	2055	94.00	116872	137.00	1970	193.00	129
56.00	12613	95.00	1000000	138.00	94	196.00	44
57.00	25048	96.00	69048	139.00	335	197.00	89
58.00	1102	97.00	1859	140.00	741	198.00	38
59.00	53	98.00	119	141.00	9765	201.00	101
60.00	7638	103.00	310	142.00	1256	218.00	48
61.00	42584	104.00	3976	143.00	10604	219.00	23
62.00	43496	105.00	1381	144.00	694	221.00	122
63.00	33944	106.00	3817	145.00	1181	222.00	34
64.00	3177	107.00	886	146.00	1466	223.00	36
65.00	1919	108.00	61	147.00	786	233.00	132
66.00	302	109.00	161	148.00	2376	235.00	48

Report Date: 27-Oct-2017 11:55:49 Chrom Revision: 2.2 16-Aug-2017 16:24:46
Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RBFBJ25.D\MR_TO15.rslt\spectra.d
Injection Date: 25-Oct-2017 11:43:30
Spectrum: Tune Spec :Average 262-264(4.34-4.34) Bgrd 248(4.30)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 148

m/z	Y	m/z	Y	m/z	Y	m/z	Y
67.00	2410	110.00	490	149.00	702	249.00	70
68.00	103432	111.00	617	150.00	981	250.00	73
69.00	104336	112.00	655	151.00	147	253.00	72
70.00	7580	113.00	702	152.00	375	254.00	79

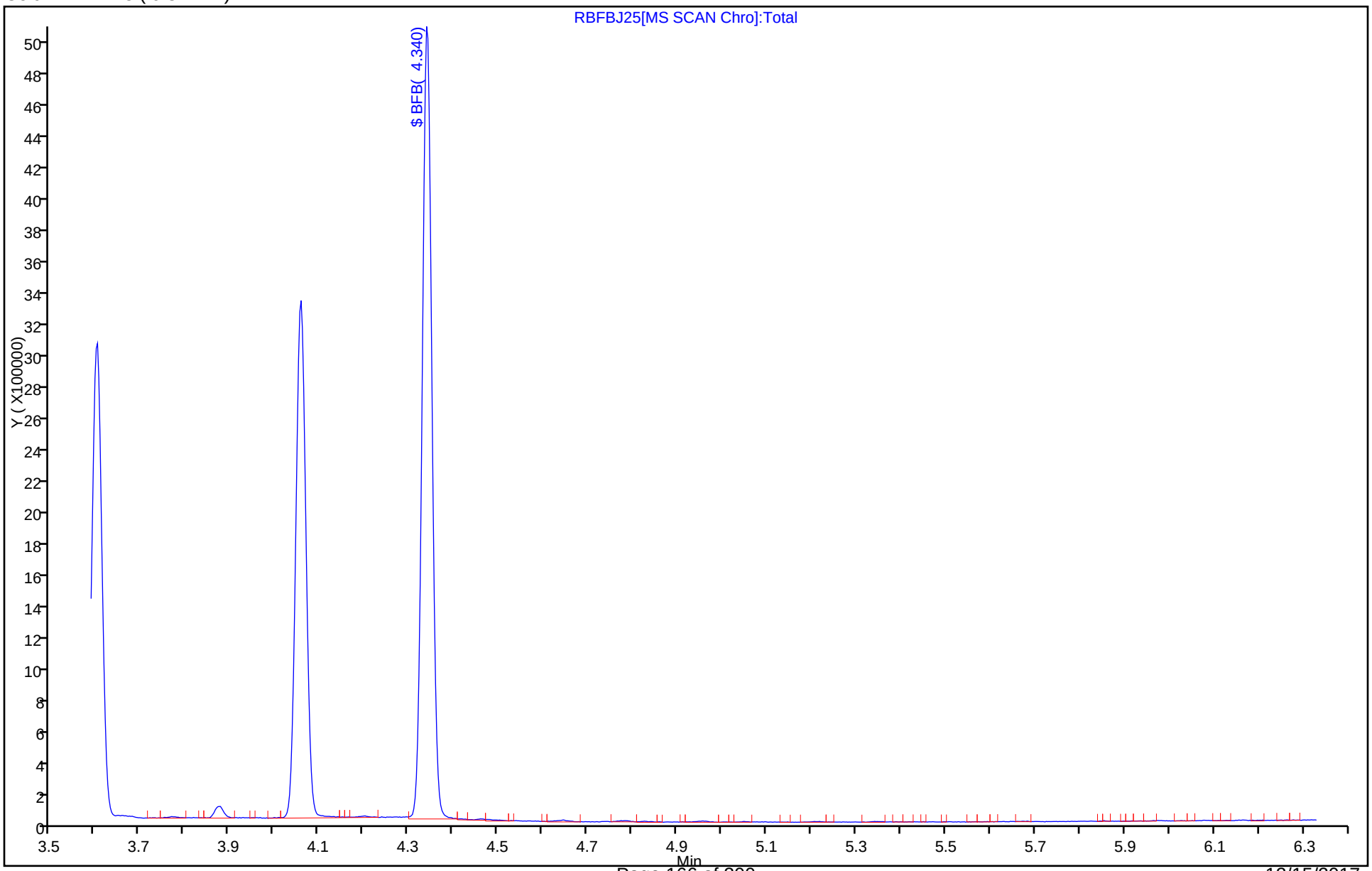
Report Date: 27-Oct-2017 11:55:49 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RBFBJ25.D

Injection Date:	25-Oct-2017 11:43:30	Instrument ID:	MR	Operator ID:	
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RBFBL06A.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	06-Dec-2017 11:43:30	ALS Bottle#:	16	Worklist Smp#:	7
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006818-001				
Misc. Info.:	TUNE				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	07-Dec-2017 10:16:05	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK028				

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.331	4.331	0.000	0	974032	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

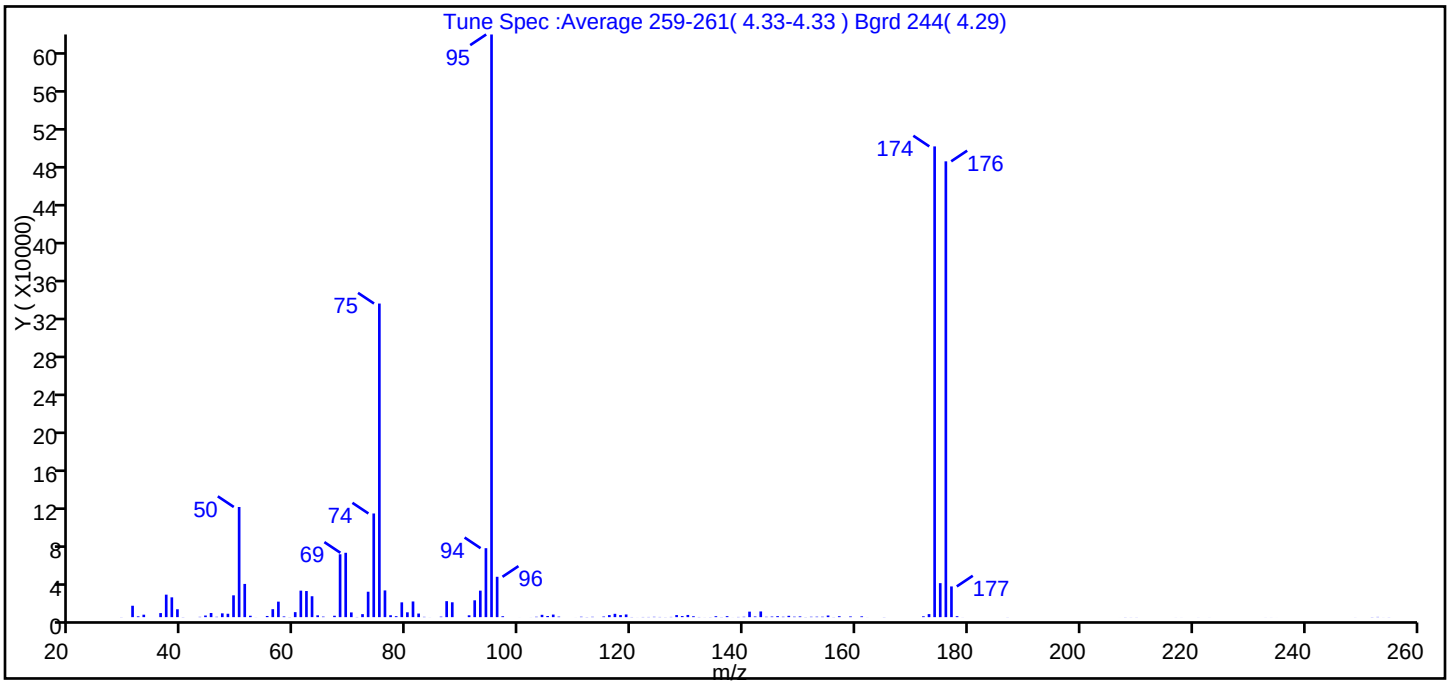
40MXSUR_00002 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RBFBL06A.D
Injection Date: 06-Dec-2017 11:43:30 Instrument ID: MR
Lims ID: BFB
Client ID:
Operator ID: ALS Bottle#: 16 Worklist Smp#: 7
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.9
75	30 to 60% of m/z 95	53.8
96	5 to 9% of m/z 95	6.9
173	Less than 2% of m/z 174	0.5 (0.6)
174	50 to 120% of m/z 95	80.8
175	5 to 9% of m/z 174	5.8 (7.2)
176	Greater than 95% but less than 101% of m/z 174	78.2 (96.8)
177	5 to 9% of m/z 176	5.3 (6.7)

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RBFBL06A.D\MR_TO15.rslt\spectra.d
Injection Date: 06-Dec-2017 11:43:30
Spectrum: Tune Spec :Average 259-261(4.33-4.33) Bgrd 244(4.29)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 145

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	100	72.00	3188	118.00	2203	155.00	1725
31.00	12066	73.00	26912	119.00	2835	156.00	113
32.00	806	74.00	109776	120.00	159	157.00	972
33.00	2601	75.00	332096	121.00	37	158.00	16
36.00	4305	76.00	28312	122.00	182	159.00	741
37.00	23816	77.00	2009	123.00	198	161.00	844
38.00	20968	78.00	1009	124.00	345	162.00	35
39.00	8355	79.00	15673	125.00	201	165.00	113
40.00	135	80.00	5116	126.00	99	172.00	889
43.00	310	81.00	16616	127.00	238	173.00	3217
44.00	1709	82.00	3812	128.00	2196	174.00	498496
45.00	4395	83.00	310	129.00	1131	175.00	36008
46.00	354	84.00	45	130.00	2320	176.00	482688
47.00	4025	86.00	529	131.00	938	177.00	32528
48.00	3606	87.00	16928	132.00	172	178.00	988
49.00	23104	88.00	15730	133.00	54	179.00	47
50.00	116648	91.00	1942	134.00	115	187.00	74
51.00	35176	92.00	17824	135.00	996	191.00	5
52.00	1488	93.00	28064	136.00	127	207.00	13
53.00	45	94.00	73024	137.00	1055	208.00	97
55.00	1228	95.00	617024	138.00	33	209.00	69
56.00	8440	96.00	42736	139.00	210	210.00	76
57.00	16416	97.00	960	140.00	401	217.00	41
58.00	729	100.00	24	141.00	5821	218.00	33
59.00	124	102.00	38	142.00	703	221.00	38
60.00	5293	103.00	394	143.00	6033	223.00	33
61.00	28064	104.00	2466	144.00	385	233.00	38
62.00	27656	105.00	1200	145.00	632	234.00	35
63.00	22144	106.00	2728	146.00	1054	235.00	12
64.00	1920	107.00	543	147.00	418	249.00	45
65.00	562	110.00	31	148.00	1403	252.00	143
66.00	3	111.00	419	149.00	502	253.00	244
67.00	1479	112.00	148	150.00	794	254.00	40

Report Date: 07-Dec-2017 10:16:06 Chrom Revision: 2.2 05-Dec-2017 07:36:06
Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RBFBL06A.D\MR_TO15.rslt\spectra.d
Injection Date: 06-Dec-2017 11:43:30
Spectrum: Tune Spec :Average 259-261(4.33-4.33) Bgrd 244(4.29)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 145

m/z	Y	m/z	Y	m/z	Y	m/z	Y
68.00	66576	113.00	352	151.00	126	255.00	87
69.00	68160	115.00	637	152.00	417		
70.00	5002	116.00	2162	153.00	491		
71.00	182	117.00	3524	154.00	443		

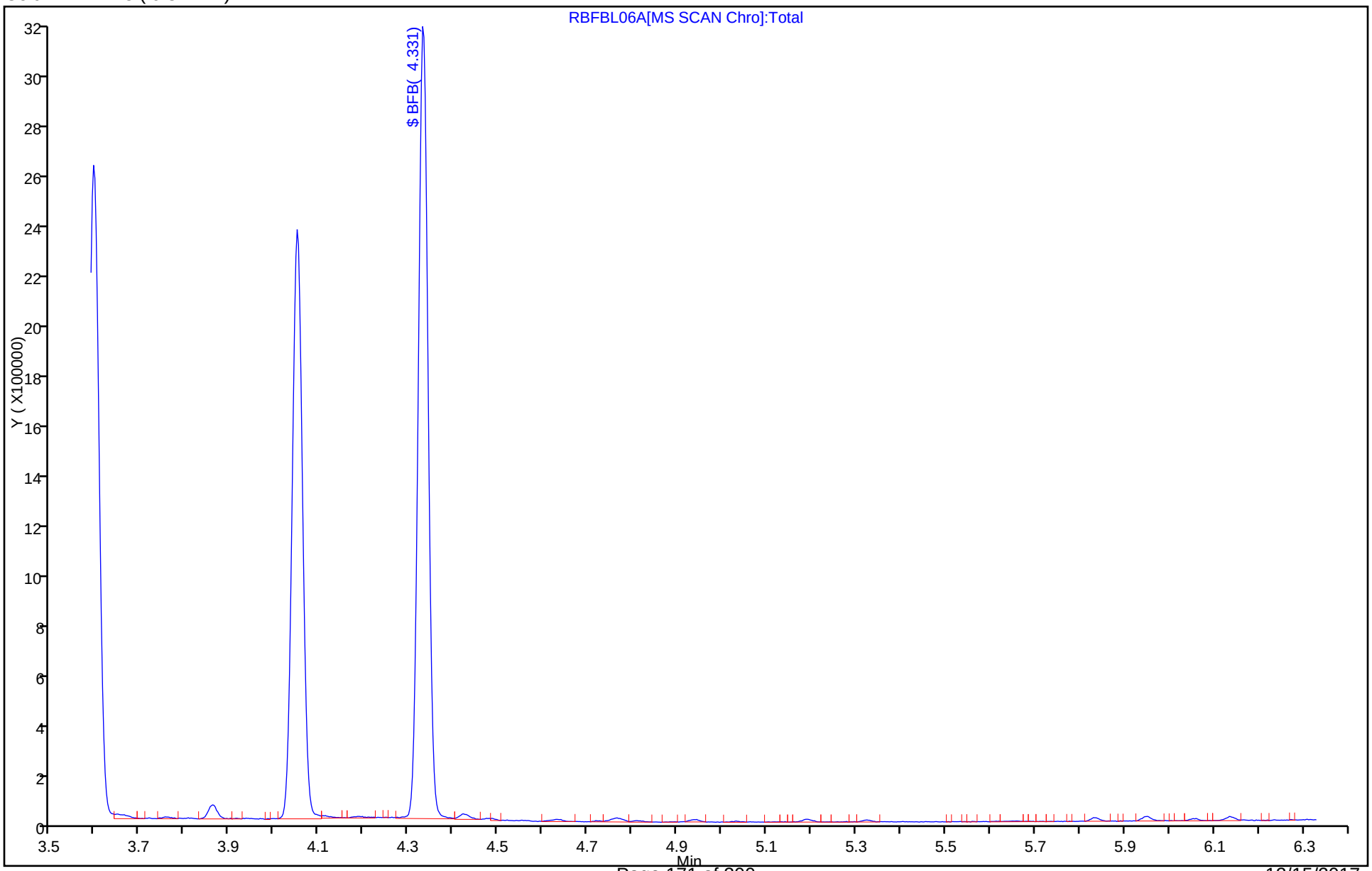
Report Date: 07-Dec-2017 10:16:06 Chrom Revision: 2.2 05-Dec-2017 07:36:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RBFBL06A.D

Injection Date:	06-Dec-2017 11:43:30	Instrument ID:	MR	Operator ID:	
Lims ID:	BFB			Worklist Smp#:	7
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-16560/16

Matrix: Air Lab File ID: BLKL10086.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 12/06/2017 14:35

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 16560 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	0.0200	J	0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10079-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-16560/16

Matrix: Air | Lab File ID: BLKL10086.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 12/06/2017 14:35

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 16560 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	0.109	J	0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\BLKL10086.D
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 06-Dec-2017 14:35:30 ALS Bottle#: 1 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006818-010
Misc. Info.: 11198
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 07-Dec-2017 10:16:08 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: tajh Date: 06-Dec-2017 15:14:26

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.757	7.768	-0.011	81	260517	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.892	9.897	-0.005	95	1532514	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.880	14.885	-0.005	88	1278293	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.589	16.589	0.000	87	978755	4.00	4.18	
39 Hexane	56	7.174	7.169	0.005	85	1150		0.0155	
44 1,1,1-Trichloroethane	97	8.749	8.749	0.000	93	5128		0.0200	
50 Thiophene	84	9.245	9.342	-0.102	1	161		NC	
102 1,2,3,5-Tetramethylbenzene	119	19.663	19.704	-0.048	92	942		NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

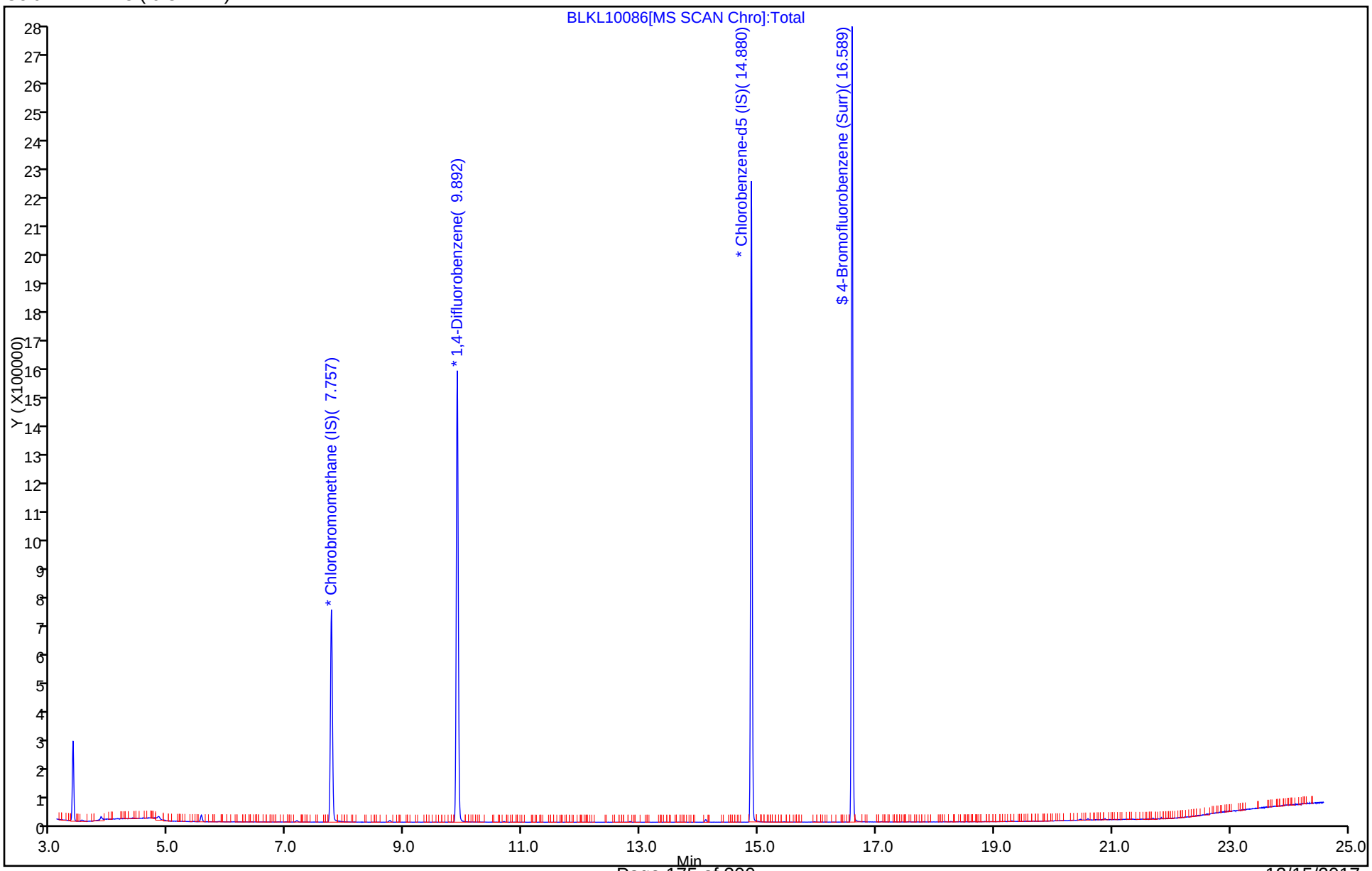
Report Date: 07-Dec-2017 10:16:17 Chrom Revision: 2.2 05-Dec-2017 07:36:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\BLKL10086.D

Injection Date:	06-Dec-2017 14:35:30	Instrument ID:	MR	Operator ID:	
Lims ID:	mb			Worklist Smp#:	16
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

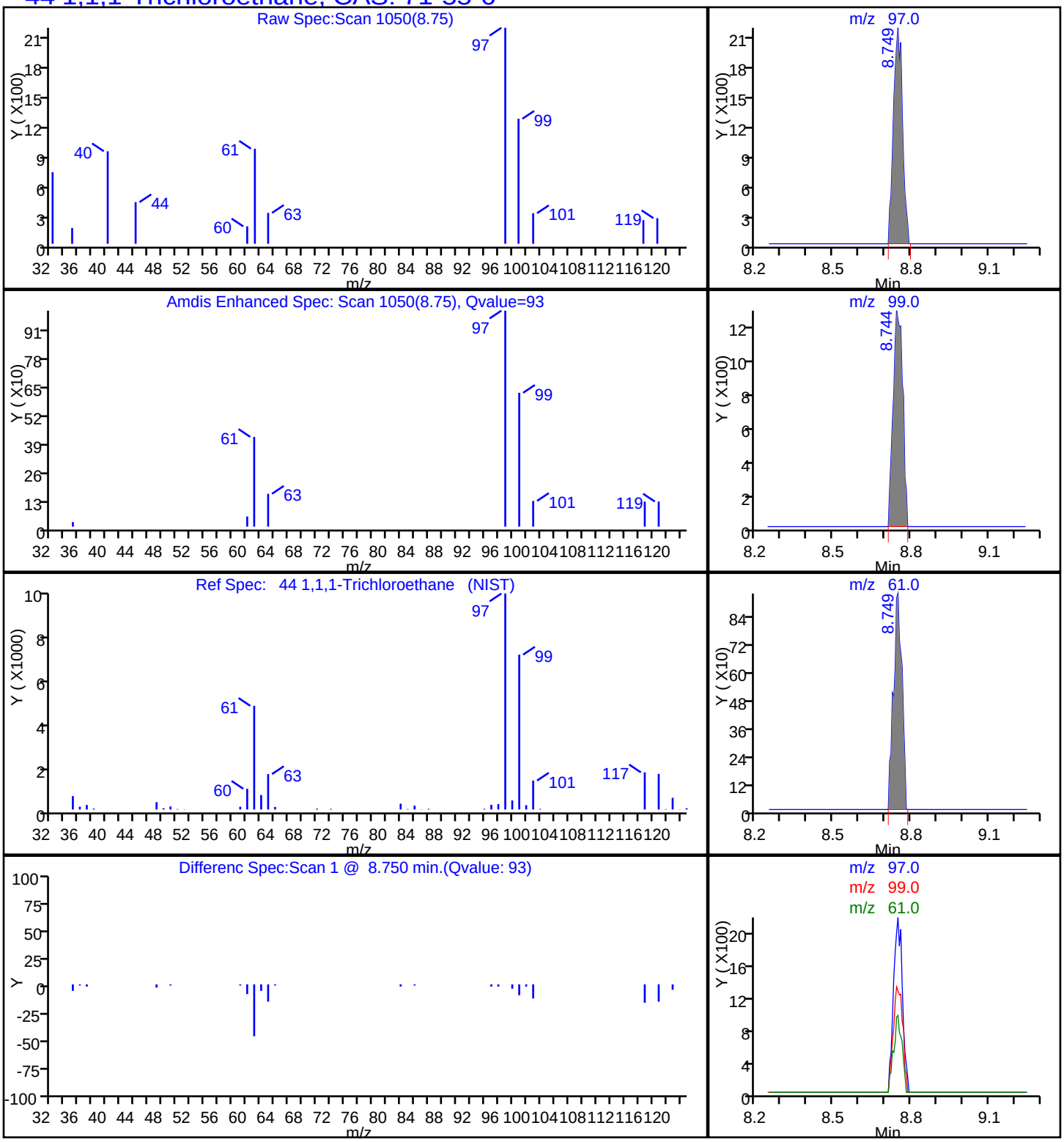
Data File:	\\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\BLKL10086.D				
Lims ID:	mb				
Client ID:					
Sample Type:	MB				
Inject. Date:	06-Dec-2017 14:35:30	ALS Bottle#:	1	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006818-010				
Misc. Info.:	11198				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	07-Dec-2017 10:16:08	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK028				
First Level Reviewer: tajh		Date:	06-Dec-2017 15:14:26		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.18	104.46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\BLKL10086.D
Injection Date: 06-Dec-2017 14:35:30 Instrument ID: MR
Lims ID: mb
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

44 1,1,1-Trichloroethane, CAS: 71-55-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 140-16560/1008

Matrix: Air Lab File ID: RCCVL06A-LCS.d

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 12/06/2017 12:14

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 16560 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.07		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.20		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.23		0.080	0.015
67-66-3	Chloroform	119.38	2.13		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	2.05		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.27		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	2.11		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	2.24		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	2.05		0.080	0.014
100-41-4	Ethylbenzene	106.17	2.20		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.90		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	2.22		0.40	0.068
91-20-3	Naphthalene	128.17	2.26		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.11		0.080	0.016
108-88-3	Toluene	92.14	2.18		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	2.04		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	2.22		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	2.19		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	2.17		0.080	0.021
79-01-6	Trichloroethene	131.39	2.09		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	2.40		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	2.37		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	2.30		0.080	0.026
75-01-4	Vinyl chloride	62.50	1.98		0.040	0.029
1330-20-7	Xylenes, Total	106.17	6.80		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RCCVL06A-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 06-Dec-2017 12:14:30 ALS Bottle#: 15 Worklist Smp#: 1008
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006818-002
Misc. Info.: P49
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 07-Dec-2017 10:16:08 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: tajh Date: 06-Dec-2017 14:56:13

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.768	7.768	0.000	82	256602	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.897	9.897	0.000	95	1521494	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.885	14.885	0.000	88	1316691	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.589	16.589	0.000	97	1013352	4.00	4.20	
6 Chlorodifluoromethane	67	3.518	3.518	0.000	95	71734	2.00	2.23	
7 Propene	41	3.524	3.524	0.000	96	138163	2.00	1.91	
8 Dichlorodifluoromethane	85	3.567	3.567	0.000	100	569792	2.00	2.27	
9 Chloromethane	52	3.702	3.702	0.000	100	45475	2.00	1.88	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.723	3.723	0.000	92	366879	2.00	1.99	
11 Vinyl chloride	62	3.836	3.836	0.000	99	144431	2.00	1.98	
13 Butadiene	54	3.912	3.912	0.000	94	101084	2.00	2.12	
12 Butane	43	3.917	3.917	0.000	91	171115	2.00	2.14	
14 Bromomethane	94	4.149	4.149	0.000	98	151965	2.00	2.04	
15 Chloroethane	64	4.262	4.262	0.000	100	71900	2.00	2.15	
16 Ethanol	31	4.370	4.370	0.000	94	241339	10.0	10.3	
17 Vinyl bromide	106	4.494	4.494	0.000	98	155083	2.00	2.00	
18 2-Methylbutane	43	4.554	4.554	0.000	83	122714	2.00	2.24	
19 Acrolein	56	4.710	4.710	0.000	95	42445	2.00	2.04	
20 Trichlorofluoromethane	101	4.715	4.715	0.000	99	550904	2.00	2.18	
21 Acetonitrile	40	4.753	4.753	0.000	96	44621	2.00	2.56	
22 Acetone	58	4.802	4.802	0.000	99	177325	6.00	6.27	
23 Isopropyl alcohol	45	4.899	4.899	0.000	81	678476	6.00	6.20	
24 Pentane	72	4.904	4.904	0.000	74	36717	2.00	2.10	
25 Ethyl ether	31	5.028	5.028	0.000	81	148129	2.00	1.97	
26 1,1-Dichloroethene	96	5.276	5.276	0.000	96	209685	2.00	2.05	
27 Acrylonitrile	53	5.346	5.346	0.000	93	133958	2.00	2.10	
28 2-Methyl-2-propanol	59	5.379	5.379	0.000	93	420659	2.00	2.18	
29 1,1,2-Trichloro-1,2,2-trif	101	5.443	5.443	0.000	97	465904	2.00	2.12	
30 Methylene Chloride	84	5.551	5.551	0.000	90	198601	2.00	1.90	
31 3-Chloro-1-propene	39	5.573	5.573	0.000	96	149975	2.00	1.83	
32 Carbon disulfide	76	5.681	5.681	0.000	98	584450	2.00	2.11	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 trans-1,2-Dichloroethene	96	6.252	6.252	0.000	98	214693	2.00	2.04	
34 Methyl tert-butyl ether	73	6.376	6.376	0.000	95	662587	2.00	2.22	
36 1,1-Dichloroethane	63	6.603	6.603	0.000	100	392599	2.00	2.11	
37 Vinyl acetate	43	6.711	6.711	0.000	99	448803	2.00	2.22	
38 2-Butanone (MEK)	72	7.083	7.083	0.000	98	96881	2.00	2.12	
39 Hexane	56	7.169	7.169	0.000	85	159826	2.00	2.19	
40 cis-1,2-Dichloroethene	96	7.482	7.482	0.000	95	220069	2.00	2.05	
41 Ethyl acetate	43	7.660	7.660	0.000	99	386789	2.00	2.16	
42 Chloroform	83	7.800	7.800	0.000	97	515017	2.00	2.13	
43 Tetrahydrofuran	42	8.145	8.145	0.000	85	179062	2.00	2.02	
44 1,1,1-Trichloroethane	97	8.749	8.749	0.000	95	553423	2.00	2.19	
45 1,2-Dichloroethane	62	8.824	8.824	0.000	99	367322	2.00	2.24	
48 Benzene	78	9.321	9.321	0.000	97	631876	2.00	2.07	
47 n-Butanol	31	9.321	9.321	0.000	61	50396	2.00	1.99	
49 Cyclohexane	69	9.347	9.347	0.000	95	103352	2.00	2.26	
51 Carbon tetrachloride	117	9.358	9.358	0.000	97	571983	2.00	2.20	
52 Isooctane	57	10.183	10.183	0.000	97	941650	2.00	2.16	
53 1,2-Dichloropropane	63	10.582	10.582	0.000	84	220666	2.00	2.09	
54 n-Heptane	71	10.598	10.598	0.000	84	224448	2.00	2.19	
55 Trichloroethene	130	10.647	10.647	0.000	96	307249	2.00	2.09	
56 Dibromomethane	93	10.690	10.690	0.000	96	272356	2.00	2.09	
57 Dichlorobromomethane	83	10.868	10.868	0.000	98	529059	2.00	2.28	
58 1,4-Dioxane	88	10.879	10.879	0.000	85	94343	2.00	2.01	
59 Methyl methacrylate	41	11.019	11.019	0.000	97	244258	2.00	2.37	
61 4-Methyl-2-pentanone (MIBK	43	11.898	11.898	0.000	94	401271	2.00	2.21	
62 cis-1,3-Dichloropropene	75	11.947	11.947	0.000	93	391729	2.00	2.31	
63 trans-1,3-Dichloropropene	75	12.685	12.685	0.000	96	355676	2.00	2.23	
64 Toluene	91	12.826	12.826	0.000	94	801950	2.00	2.18	
65 1,1,2-Trichloroethane	83	12.879	12.879	0.000	99	229789	2.00	2.17	
66 2-Hexanone	58	13.327	13.327	0.000	96	223527	2.00	2.40	
67 Chlorodibromomethane	129	13.607	13.607	0.000	98	503731	2.00	2.31	
68 n-Octane	85	13.640	13.640	0.000	86	268401	2.00	2.27	
69 Ethylene Dibromide	107	13.899	13.899	0.000	98	422776	2.00	2.15	
70 Tetrachloroethene	129	14.028	14.028	0.000	95	305291	2.00	2.11	
71 Chlorobenzene	112	14.934	14.934	0.000	92	632795	2.00	2.05	
72 Ethylbenzene	91	15.258	15.258	0.000	99	1063002	2.00	2.20	
73 m-Xylene & p-Xylene	91	15.430	15.430	0.000	100	1692912	4.00	4.57	
74 Bromoform	173	15.834	15.834	0.000	96	439298	2.00	2.25	
75 Styrene	104	15.905	15.905	0.000	98	591950	2.00	2.28	
76 n-Nonane	57	15.942	15.942	0.000	84	480237	2.00	2.35	
77 o-Xylene	91	15.964	15.964	0.000	98	882126	2.00	2.23	
78 1,1,2,2-Tetrachloroethane	83	16.287	16.287	0.000	99	579637	2.00	2.23	
79 1,2,3-Trichloropropane	110	16.444	16.444	0.000	98	192702	2.00	2.11	
80 Isopropylbenzene	105	16.584	16.584	0.000	97	1178875	2.00	2.06	
81 N-Propylbenzene	120	17.161	17.161	0.000	99	339603	2.00	2.22	
82 2-Chlorotoluene	126	17.183	17.183	0.000	97	300989	2.00	2.12	
83 4-Ethyltoluene	105	17.334	17.334	0.000	99	1309095	2.00	2.31	
84 1,3,5-Trimethylbenzene	120	17.420	17.420	0.000	92	533890	2.00	2.30	
85 Alpha Methyl Styrene	118	17.673	17.673	0.000	87	516129	2.00	2.38	
86 n-Decane	57	17.808	17.808	0.000	93	711005	2.00	2.48	
87 tert-Butylbenzene	119	17.889	17.889	0.000	91	1227601	2.00	2.26	
88 1,2,4-Trimethylbenzene	105	17.900	17.900	0.000	96	1149121	2.00	2.37	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
89 1,3-Dichlorobenzene	146	18.169	18.169	0.000	99	725079	2.00	2.20	
90 sec-Butylbenzene	105	18.186	18.186	0.000	98	1660009	2.00	2.39	
91 Benzyl chloride	91	18.256	18.256	0.000	98	995998	2.00	2.34	
92 1,4-Dichlorobenzene	146	18.266	18.266	0.000	96	733694	2.00	2.20	
93 4-Isopropyltoluene	119	18.374	18.374	0.000	96	1484146	2.00	2.38	
94 1,2,3-Trimethylbenzene	105	18.412	18.412	0.000	98	1299646	2.00	2.40	
95 1,2-Dichlorobenzene	146	18.655	18.655	0.000	94	718868	2.00	2.22	
98 n-Butylbenzene	91	18.849	18.849	0.000	98	1415462	2.00	2.48	
99 Undecane	57	19.242	19.242	0.000	93	843584	2.00	2.53	
100 1,2-Dibromo-3-Chloropropan	157	19.302	19.302	0.000	98	562432	2.00	2.32	
101 1,2,4,5-Tetramethylbenzene	119	19.658	19.658	0.000	96	1917029	2.00	2.32	
104 Dodecane	57	20.353	20.353	0.000	98	821486	2.00	2.46	
105 1,2,4-Trichlorobenzene	180	20.461	20.461	0.000	94	598280	2.00	2.22	
106 Naphthalene	128	20.591	20.591	0.000	99	1405926	2.00	2.26	
107 Hexachlorobutadiene	225	20.844	20.844	0.000	95	583707	2.00	2.11	
108 1,2,3-Trichlorobenzene	180	20.882	20.882	0.000	94	563634	2.00	2.12	
109 2-Methylnaphthalene	142	21.691	21.691	0.000	100	642522	4.60	3.94	
110 1-Methylnaphthalene	142	21.836	21.836	0.000	99	529620	4.60	3.73	
S 111 Xylenes, Total	100				0		6.00	6.81	
S 112 1,2-Dichloroethene, Total	1				0		4.00	4.09	

Reagents:

40CV101P_00049	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

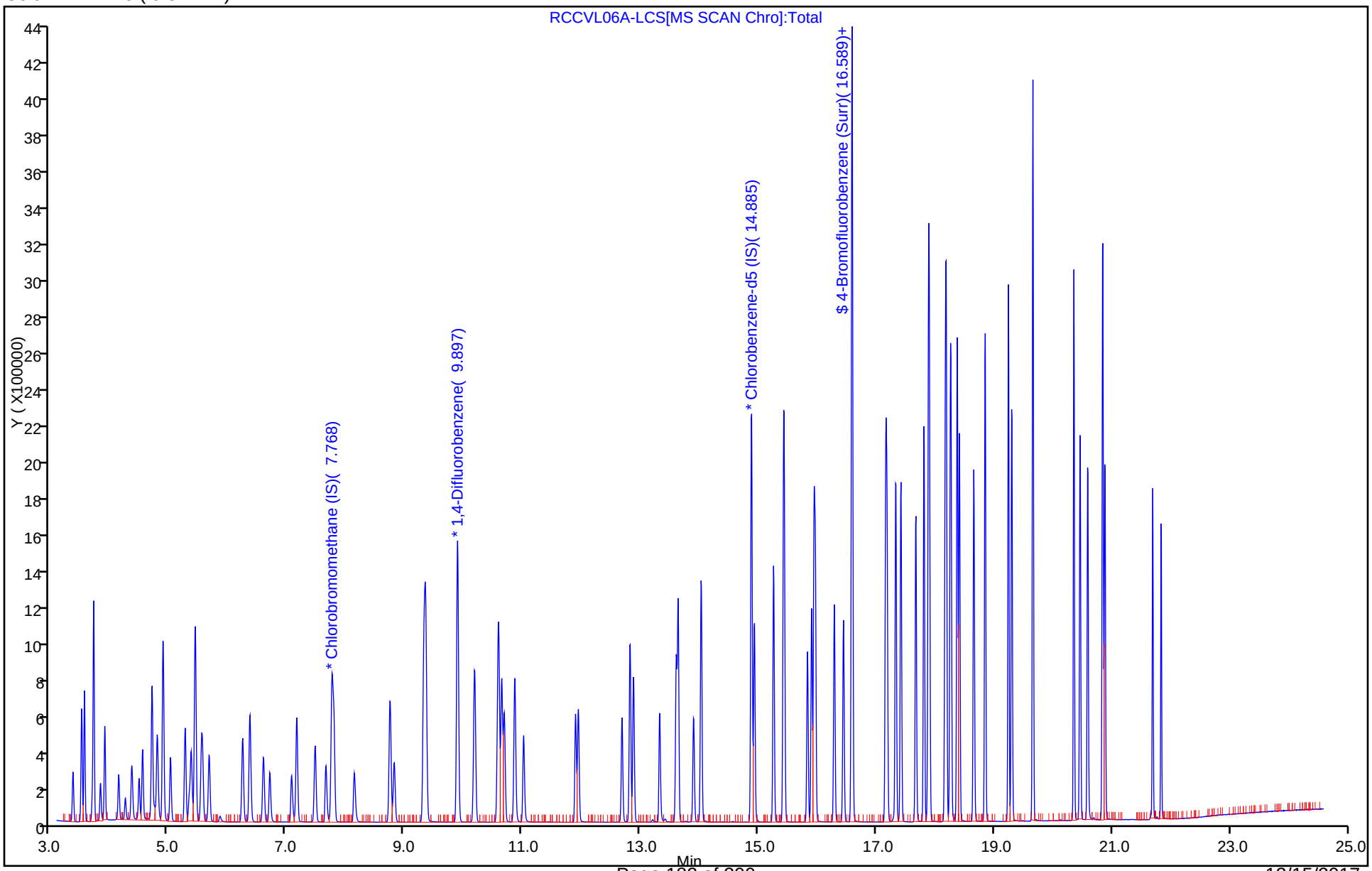
Report Date: 07-Dec-2017 10:16:12 Chrom Revision: 2.2 05-Dec-2017 07:36:06

TestAmerica Laboratories

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RCCVL06A-LCS.d

Injection Date:	06-Dec-2017 12:14:30	Instrument ID:	MR	Operator ID:	
Lims ID:	LCS			Worklist Smp#:	1008
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\RCCVL06A-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 06-Dec-2017 12:14:30 ALS Bottle#: 15 Worklist Smp#: 1008
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006818-002
Misc. Info.: P49
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20171204-6818.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 07-Dec-2017 10:16:08 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: tajh Date: 06-Dec-2017 14:56:13

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.20	105.00

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1

SDG No.:

Instrument ID: MR Start Date: 10/25/2017 11:43

Analysis Batch Number: 15542 End Date: 10/26/2017 00:08

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-15542/1		10/25/2017 11:43	1	RBFBJ25.D	RTX-5 0.32(mm)
IC 140-15542/3		10/25/2017 13:00	1	RJ25IC01.D	RTX-5 0.32(mm)
IC 140-15542/4		10/25/2017 13:46	1	RJ25IC02.D	RTX-5 0.32(mm)
140-9802-A-1 MDLV		10/25/2017 13:46	1		RTX-5 0.32(mm)
IC 140-15542/5		10/25/2017 14:33	1	RJ25IC03.D	RTX-5 0.32(mm)
140-9802-A-2 MDLV		10/25/2017 14:33	1		RTX-5 0.32(mm)
IC 140-15542/6		10/25/2017 15:20	1	RJ25IC04.D	RTX-5 0.32(mm)
140-9802-A-3 MDLV		10/25/2017 15:20	1		RTX-5 0.32(mm)
IC 140-15542/7		10/25/2017 16:08	1	RJ25IC05.D	RTX-5 0.32(mm)
140-9802-A-4 MDLV		10/25/2017 16:08	1		RTX-5 0.32(mm)
IC 140-15542/8		10/25/2017 16:56	1	RJ25IC06.D	RTX-5 0.32(mm)
140-9802-A-5 MDLV		10/25/2017 16:56	1		RTX-5 0.32(mm)
ICIS 140-15542/9		10/25/2017 17:43	1	RJ25IC07.D	RTX-5 0.32(mm)
IC 140-15542/10		10/25/2017 18:31	1	RJ25IC08.D	RTX-5 0.32(mm)
IC 140-15542/11		10/25/2017 19:18	1	RJ25IC09.D	RTX-5 0.32(mm)
IC 140-15542/12		10/25/2017 20:06	1	RJ25IC10.D	RTX-5 0.32(mm)
ICV 140-15542/14		10/25/2017 21:40	1	RJ25ICV.D	RTX-5 0.32(mm)
ZZZZZ		10/26/2017 00:08	1		RTX-5 0.32(mm)

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 18 & KNOX-MS-0023, Rev 2

Analysis Date:	10/25/17	Instrument:	UA	Chrom WL #:	6453	TALS Batch & Event #	TO14/15: 15542 - 1314
							DOD: 15544 1316 OHIO: 15543 1315

Chrom/Worklist Review		1st	Comments	2nd
1. Re-read each Limit Group	[method editor-limit groups]	✓		na
2. Verify LODV in Chrom	[method editor -> edit -> MDL]	✓		na
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level)	[WL Sample Reagents Tab vs. Entech]	✓		✓
4. Files linked properly to calibration levels?	[Sample List- Lab ID vs. Info]	✓		✓
5. Did BFB meet tune criteria?	[F8]	✓		✓
6. Were all standards injected within 24 hr of BFB?	[F7]	✓		✓
7. High point checked for saturation and point removed if so?	[Chrom]	✓	(5) Naph. 1245 TMBF	✓
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given?	[Chrom]	✓	allotnitrile lvl 7.8	✓ 10/26/17
9. RT for each IS ±20 sec avg. RT?	[F6 IstdRec]	✓		✓
10. Area for each IS ± 40% avg. area?	[F6 IstdRec]	✓		✓
11. Each analyte ± 0.06 RRT of avg. RRT?	[F6 - RRT]	✓		✓
12. Elution order checked on isomeric pairs?	[Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane		✓		✓
• 2-methyl butane / acrolein		✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane		✓		✓
• vinyl acetate / hexane		✓		✓
• cis- and trans- isomers		✓		✓
• ethyl benzene / m/p-xylene / o-xylene		✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/ sec-butylbenzene/1,2,3-trimethylbenzene		✓		✓
• tert-butylbenzene/4-isopropyltoluene		✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene		✓		✓
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes		ND 1285, 1234		✓
• 1,2,4- and 1,2,3-trichlorobenzenes		✓		✓
• 2-, and 1-methylnaphthalene		✓		✓
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?		✓		✓

MLG Review		TO	DOD	OH	Comments	TO-	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1& 2 methylnaphthalene ≤ 50%	[F6 Σ]	✓	✓	✓		✓	✓	✓
15. Were at least 5 levels of each compound analyzed?	[F6]	✓	✓	✓		✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.?	[F6]	✓	✓	✓		✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? (Note: Ohio does not allow quad)	[F6]	NA ✓	→	→		NA	→	→
18. If curves were used, is correlation coefficient ≥0.990?	[F6]	NL	→	→		NA	→	→
19. Is the intercept less than the RL for each curve?	[F6]	NL	→	→		NA	→	→
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous.	[Cntrl-C, details]	NL	NL	na		NA	→	na
21. Is low point RSE ≤ 50 %?	[F6]	✓	✓	✓		✓	✓	✓
22. Is the second source analysis within limits?	[F8 - icv]	✓	✓	✓				

Analyst/Date: 10/26/17 **2nd Level Reviewer/Date:** 10/26/17

TALS Review		TO	DOD	OH	Comments	TO	DOD	OH
23. Upload ICAL		✓				na	na	na
24. Graphics uploaded?	[paperclip]	✓	✓	✓		✓	✓	✓
25. All points are in the most recent active calibration event?	[Calibration Events --'Fix ICAL linkage' if needed]	✓	✓	✓		✓	✓	✓
26. Runs linked to BFB?	[QC Links]	✓	✓	✓		✓	✓	✓
27. Run Checklist and acknowledge findings	[F6]	✓	✓	✓		✓	✓	✓
28. If criteria not met, was a NCM generated?		NL	→	→		NA	→	→
29. After review in TALS, approve the method in TALS.		na	na	na		✓	✓	✓
30. After verifying TALS is correct, lock method in Chrom	<resolve any error issues>		na	na		✓	✓	✓
31. Checklist & Entech report scanned, attached & assigned properly?			na	na		✓	✓	✓

Analyst/date: 10/27/17	2nd Level Reviewer/date: 10/27/17
Comments:	Comments:

MS017r42, 08/30/2017

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-10079-1

SDG No.:

Instrument ID: MR Start Date: 12/06/2017 11:43

Analysis Batch Number: 16560 End Date: 12/06/2017 20:55

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-16560/7		12/06/2017 11:43	1	RBFBL06A.D	RTX-5 0.32(mm)
CCVIS 140-16560/8		12/06/2017 12:14	1	RCCVL06A.D	RTX-5 0.32(mm)
LCS 140-16560/1008		12/06/2017 12:14	1	RCCVL06A-LCS.d	RTX-5 0.32(mm)
ZZZZZ		12/06/2017 14:35	1		RTX-5 0.32(mm)
MB 140-16560/16		12/06/2017 14:35	1	BLKL10086.D	RTX-5 0.32(mm)
ZZZZZ		12/06/2017 15:22	1		RTX-5 0.32(mm)
ZZZZZ		12/06/2017 16:14	1		RTX-5 0.32(mm)
140-10079-2		12/06/2017 17:47	1	RL06P105.D	RTX-5 0.32(mm)
ZZZZZ		12/06/2017 18:34	1		RTX-5 0.32(mm)
140-10079-3		12/06/2017 19:21	1	RL06P106DU.D	RTX-5 0.32(mm)
140-10079-1		12/06/2017 20:07	1	RL06P104R.D	RTX-5 0.32(mm)
140-10079-2 DL		12/06/2017 20:55	1	RL06P105DL.D	RTX-5 0.32(mm)

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 18 & KNOX-MS-0023, Rev 3

Instrument/Date	MR 12/6/17		Routine	DOD	OHIO
CCAL Chrom WL #	6818	CCAL Batch #	16560		
ICAL Chrom WL #	6453	ICAL Batch # / Event #	15941 / 1314	/	/

Chrom Review	1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	✓		na
2. Did BFB meet tune criteria? [F8]	✓	□ [Failed TO-14A, but passes TO-15] (NCM#_____)	✓
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICal File batch #/start/end Cal date/time)? [F8]	✓		✓
4. Is the %D ≤ 30% for all target analytes? [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab]	✓	□ CCV - %D - LCS criteria met (NCM#_____) □ CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM#_____)	✓
5. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene/1,2,3-trimethylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	M		M
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
6. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	M		M
7. Has the RT been updated to the method?	✓		✓
Analyst/date	12/7/17	**2nd Level Reviewer/date**	12/7/17
8. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]	✓	✓ On screen	✓
9. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]	✓		✓
10. Were all samples/QC analyzed within 24 hr of BFB? [F7]	✓		✓
11. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). *If no, list blank ID:*	✓	□ Method Blank – Report, ND (NCM#_____) □ Method Blank – Report, 10X (NCM#_____)	✓
12. All runs - peaks ID'd correctly and false positives removed?	✓		✓
13. If manual integrations performed, are they properly performed, correctly ID'd, baseline clearly identified, and reason given?	✓		✓
14. IS/Surr within limits? *List samples and reason (e.g., 1 thru 5):* [Batch Results IS & SUR Tab] Sample / Reason / Sample / Reason	✓	□ (1) Surrogate – Matrix (NCM#_____) □ (2) Surrogate – High, ND (NCM#_____) □ (3) ISTD – RA/RA Concurs (NCM#_____) □ (4) Surrogate –RX concur, Report both (NCM#_____) □ (5) ISTD – Matrix, DL required (NCM#_____)	✓
15. Samples outside calibration range scheduled for dilution?	✓	□ ICAL – Range Exceeded; Minimum Dilution	✓

Chrom Review	1st	If No, why is data reportable?	2nd
16. For first analysis that is at a dilution, is highest target analyte >20% cal range? *List samples and reason:* Sample / Reason / Sample / Reason	✓	□ (1) Reporting Limit – Dilution, Matrix (NCM#_____) □ (2) Reporting Limit – Dilution, Non-Target (NCM#_____) □ (3) Issues with initial collection volume; see DRC.	✓
17. RIC inspected for proper integration for TPH?	M		M
18. Obvious non-TPH peaks excluded?	✓		✓
19. Individual TPH peak area < octane high point area?	✓		✓

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 18 & KNOX-MS-0023, Rev 3

TALS Review	1st	If No, why is data reportable?	2nd
20. Graphics uploaded? [paperclip]	✓		✓
21. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	✓		na
22. Sample special instructions verified?	✓		✓
23. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	✓	□ Marginal Exceedances - Within ME Limits and Random; Report (NCM# ___) □ LCS/LCSD - %R High (NCM#_____)	✓
24. Suffixes assigned properly (DL/RE)? [Sample List Tab]	✓		✓
25. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	✓		✓
26. Analytes over calibration range set to secondary [Conditions Review Tab]	✓		✓
27. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	✓		✓
28. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) *(If DUP not reported - set to 'Acceptable' for each job)*	✓		✓
29. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	✓	**500 mL blank ID:** 16 **200 mL blank ID:**	✓
30. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	✓		✓
31. Correct ICV linked to each MB? [QC Links]	✓		✓
32. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	✓		✓
33. Run Checklist and acknowledge findings [FC]	✓		✓
34. Runs set to 1st level review?	✓	Runs set to 2nd level review?	✓
35. QC checker run and items addressed?	-na-		✓
36. Checklist & Entech report scanned, attached & assigned properly?	-na-		✓

Analyst:	**Date:** 12/7/17
Comments:	
Example Calculation: 10079.7 hcm	
On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF	
0.6716 x 100mL/1 = 3.398	

2nd Level Reviewer :	**Date:** 12/8/17
Comments:	

# marginal exceedances of LCS control limits allowed	Number of target analytes in LCS
5	>90
4	71 - 90
3	51 - 70
2	31 - 50
1	11 - 30
0	< 11

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9664-1

SDG No.:

Client Sample ID: 09643 | Lab Sample ID: 140-9664-1

Matrix: Air | Lab File ID: GJ30bk9664-1.D

Analysis Method: TO-15 | Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) | Date Analyzed: 10/31/2017 03:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15525 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	*	0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND	*	0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	NC		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	NC		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND	*	0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	NC		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND	*	0.50	
91-57-6	2-Methylnaphthalene	ND	*	2.5	
107-83-5	2-Methylpentane	NC		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9664-1

SDG No.:

Client Sample ID: 09643 | Lab Sample ID: 140-9664-1

Matrix: Air | Lab File ID: GJ30bk9664-1.D

Analysis Method: TO-15 | Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) | Date Analyzed: 10/31/2017 03:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15525 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND	*	1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND	*	0.20	
106-97-8	Butane	ND	*	0.40	
75-15-0	Carbon disulfide	ND	*	0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND	*	0.20	
75-00-3	Chloroethane	ND	*	0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND	*	0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND	*	0.20	
64-17-5	Ethanol	ND	*	5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	NC		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-9664-1

SDG No.:

Client Sample ID: 09643 Lab Sample ID: 140-9664-1

Matrix: Air Lab File ID: GJ30bk9664-1.D

Analysis Method: TO-15 Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) Date Analyzed: 10/31/2017 03:24

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 15525 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	NC		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND	*	1.0	
115-07-1	Propene	ND	*	0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	NC		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND	*	0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171025-6448.b\GJ30bk9664-1.D				
Lims ID:	140-9664-A-1				
Client ID:	09643				
Sample Type:	Client				
Inject. Date:	31-Oct-2017 03:24:30	ALS Bottle#:	13	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006448-022				
Misc. Info.:	09643				
Operator ID:	403648	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20171025-6448.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	31-Oct-2017 10:45:29	Calib Date:	20-Sep-2017 09:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL02R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK007				
First Level Reviewer: tajh		Date:	31-Oct-2017 10:42:26		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.609	7.620	-0.011	91	257098	4.00	
* 2 1,4-Difluorobenzene	114	9.755	9.760	-0.005	95	1206300	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.705	14.710	-0.005	89	1048489	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.393	16.398	-0.005	93	698386	3.51	
22 Acetone	58	4.600	4.584	0.016	99	27928	0.8649	
24 Isopropyl alcohol	45	4.713	4.686	0.027	98	13569	0.1456	
30 Methylene Chloride	84	5.355	5.355	0.000	93	12839	0.1686	
32 Carbon disulfide	76	5.484	5.490	-0.006	91	5564	0.0278	
36 2-Methylpentane	43	6.687	6.541	0.146	71	12536	NC	
50 2,3-Dimethylpentane	71	9.750	9.749	0.001	27	2254	NC	
51 Thiophene	84	9.739	9.766	-0.027	39	2256	NC	
60 Methylcyclohexane	83	11.529	11.626	-0.097	1	119	NC	
70 Tetrachloroethene	129	13.859	13.864	-0.005	90	4318	0.0449	
97 2,3-Dihydroindene	117	18.399	18.426	-0.027	1	272	NC	
101 1,2,3,5-Tetramethylbenzene	119	19.386	19.396	-0.010	1	160	NC	
103 1,2,3,4-Tetramethylbenzene	119	19.715	19.785	-0.070	1	62	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

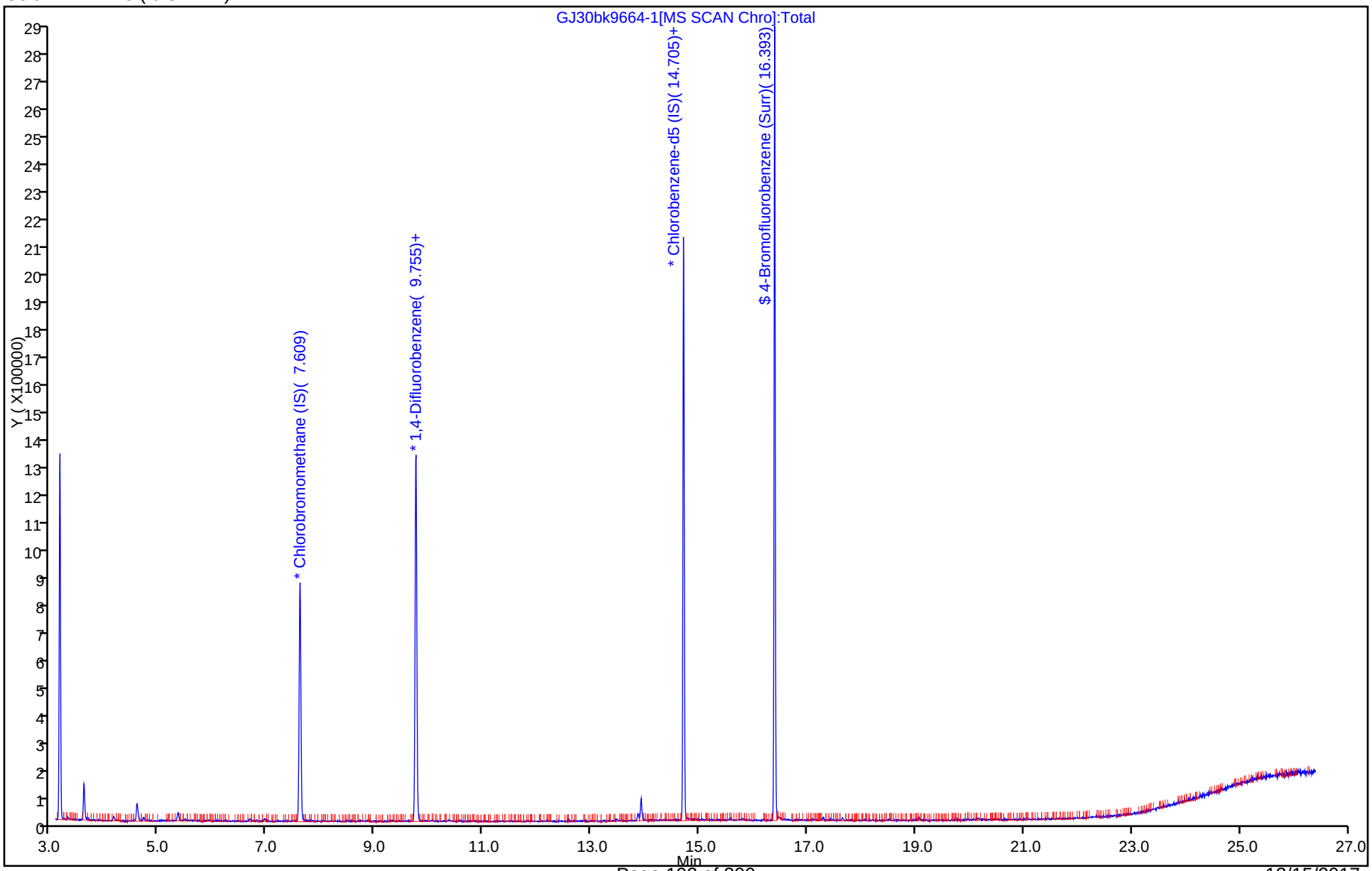
Report Date: 31-Oct-2017 10:46:48 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20171025-6448.b\GJ30bk9664-1.D

Injection Date:	31-Oct-2017 03:24:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	140-9664-A-1	Lab Sample ID:	140-9664-1	Worklist Smp#:	22
Client ID:	09643				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

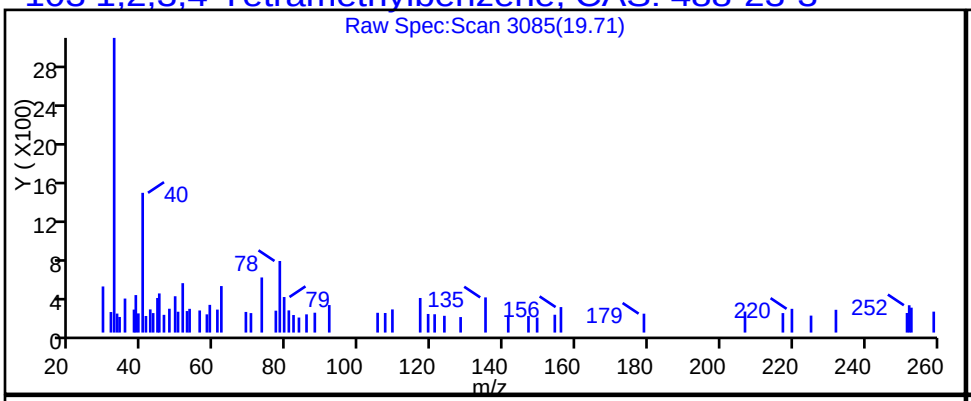
Column: RTX-5 (0.32 mm)

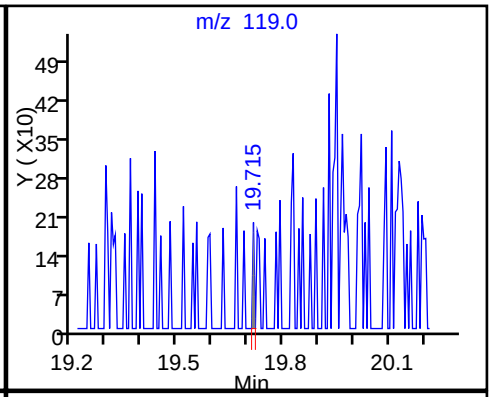


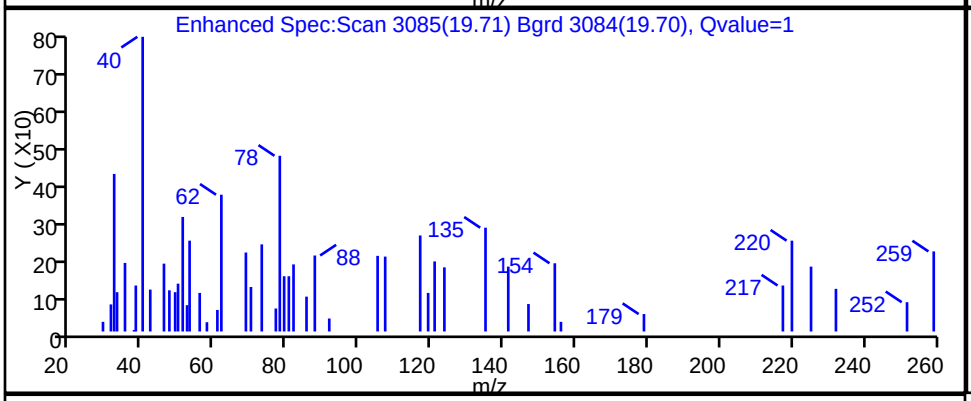
TestAmerica Knoxville

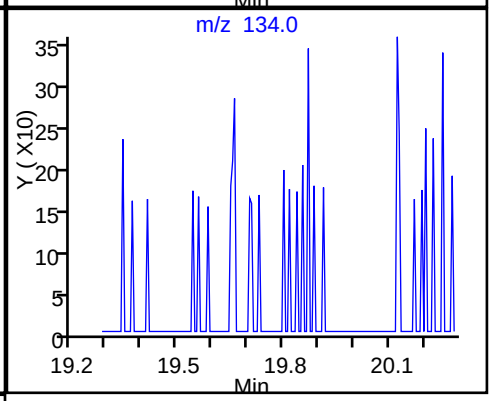
Data File:	\\ChromNA\Knoxville\ChromData\MG\20171025-6448.b\GJ30bk9664-1.D				
Injection Date:	31-Oct-2017 03:24:30	Instrument ID:	MG		
Lims ID:	140-9664-A-1	Lab Sample ID:	140-9664-1		
Client ID:	09643				
Operator ID:	403648	ALS Bottle#:	13	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

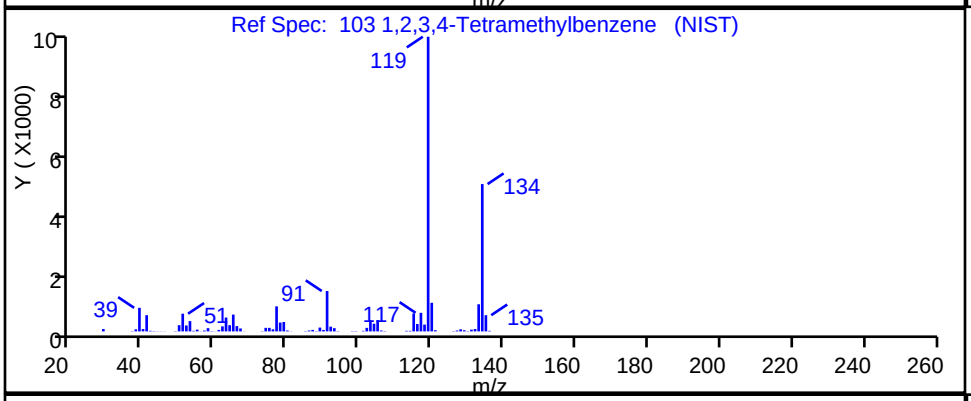
103 1,2,3,4-Tetramethylbenzene, CAS: 488-23-3

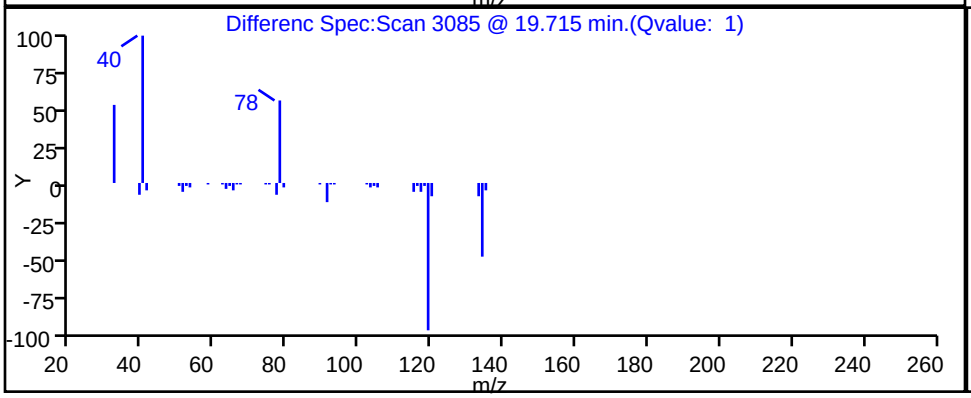


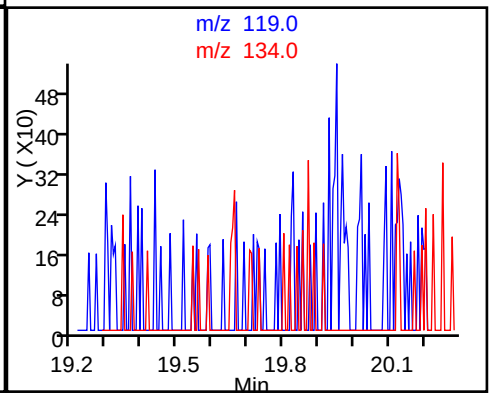








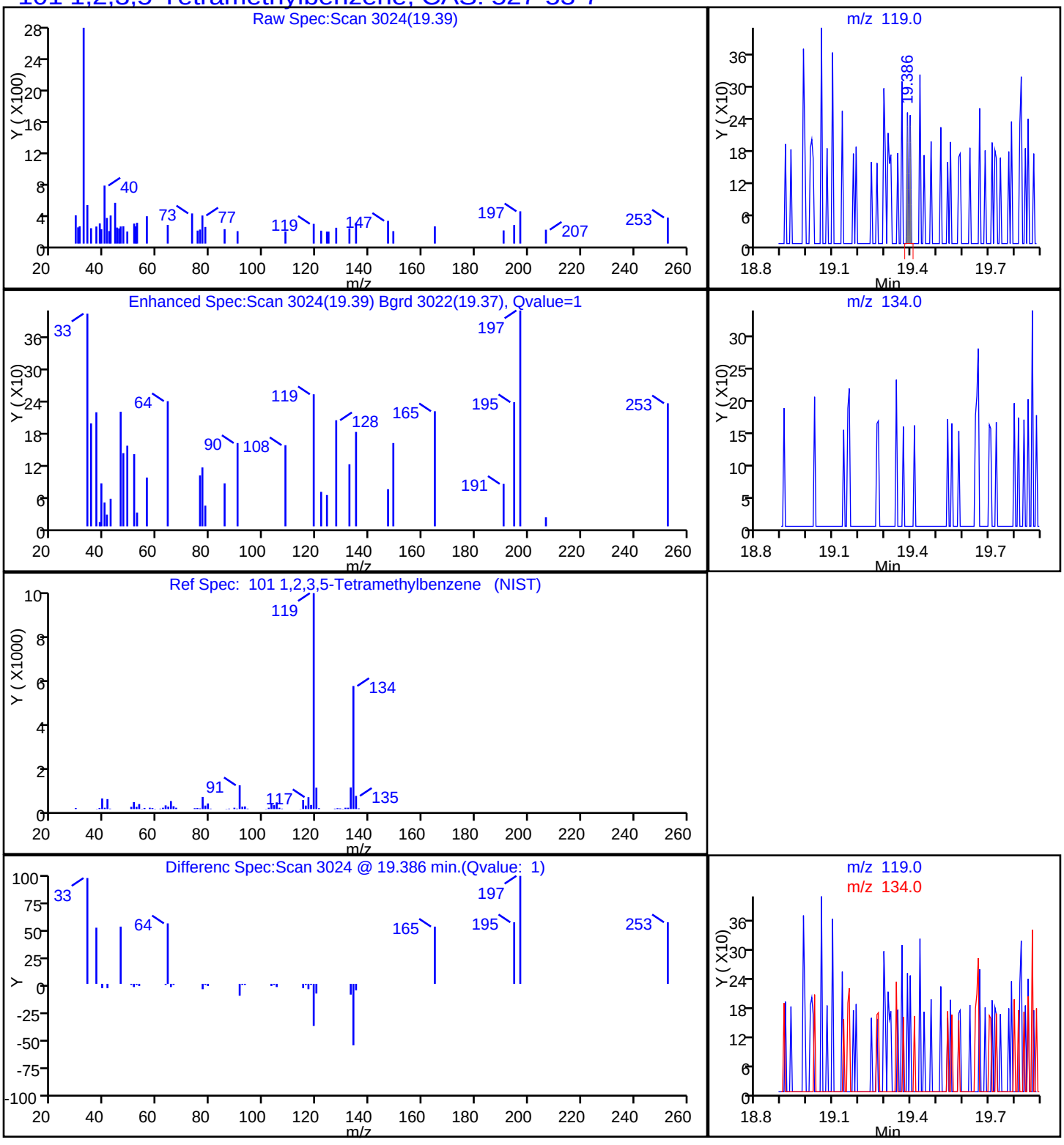




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171025-6448.b\GJ30bk9664-1.D				
Injection Date:	31-Oct-2017 03:24:30	Instrument ID:	MG		
Lims ID:	140-9664-A-1	Lab Sample ID:	140-9664-1		
Client ID:	09643				
Operator ID:	403648	ALS Bottle#:	13	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

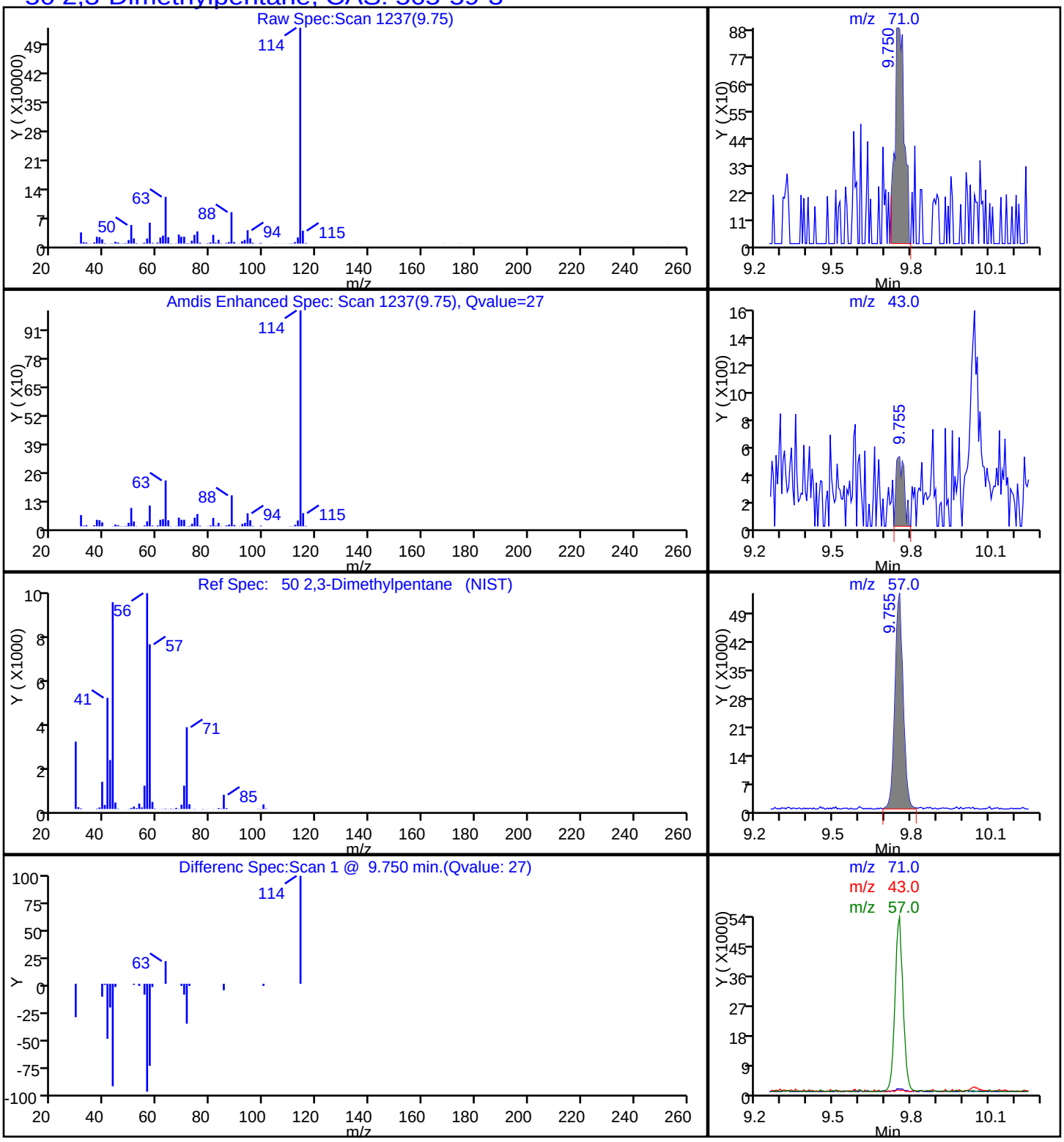
101 1,2,3,5-Tetramethylbenzene, CAS: 527-53-7



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171025-6448.b\GJ30bk9664-1.D				
Injection Date:	31-Oct-2017 03:24:30	Instrument ID:	MG		
Lims ID:	140-9664-A-1	Lab Sample ID:	140-9664-1		
Client ID:	09643				
Operator ID:	403648	ALS Bottle#:	13	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

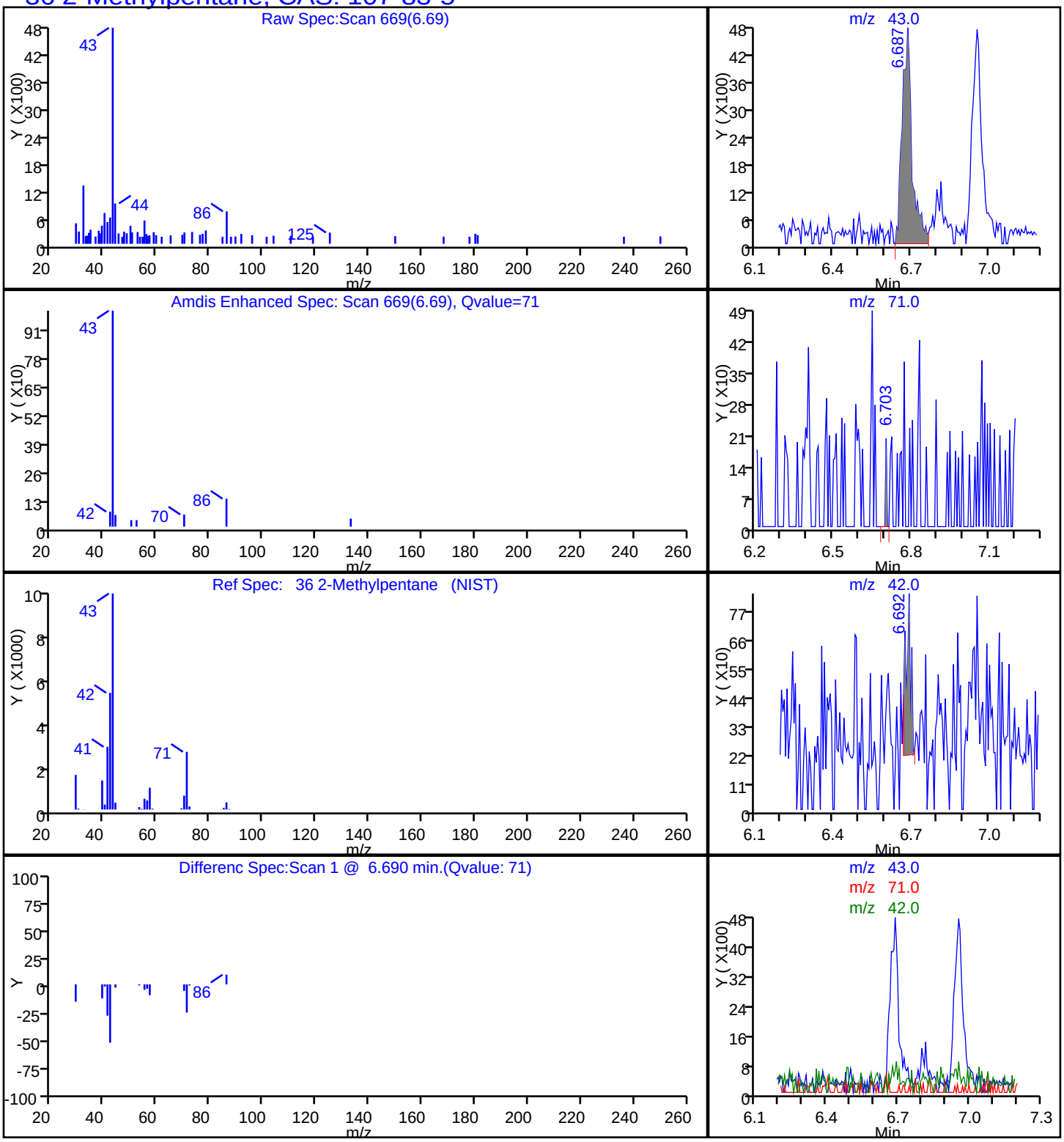
50 2,3-Dimethylpentane, CAS: 565-59-3



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171025-6448.b\GJ30bk9664-1.D				
Injection Date:	31-Oct-2017 03:24:30	Instrument ID:	MG		
Lims ID:	140-9664-A-1	Lab Sample ID:	140-9664-1		
Client ID:	09643				
Operator ID:	403648	ALS Bottle#:	13	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

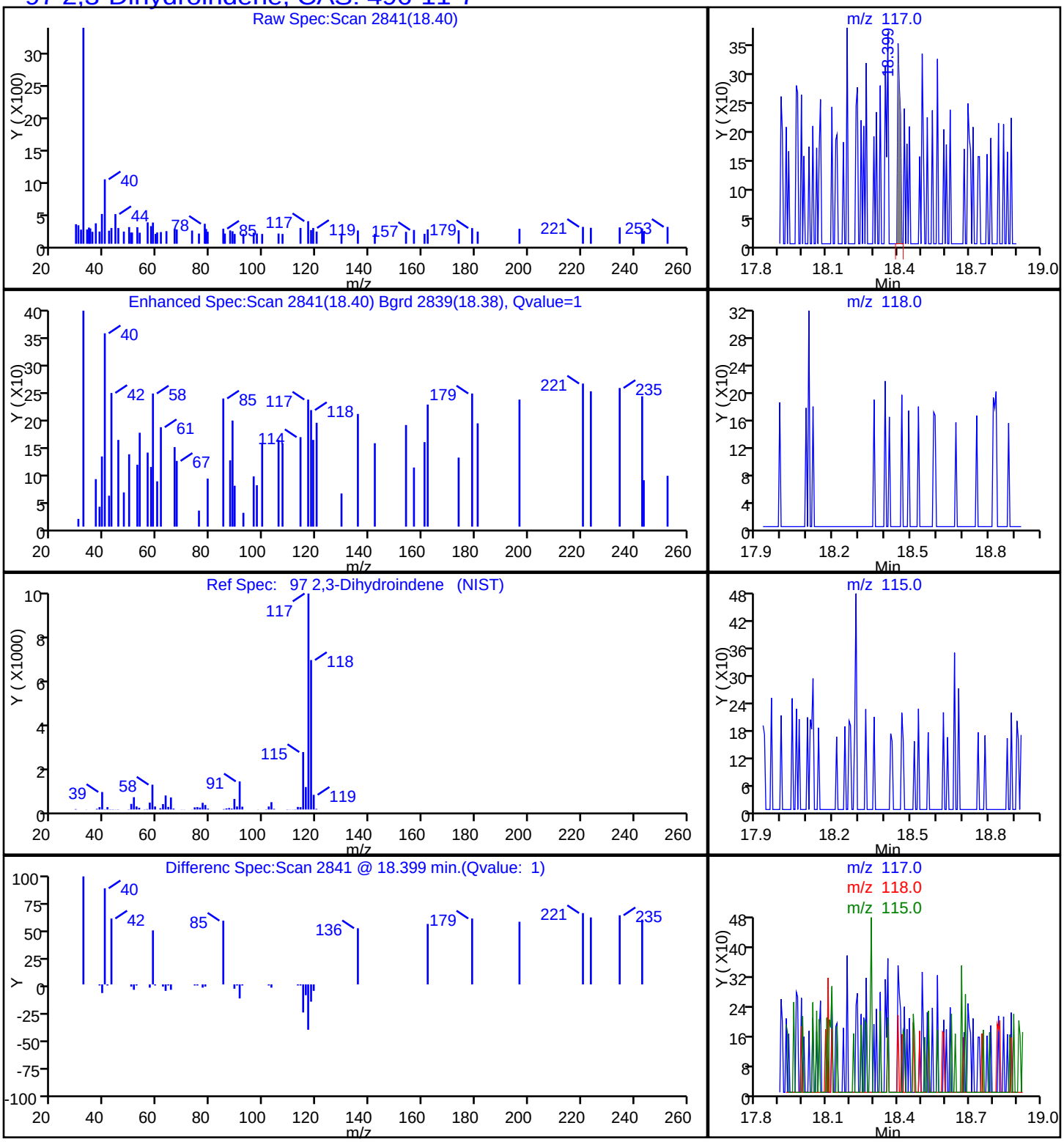
36 2-Methylpentane, CAS: 107-83-5



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171025-6448.b\GJ30bk9664-1.D				
Injection Date:	31-Oct-2017 03:24:30	Instrument ID:	MG		
Lims ID:	140-9664-A-1	Lab Sample ID:	140-9664-1		
Client ID:	09643				
Operator ID:	403648	ALS Bottle#:	13	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

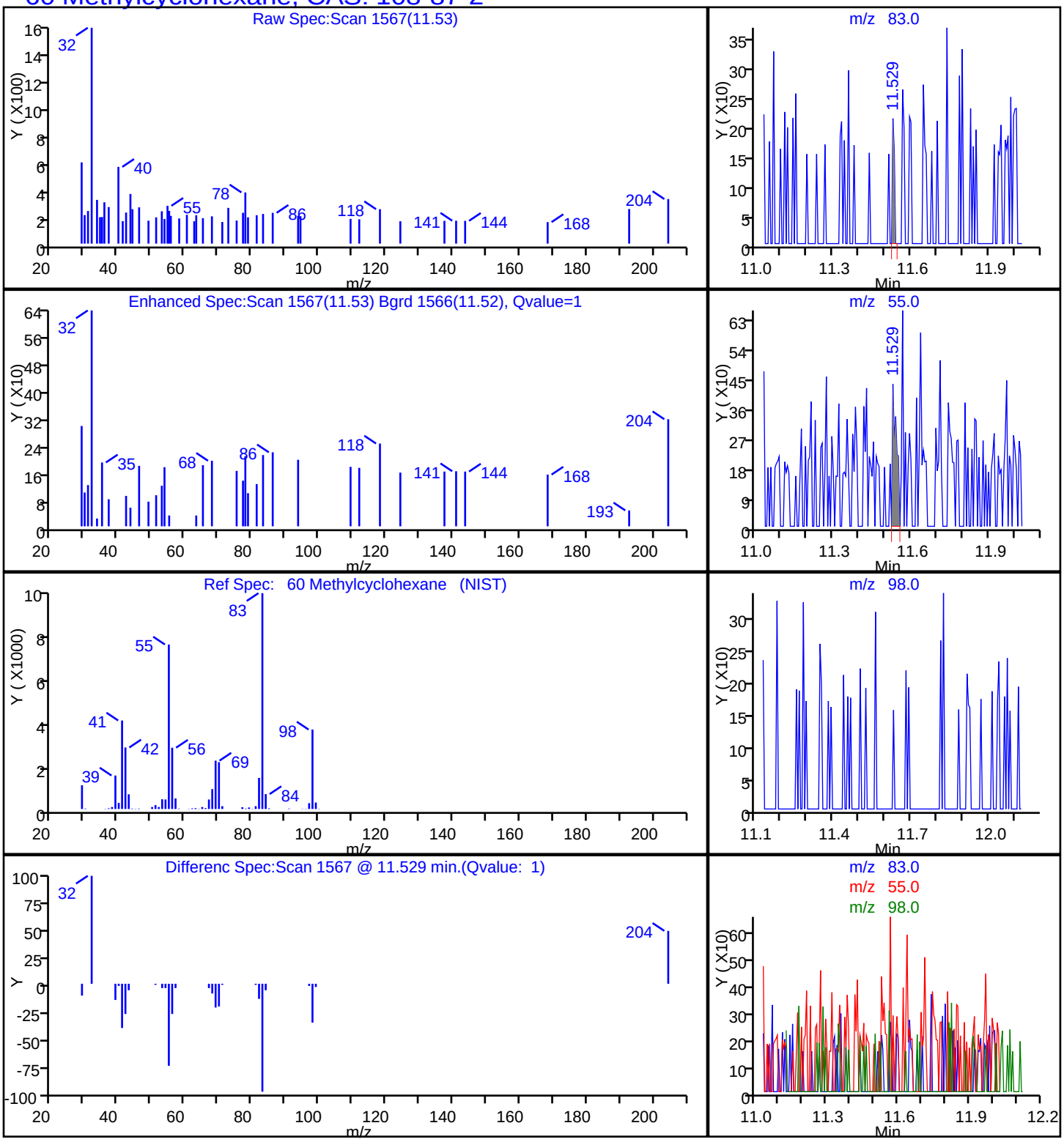
97 2,3-Dihydroindene, CAS: 496-11-7



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171025-6448.b\GJ30bk9664-1.D				
Injection Date:	31-Oct-2017 03:24:30	Instrument ID:	MG		
Lims ID:	140-9664-A-1	Lab Sample ID:	140-9664-1		
Client ID:	09643				
Operator ID:	403648	ALS Bottle#:	13	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

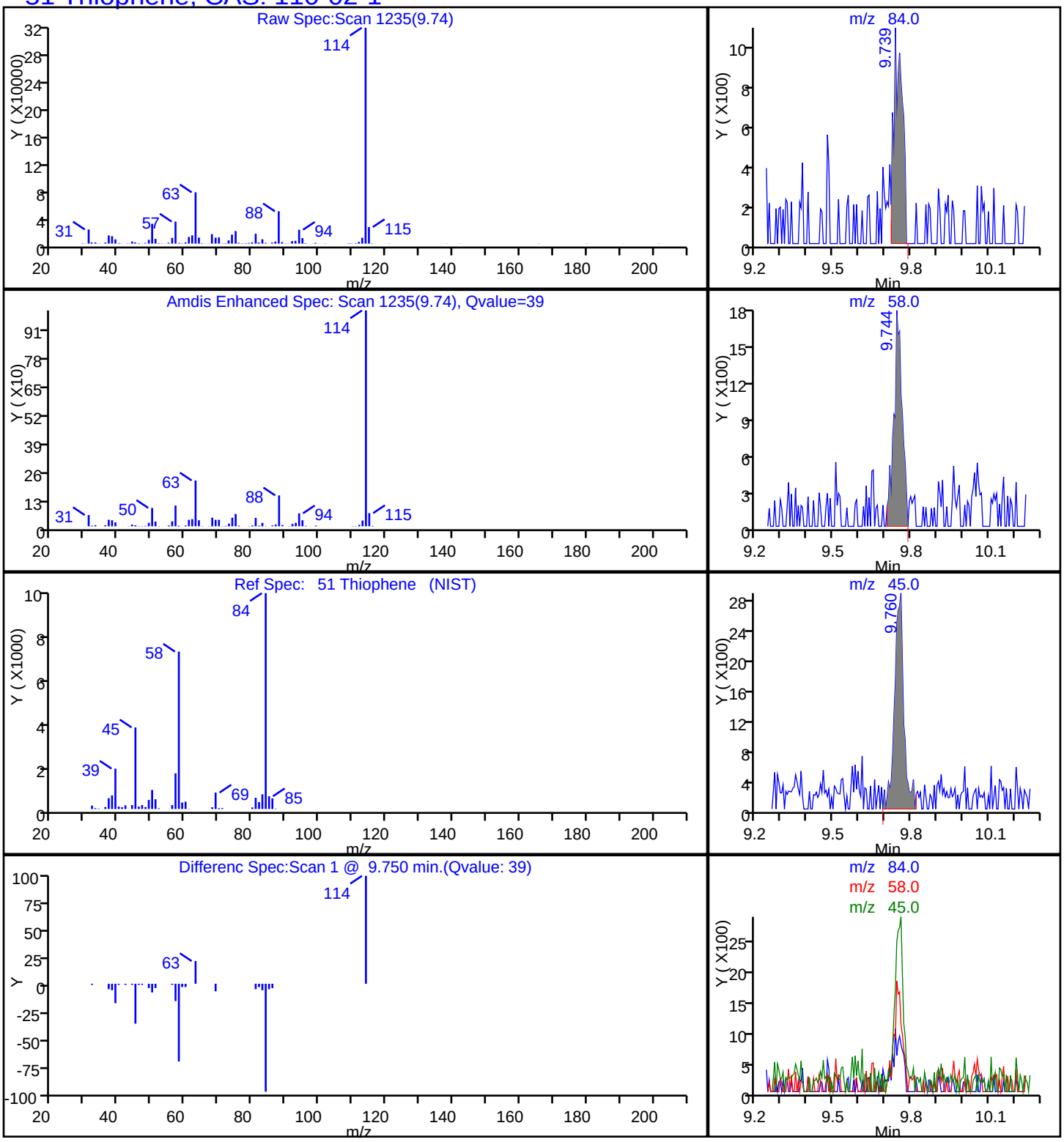
60 Methylcyclohexane, CAS: 108-87-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171025-6448.b\GJ30bk9664-1.D				
Injection Date:	31-Oct-2017 03:24:30	Instrument ID:	MG		
Lims ID:	140-9664-A-1	Lab Sample ID:	140-9664-1		
Client ID:	09643				
Operator ID:	403648	ALS Bottle#:	13	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

51 Thiophene, CAS: 110-02-1



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-9664-1

SDG No.:

Client Sample ID: 10603 Lab Sample ID: 140-9664-2

Matrix: Air Lab File ID: GJ30bk9664-2.D

Analysis Method: TO-15 Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) Date Analyzed: 10/31/2017 04:06

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 15525 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	*	0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND	*	0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	NC		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	NC		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND	*	0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	NC		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND	*	0.50	
91-57-6	2-Methylnaphthalene	ND	*	2.5	
107-83-5	2-Methylpentane	NC		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9664-1

SDG No.:

Client Sample ID: 10603 | Lab Sample ID: 140-9664-2

Matrix: Air | Lab File ID: GJ30bk9664-2.D

Analysis Method: TO-15 | Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) | Date Analyzed: 10/31/2017 04:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15525 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND	*	1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND	*	0.20	
106-97-8	Butane	ND	*	0.40	
75-15-0	Carbon disulfide	ND	*	0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND	*	0.20	
75-00-3	Chloroethane	ND	*	0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND	*	0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND	*	0.20	
64-17-5	Ethanol	ND	*	5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	NC		0.20	
95-13-6	Indene	NC		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-9664-1

SDG No.:

Client Sample ID: 10603 Lab Sample ID: 140-9664-2

Matrix: Air Lab File ID: GJ30bk9664-2.D

Analysis Method: TO-15 Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) Date Analyzed: 10/31/2017 04:06

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 15525 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	NC		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND	*	1.0	
115-07-1	Propene	ND	*	0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	NC		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND	*	0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20171025-6448.b\GJ30bk9664-2.D
Lims ID: 140-9664-A-2
Client ID: 10603
Sample Type: Client
Inject. Date: 31-Oct-2017 04:06:30 ALS Bottle#: 14 Worklist Smp#: 23
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006448-023
Misc. Info.: 10603
Operator ID: 403648 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20171025-6448.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 31-Oct-2017 10:45:29 Calib Date: 20-Sep-2017 09:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: tajh Date: 31-Oct-2017 10:43:02

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.609	7.620	-0.011	91	256237	4.00	
* 2 1,4-Difluorobenzene	114	9.755	9.760	-0.005	95	1342037	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.705	14.710	-0.005	89	1180104	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.393	16.398	-0.005	94	837768	3.74	
13 Butane	43	3.694	3.694	0.000	89	4759	0.0391	
22 Acetone	58	4.600	4.584	0.016	99	27030	0.8399	
24 Isopropyl alcohol	45	4.724	4.686	0.038	70	6962	0.0749	
30 Methylene Chloride	84	5.355	5.355	0.000	95	12156	0.1601	
32 Carbon disulfide	76	5.484	5.490	-0.006	90	4188	0.0210	
36 2-Methylpentane	43	6.687	6.541	0.146	74	10491	NC	
38 2-Butanone (MEK)	72	6.951	6.929	0.022	98	3234	0.0869	
50 2,3-Dimethylpentane	71	9.744	9.749	-0.005	27	2520	NC	
51 Thiophene	84	9.750	9.766	-0.016	39	2573	NC	
60 Methylcyclohexane	83	11.551	11.626	-0.075	0	247	NC	
97 2,3-Dihydroindene	117	18.226	18.426	-0.200	1	275	NC	
98 Indene	116	18.669	18.674	-0.005	5	259	NC	
101 1,2,3,5-Tetramethylbenzene	119	19.300	19.396	-0.096	1	311	NC	
103 1,2,3,4-Tetramethylbenzene	119	19.753	19.785	-0.032	1	247	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

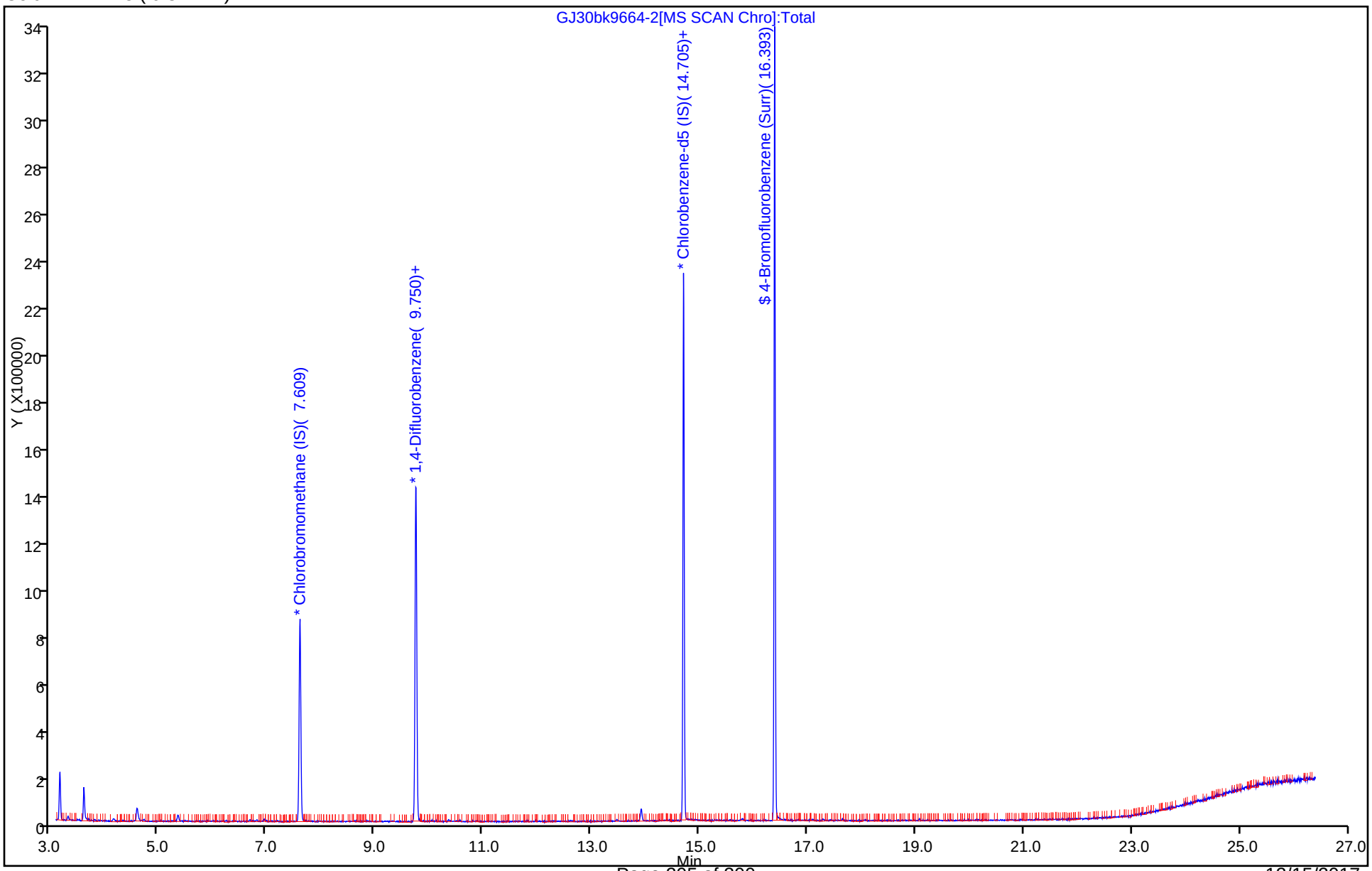
Report Date: 31-Oct-2017 10:46:51 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20171025-6448.b\GJ30bk9664-2.D

Injection Date:	31-Oct-2017 04:06:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	140-9664-A-2	Lab Sample ID:	140-9664-2	Worklist Smp#:	23
Client ID:	10603				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

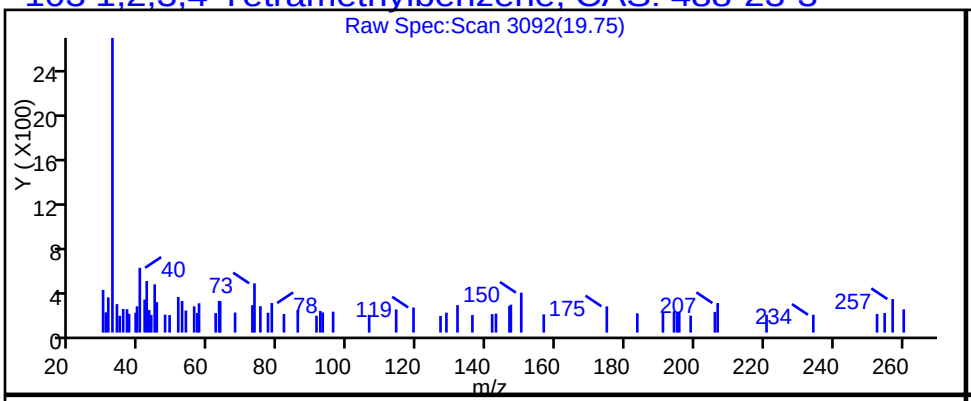


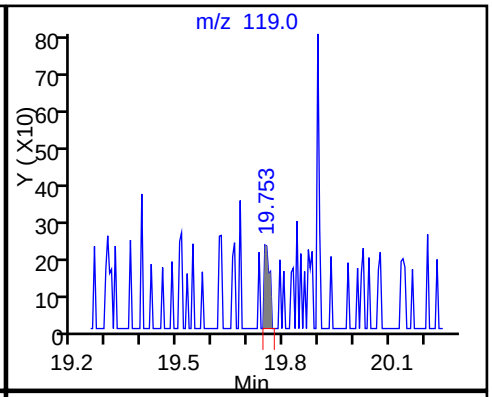
TestAmerica Knoxville

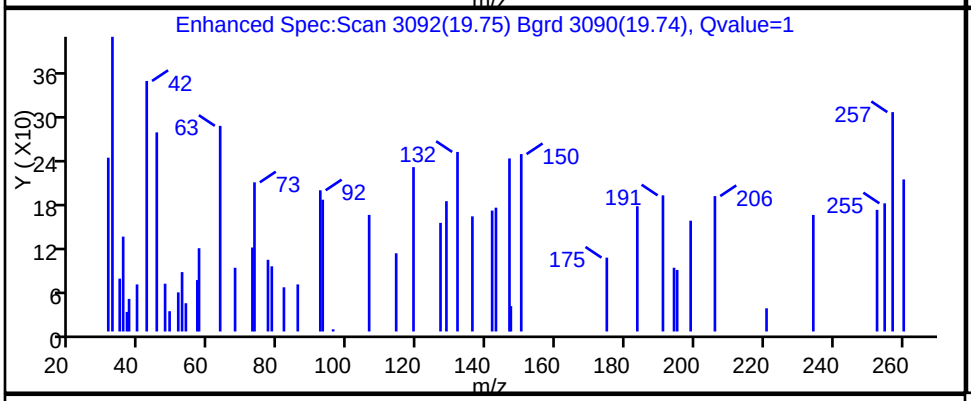
Data File: \\ChromNA\Knoxville\ChromData\MG\20171025-6448.b\GJ30bk9664-2.D

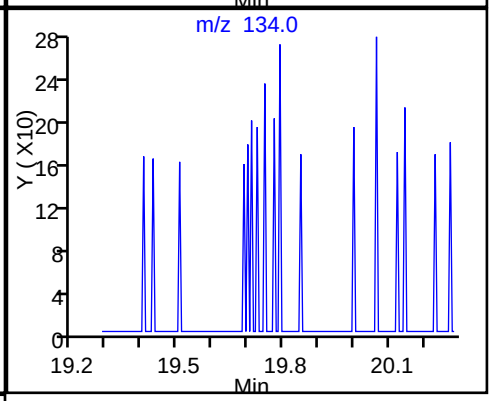
Injection Date:	31-Oct-2017 04:06:30	Instrument ID:	MG		
Lims ID:	140-9664-A-2	Lab Sample ID:	140-9664-2		
Client ID:	10603				
Operator ID:	403648	ALS Bottle#:	14	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

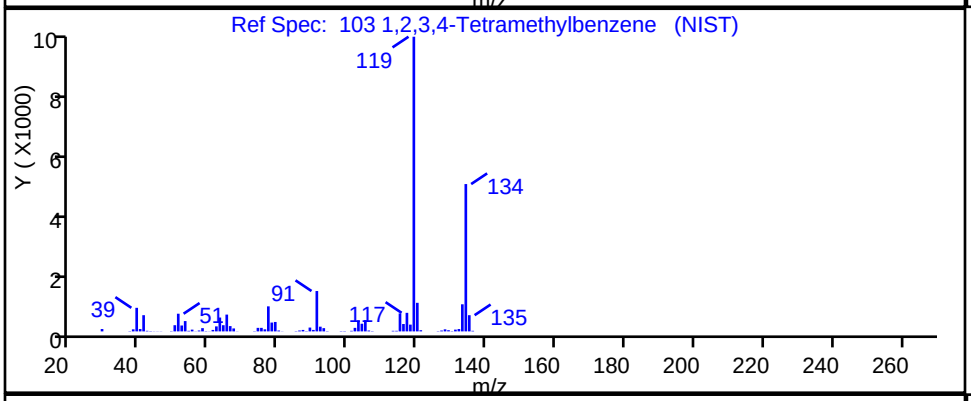
103 1,2,3,4-Tetramethylbenzene, CAS: 488-23-3

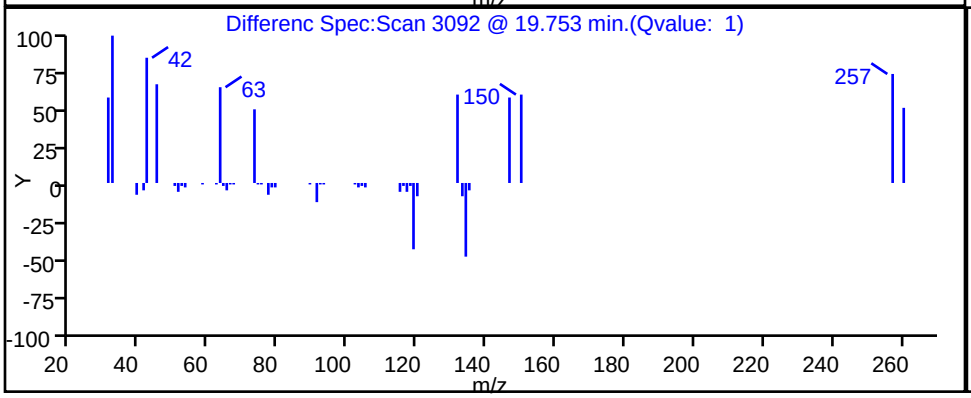


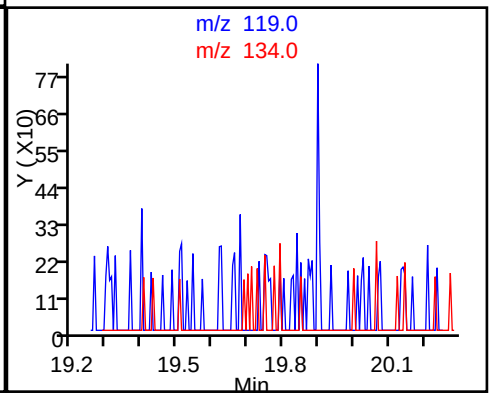








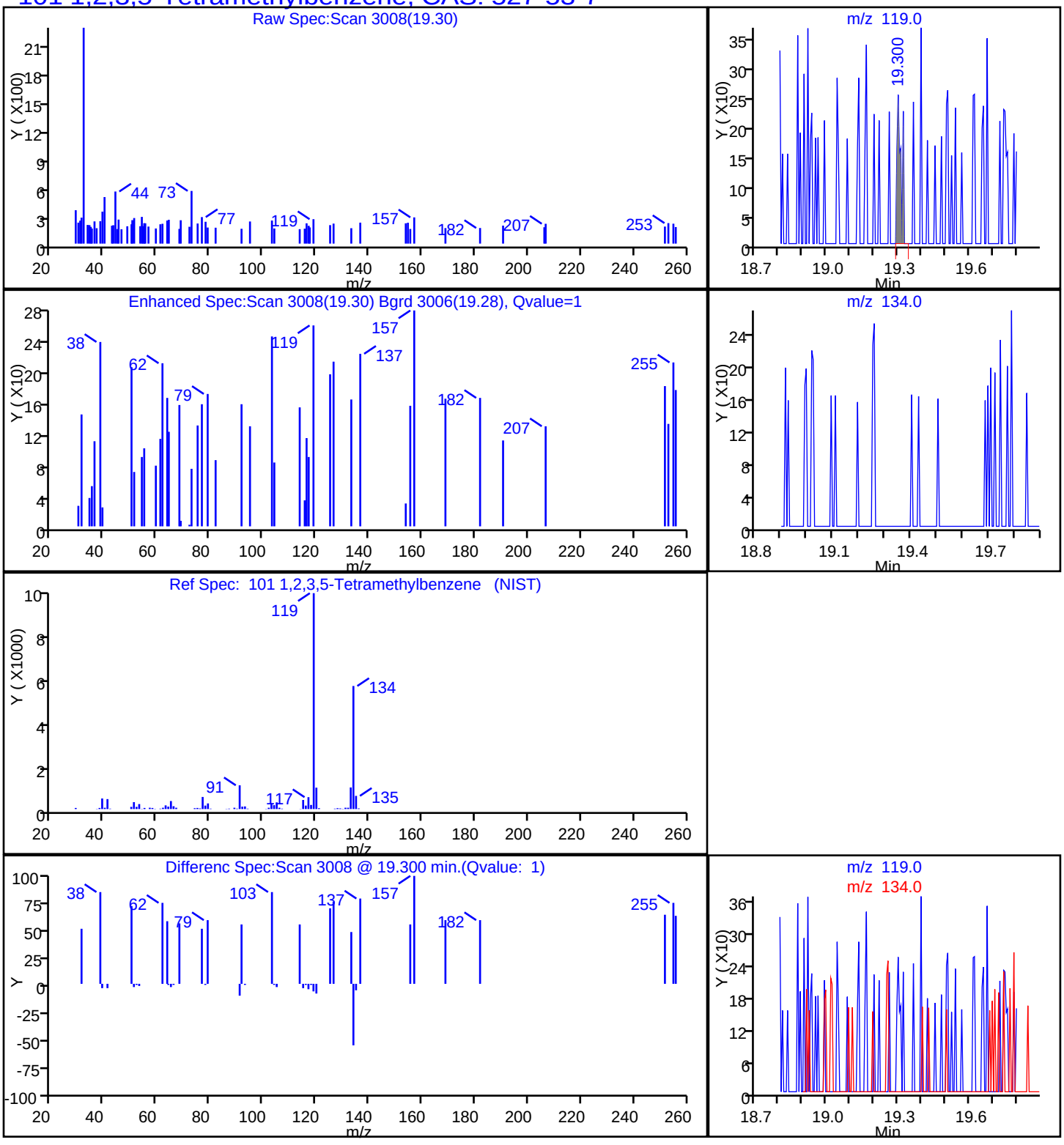




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171025-6448.b\GJ30bk9664-2.D				
Injection Date:	31-Oct-2017 04:06:30	Instrument ID:	MG		
Lims ID:	140-9664-A-2	Lab Sample ID:	140-9664-2		
Client ID:	10603				
Operator ID:	403648	ALS Bottle#:	14	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

101 1,2,3,5-Tetramethylbenzene, CAS: 527-53-7

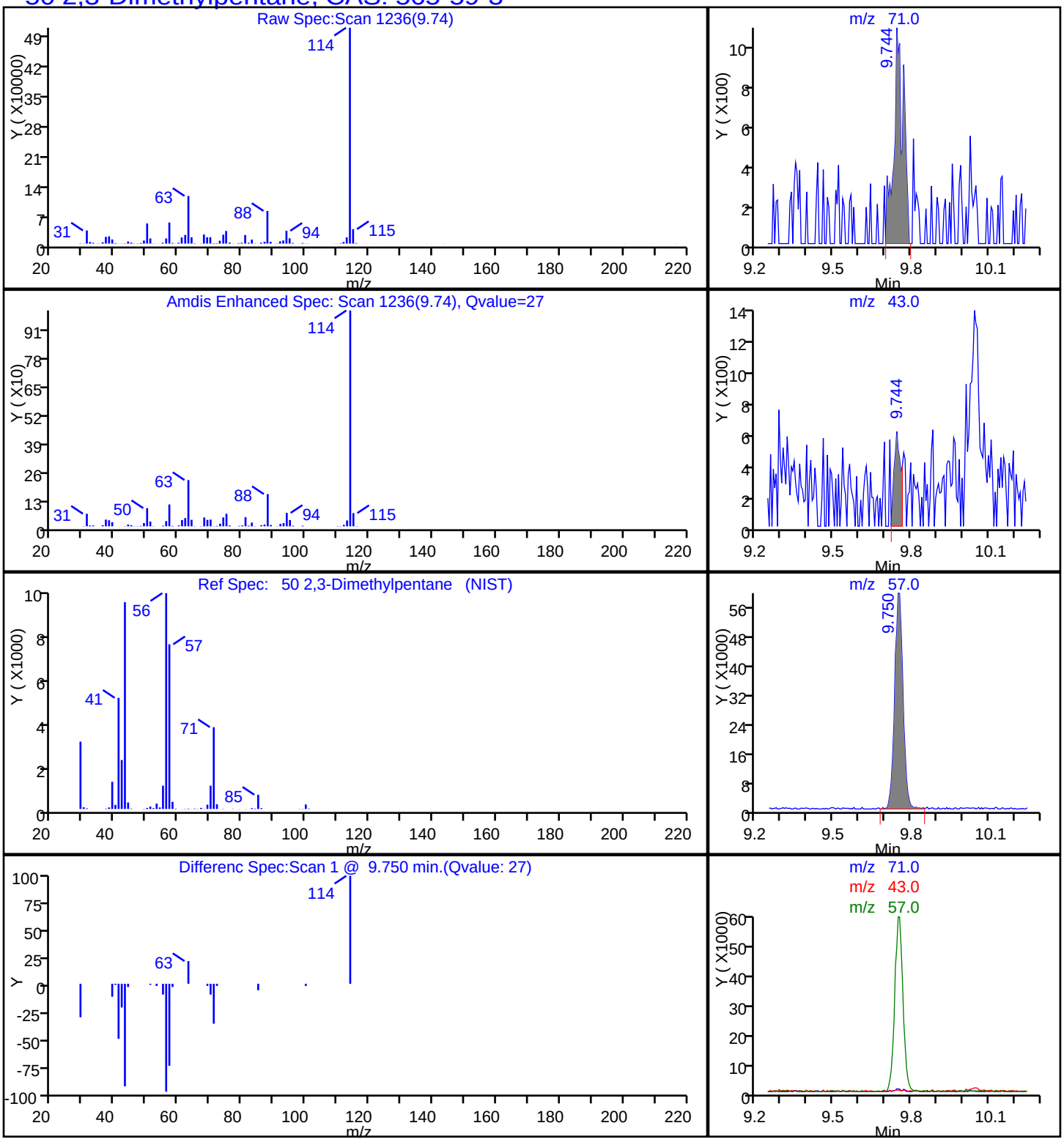


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20171025-6448.b\GJ30bk9664-2.D

Injection Date:	31-Oct-2017 04:06:30	Instrument ID:	MG		
Lims ID:	140-9664-A-2	Lab Sample ID:	140-9664-2		
Client ID:	10603				
Operator ID:	403648	ALS Bottle#:	14	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

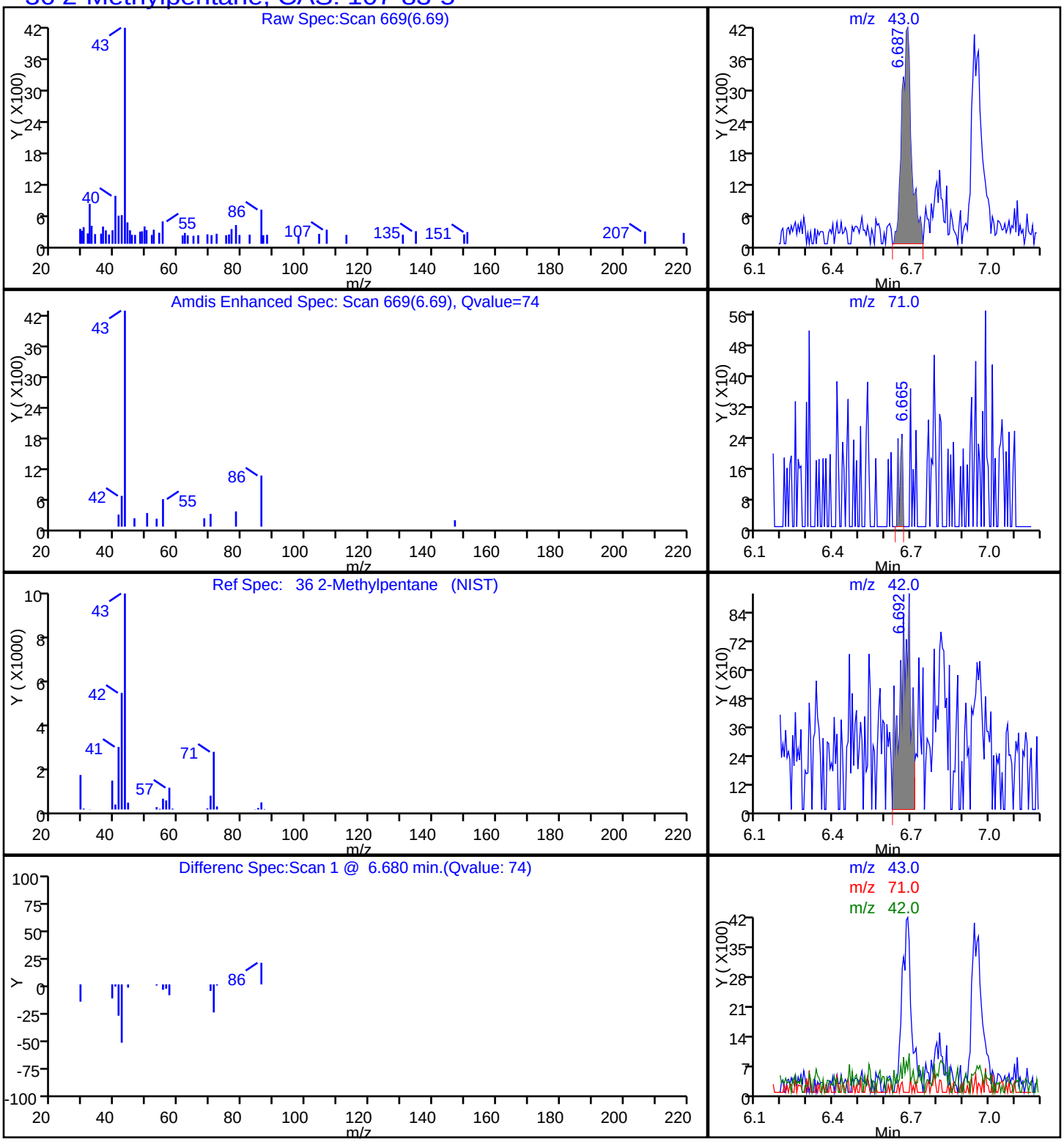
50 2,3-Dimethylpentane, CAS: 565-59-3



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171025-6448.b\GJ30bk9664-2.D				
Injection Date:	31-Oct-2017 04:06:30	Instrument ID:	MG		
Lims ID:	140-9664-A-2	Lab Sample ID:	140-9664-2		
Client ID:	10603				
Operator ID:	403648	ALS Bottle#:	14	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

36 2-Methylpentane, CAS: 107-83-5

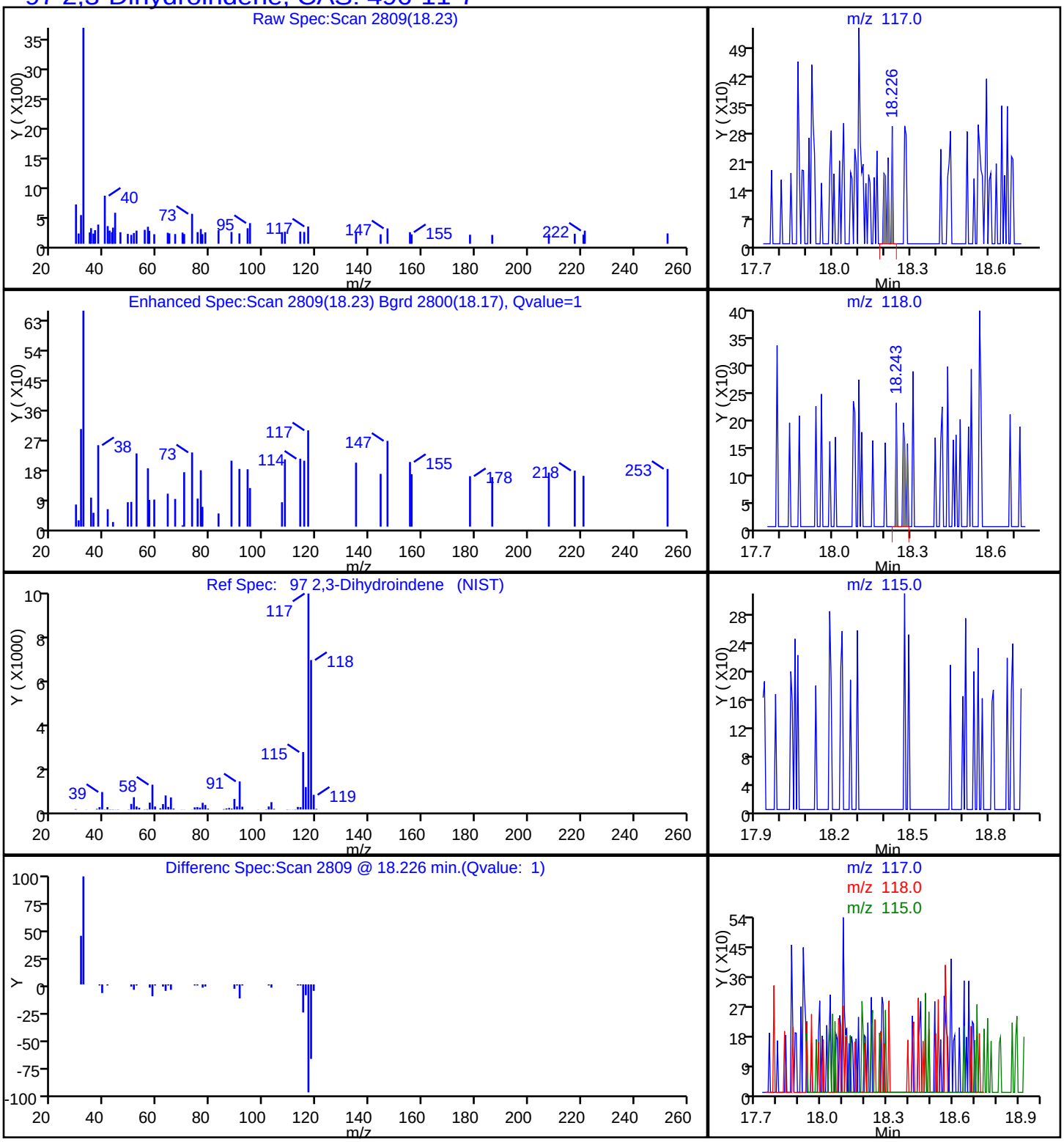


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20171025-6448.b\GJ30bk9664-2.D

Injection Date:	31-Oct-2017 04:06:30	Instrument ID:	MG		
Lims ID:	140-9664-A-2	Lab Sample ID:	140-9664-2		
Client ID:	10603				
Operator ID:	403648	ALS Bottle#:	14	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

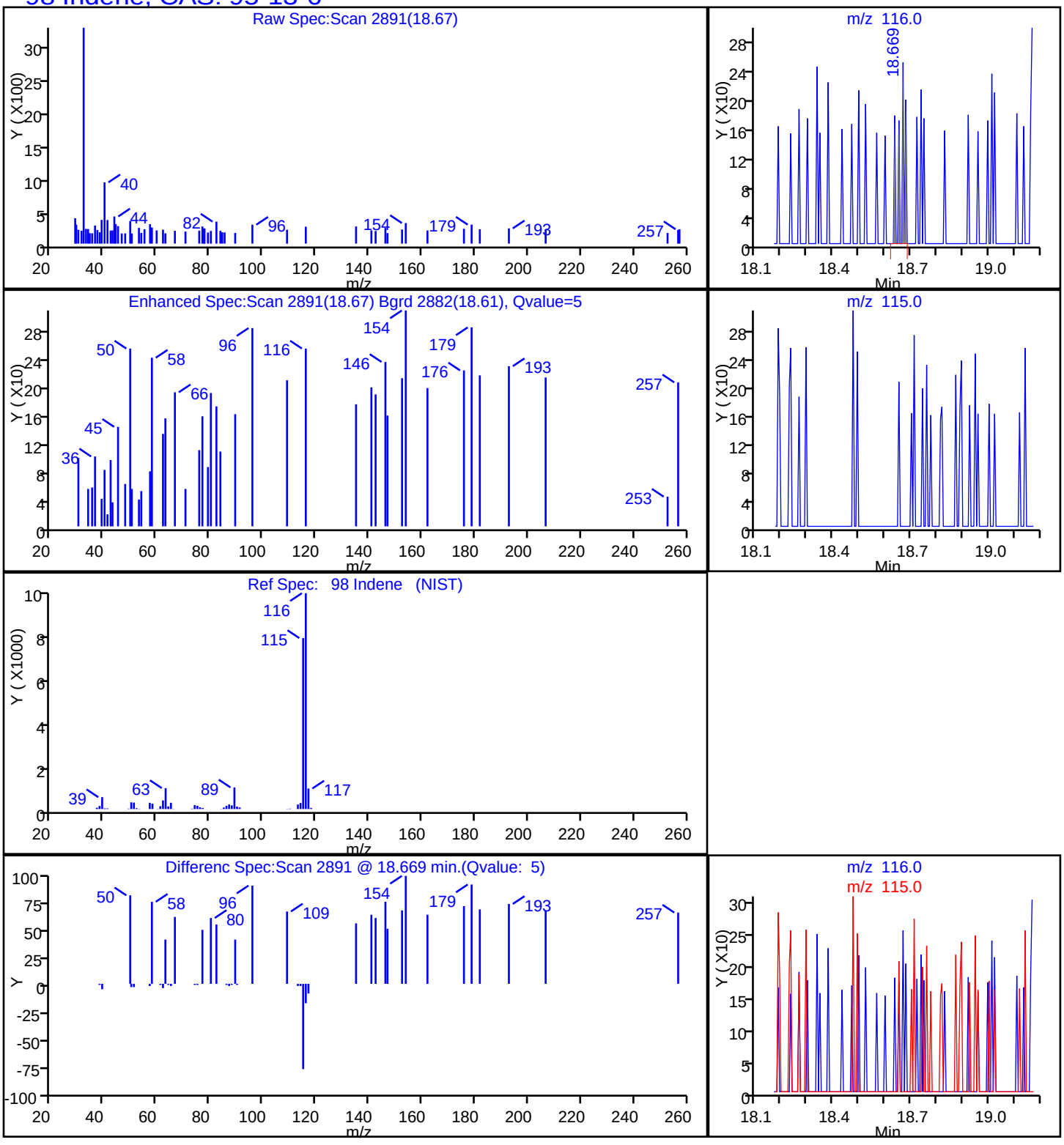
97 2,3-Dihydroindene, CAS: 496-11-7



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171025-6448.b\GJ30bk9664-2.D		
Injection Date:	31-Oct-2017 04:06:30	Instrument ID:	MG
Lims ID:	140-9664-A-2	Lab Sample ID:	140-9664-2
Client ID:	10603		
Operator ID:	403648	ALS Bottle#:	14 Worklist Smp#: 23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

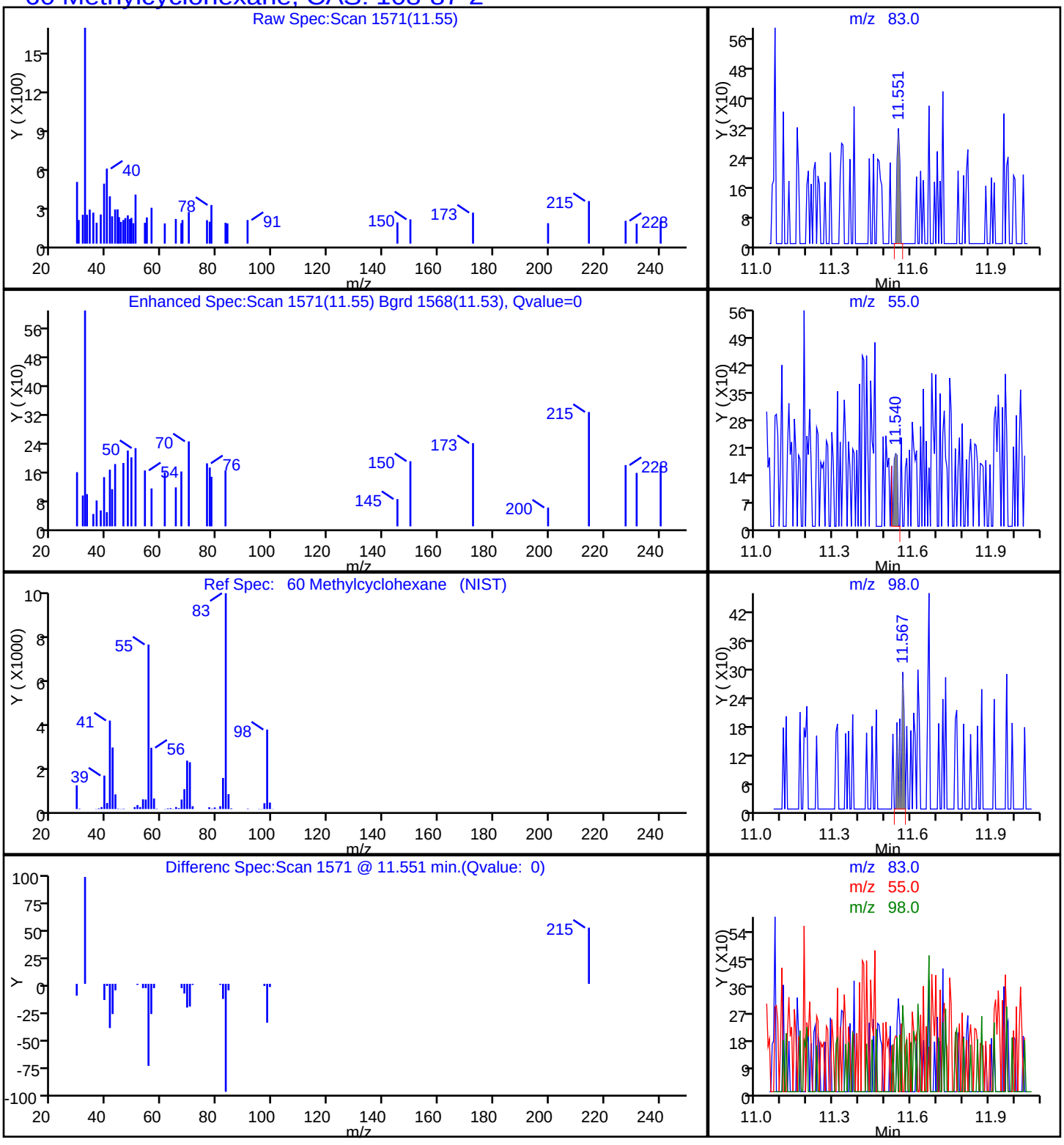
98 Indene, CAS: 95-13-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171025-6448.b\GJ30bk9664-2.D				
Injection Date:	31-Oct-2017 04:06:30	Instrument ID:	MG		
Lims ID:	140-9664-A-2	Lab Sample ID:	140-9664-2		
Client ID:	10603				
Operator ID:	403648	ALS Bottle#:	14	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

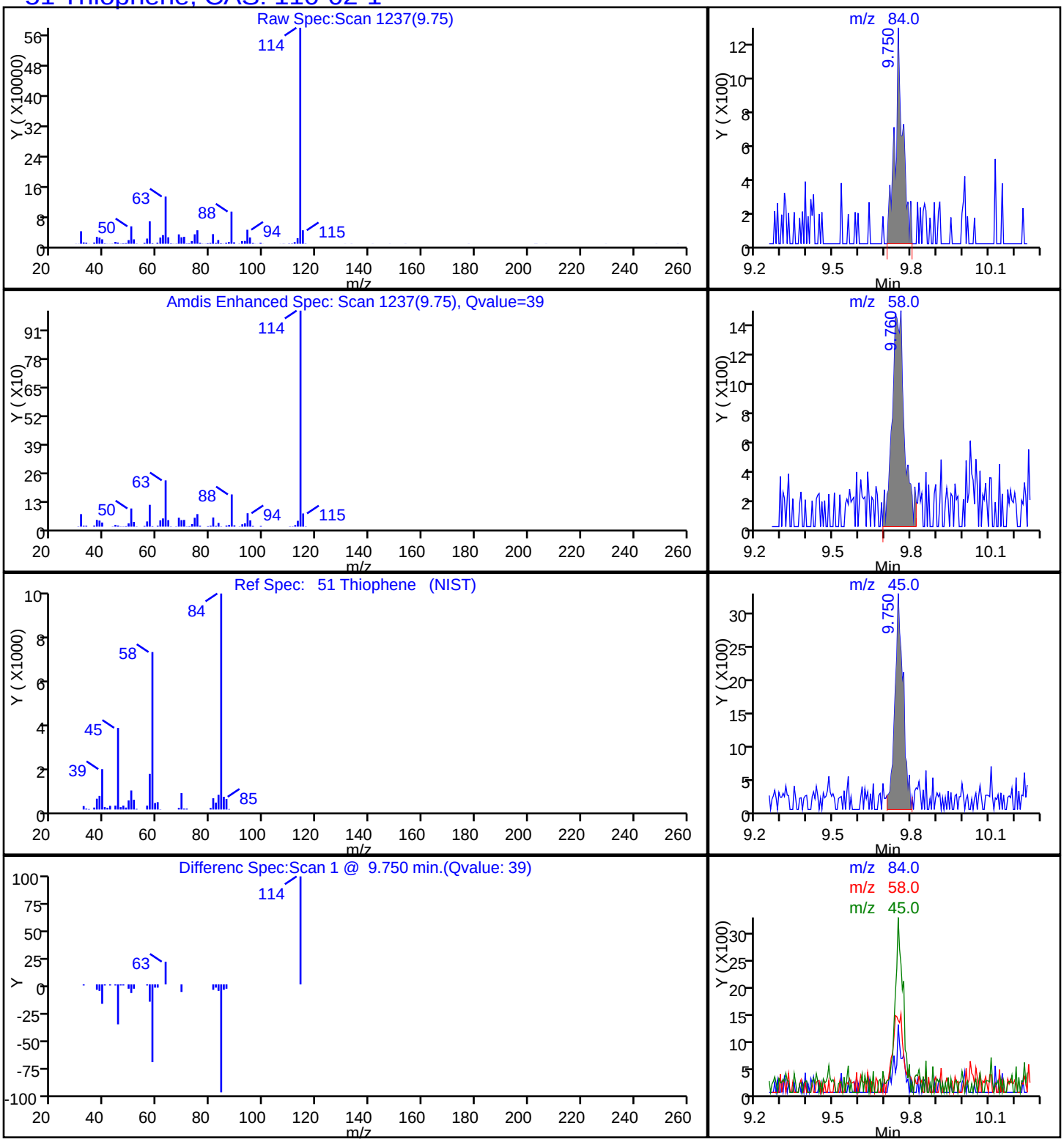
60 Methylcyclohexane, CAS: 108-87-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171025-6448.b\GJ30bk9664-2.D				
Injection Date:	31-Oct-2017 04:06:30	Instrument ID:	MG		
Lims ID:	140-9664-A-2	Lab Sample ID:	140-9664-2		
Client ID:	10603				
Operator ID:	403648	ALS Bottle#:	14	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

51 Thiophene, CAS: 110-02-1



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-9664-1

SDG No.:

Client Sample ID: 09741 Lab Sample ID: 140-9664-5

Matrix: Air Lab File ID: 9664BK05.D

Analysis Method: TO-15 Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) Date Analyzed: 10/28/2017 04:34

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 15524 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	NC		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	NC		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND	*	1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	NC		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND	*	0.50	
91-57-6	2-Methylnaphthalene	ND	*	2.5	
107-83-5	2-Methylpentane	NC		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9664-1

SDG No.:

Client Sample ID: 09741 | Lab Sample ID: 140-9664-5

Matrix: Air | Lab File ID: 9664BK05.D

Analysis Method: TO-15 | Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) | Date Analyzed: 10/28/2017 04:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15524 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND	*	1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND	*	0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	NC		0.20	
95-13-6	Indene	NC		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9664-1

SDG No.:

Client Sample ID: 09741 | Lab Sample ID: 140-9664-5

Matrix: Air | Lab File ID: 9664BK05.D

Analysis Method: TO-15 | Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) | Date Analyzed: 10/28/2017 04:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15524 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	NC		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	NC		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20171025-6447.b\9664BK05.D
Lims ID: 140-9664-A-5
Client ID: 09741
Sample Type: Client
Inject. Date: 28-Oct-2017 04:34:30 ALS Bottle#: 16 Worklist Smp#: 23
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006447-023
Misc. Info.: 09741
Operator ID: 7126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20171025-6447.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 01-Nov-2017 09:45:33 Calib Date: 20-Sep-2017 09:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170919-6110.b\GI18ICL02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: barlozhetskayaa Date: 30-Oct-2017 12:06:40

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
*	1 Chlorobromomethane (IS)	128	7.609	7.619	-0.010	91	293765	4.00	
*	2 1,4-Difluorobenzene	114	9.755	9.760	-0.005	95	1595452	4.00	
*	3 Chlorobenzene-d5 (IS)	117	14.705	14.710	-0.005	89	1415013	4.00	
$	4 4-Bromofluorobenzene (Surr	95	16.393	16.398	-0.005	94	976841	3.64	
	9 Chloromethane	52	3.484	3.489	-0.005	98	4308	0.1666	
	24 Isopropyl alcohol	45	4.702	4.686	0.016	99	49869	0.4683	
	30 Methylene Chloride	84	5.349	5.355	-0.006	97	13653	0.1569	
	36 2-Methylpentane	43	6.687	6.530	0.157	68	4960	NC	
	50 2,3-Dimethylpentane	71	9.755	9.760	-0.005	27	2397	NC	
	51 Thiophene	84	9.744	9.771	-0.027	39	2329	NC	
	55 Trichloroethene	130	10.510	10.515	-0.005	93	6788	0.0433	
	60 Methylcyclohexane	83	11.583	11.588	-0.005	1	82	NC	
	97 2,3-Dihydroindene	117	18.383	18.501	-0.118	1	173	NC	
	98 Indene	116	18.793	18.766	0.027	1	54	NC	
	101 1,2,3,5-Tetramethylbenzene	119	19.386	19.391	-0.005	1	340	NC	
	103 1,2,3,4-Tetramethylbenzene	119	19.785	19.801	-0.016	1	113	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

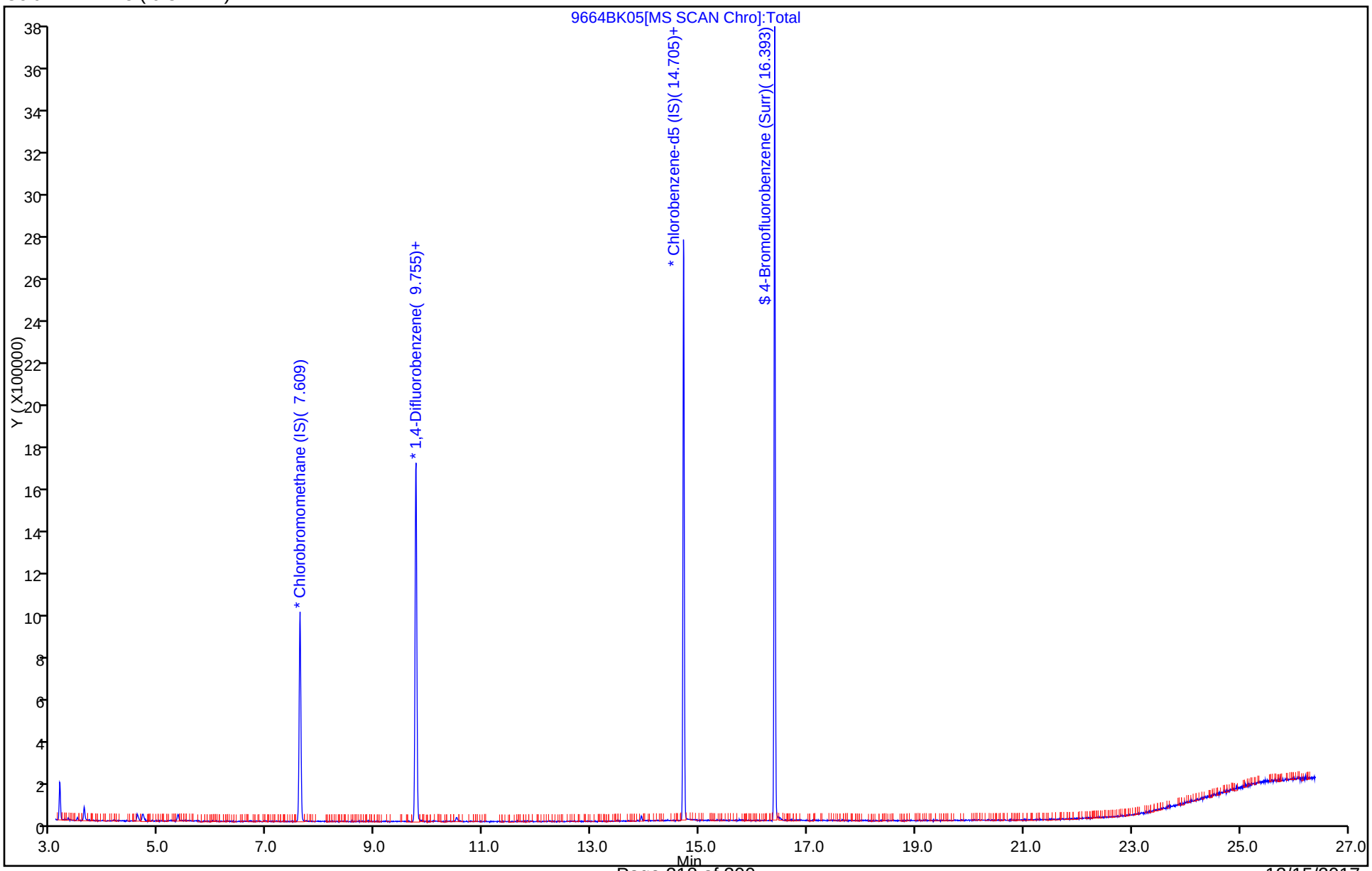
Report Date: 01-Nov-2017 09:46:29 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20171025-6447.b\9664BK05.D

Injection Date:	28-Oct-2017 04:34:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-9664-A-5	Lab Sample ID:	140-9664-5	Worklist Smp#:	23
Client ID:	09741				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

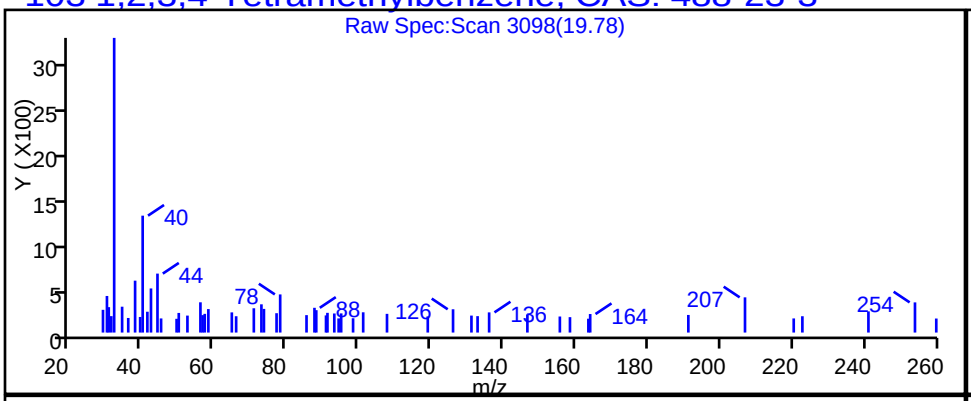
Column: RTX-5 (0.32 mm)

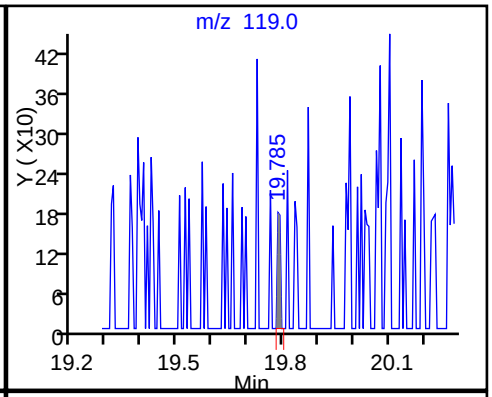


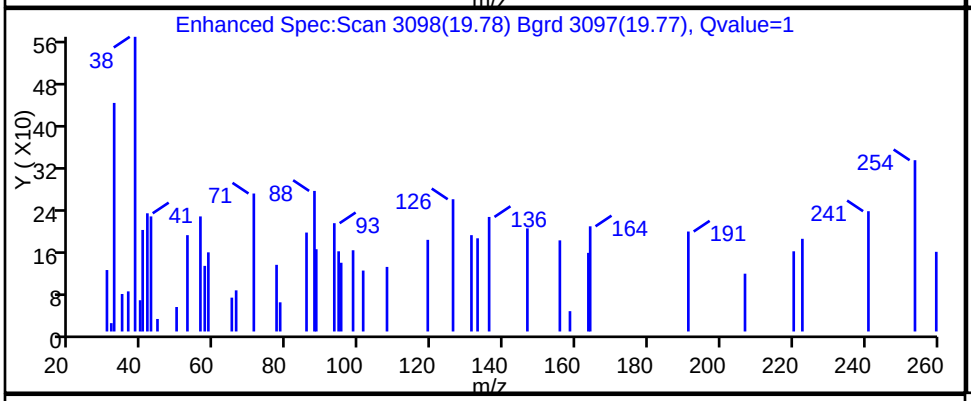
TestAmerica Knoxville

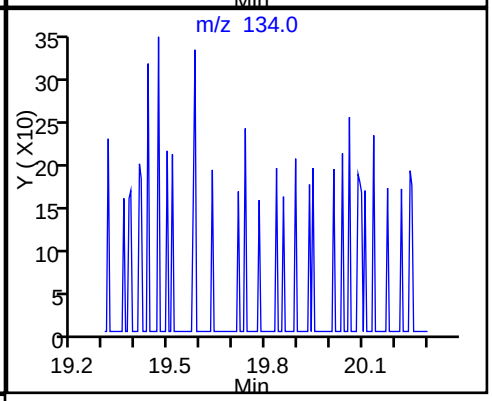
Data File:	\\ChromNA\Knoxville\ChromData\MG\20171025-6447.b\9664BK05.D				
Injection Date:	28-Oct-2017 04:34:30	Instrument ID:	MG		
Lims ID:	140-9664-A-5	Lab Sample ID:	140-9664-5		
Client ID:	09741				
Operator ID:	7126	ALS Bottle#:	16	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

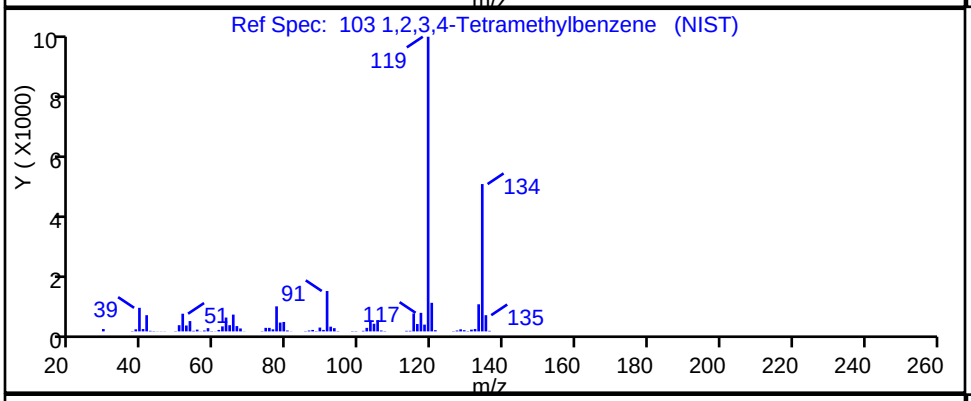
103 1,2,3,4-Tetramethylbenzene, CAS: 488-23-3

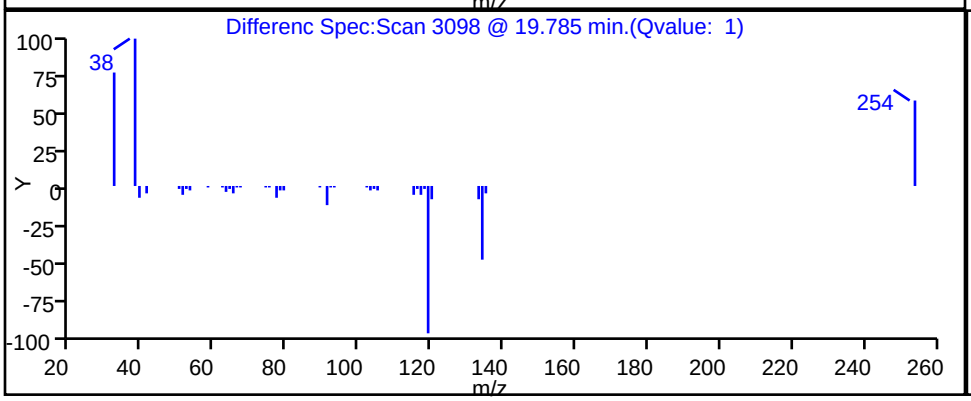


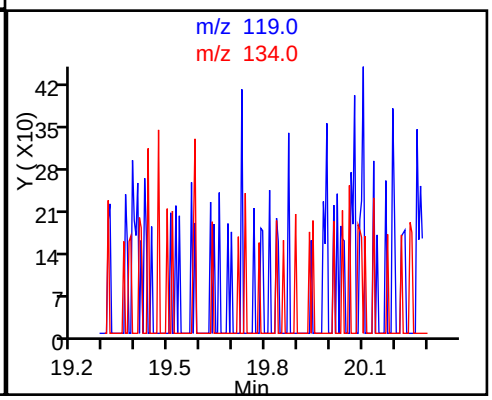








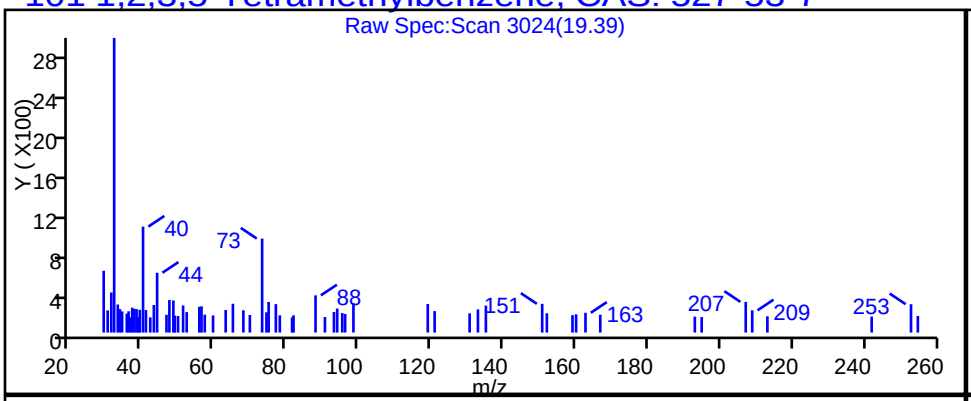


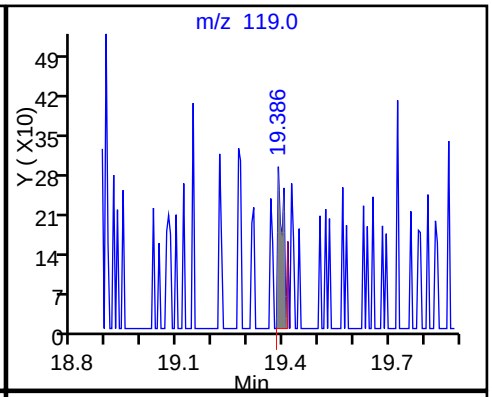


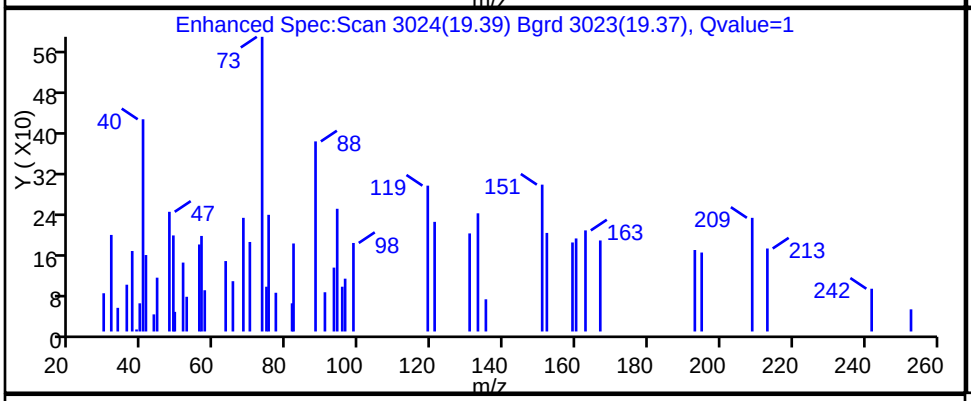
TestAmerica Knoxville

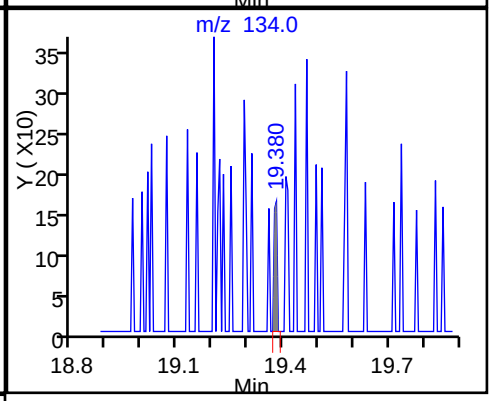
Data File:	\\ChromNA\Knoxville\ChromData\MG\20171025-6447.b\9664BK05.D				
Injection Date:	28-Oct-2017 04:34:30	Instrument ID:	MG		
Lims ID:	140-9664-A-5	Lab Sample ID:	140-9664-5		
Client ID:	09741				
Operator ID:	7126	ALS Bottle#:	16	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

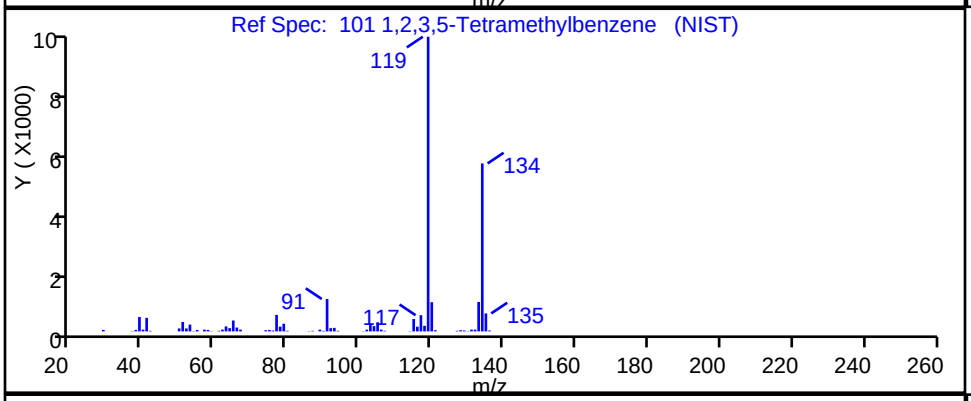
101 1,2,3,5-Tetramethylbenzene, CAS: 527-53-7

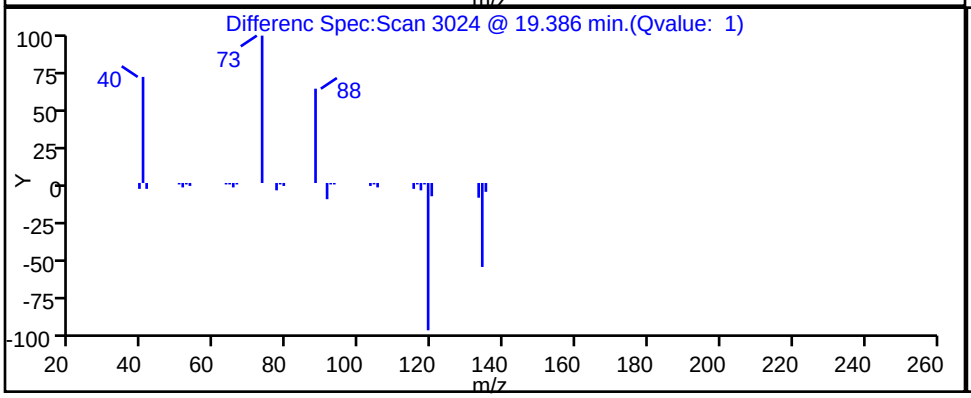


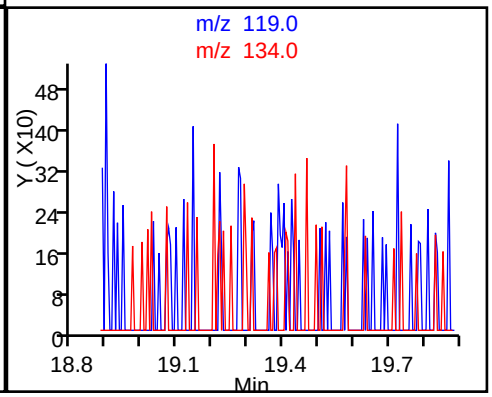








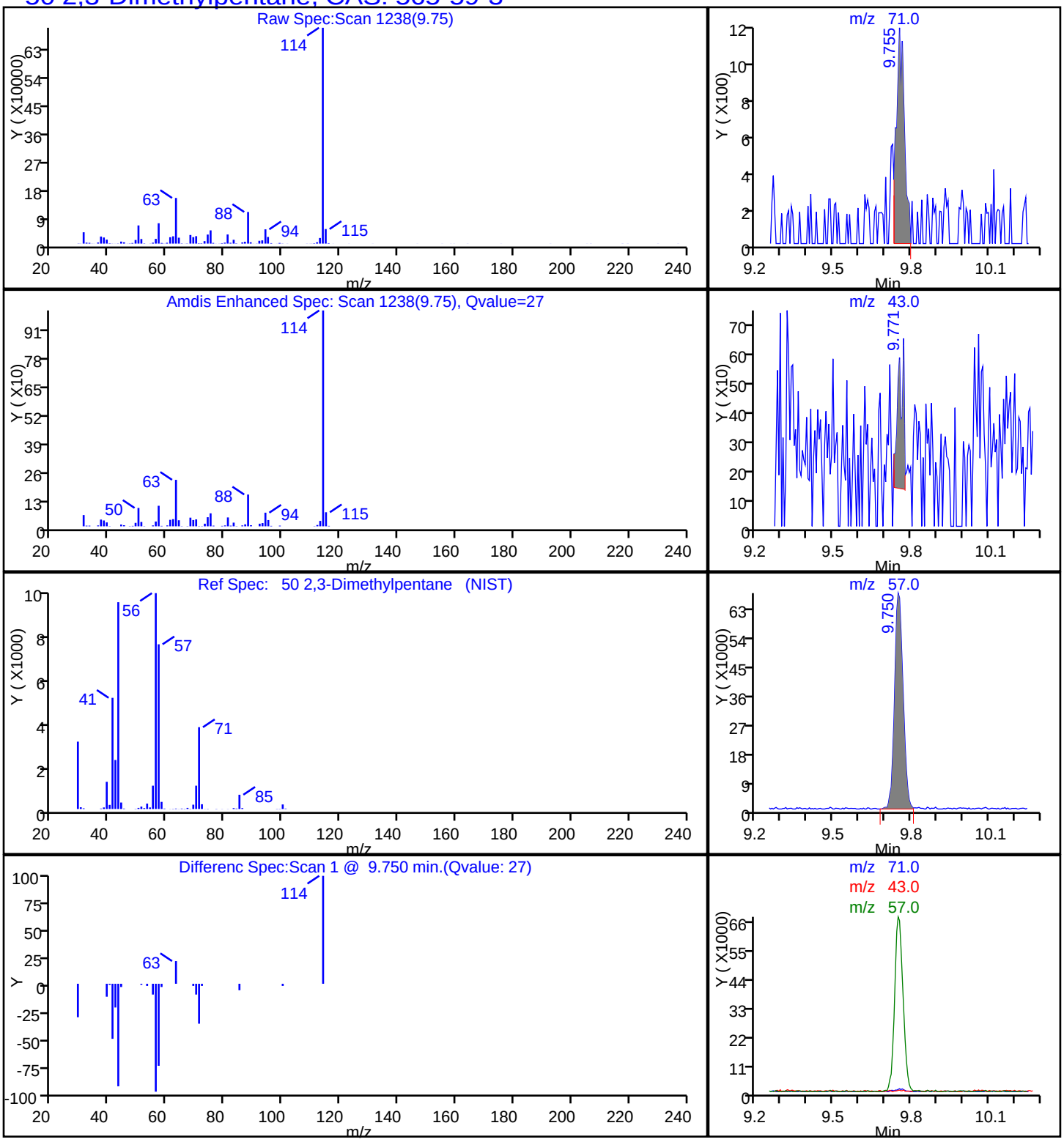




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171025-6447.b\9664BK05.D				
Injection Date:	28-Oct-2017 04:34:30	Instrument ID:	MG		
Lims ID:	140-9664-A-5	Lab Sample ID:	140-9664-5		
Client ID:	09741				
Operator ID:	7126	ALS Bottle#:	16	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

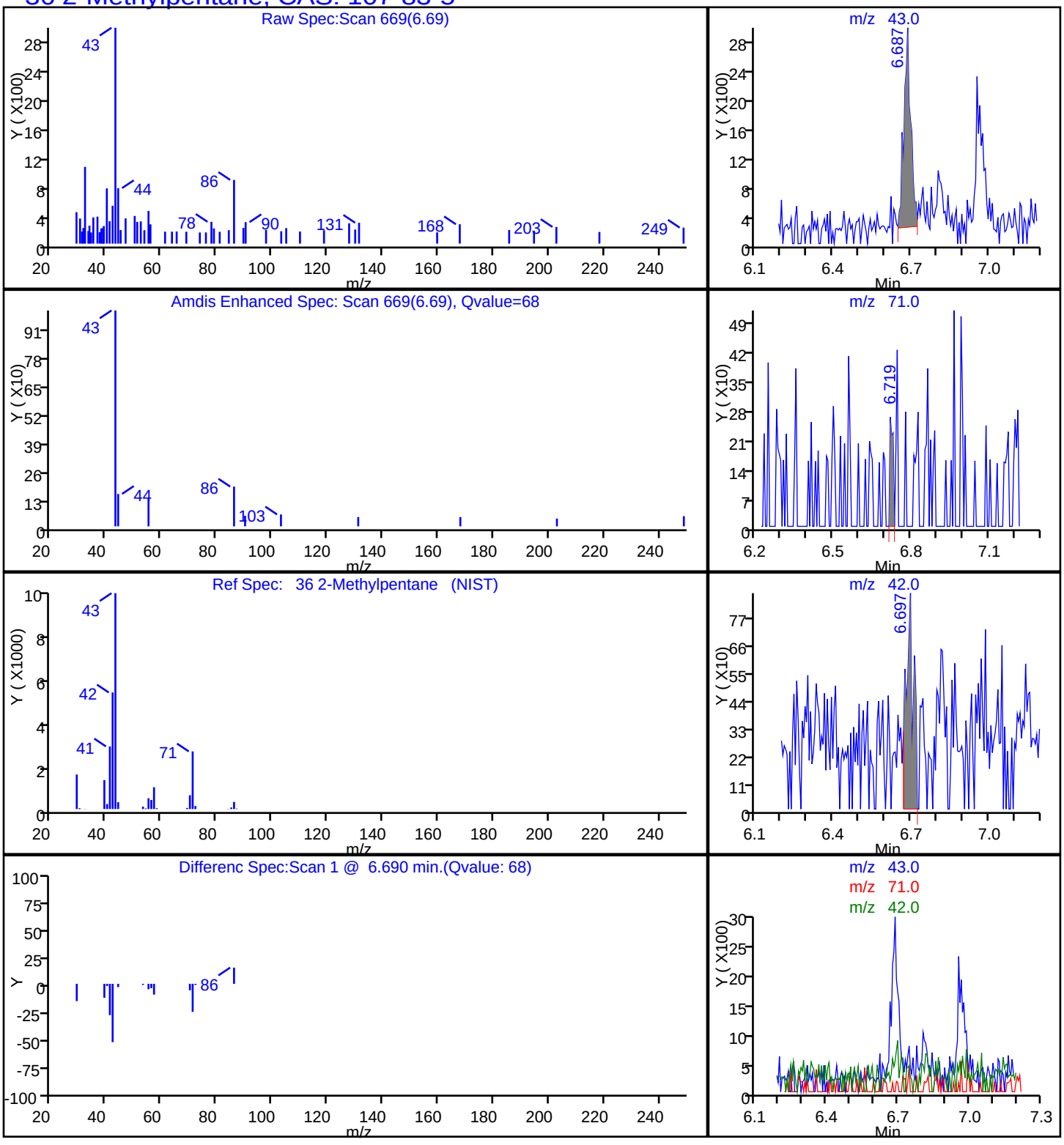
50 2,3-Dimethylpentane, CAS: 565-59-3



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171025-6447.b\9664BK05.D		
Injection Date:	28-Oct-2017 04:34:30	Instrument ID:	MG
Lims ID:	140-9664-A-5	Lab Sample ID:	140-9664-5
Client ID:	09741		
Operator ID:	7126	ALS Bottle#:	16 Worklist Smp#: 23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

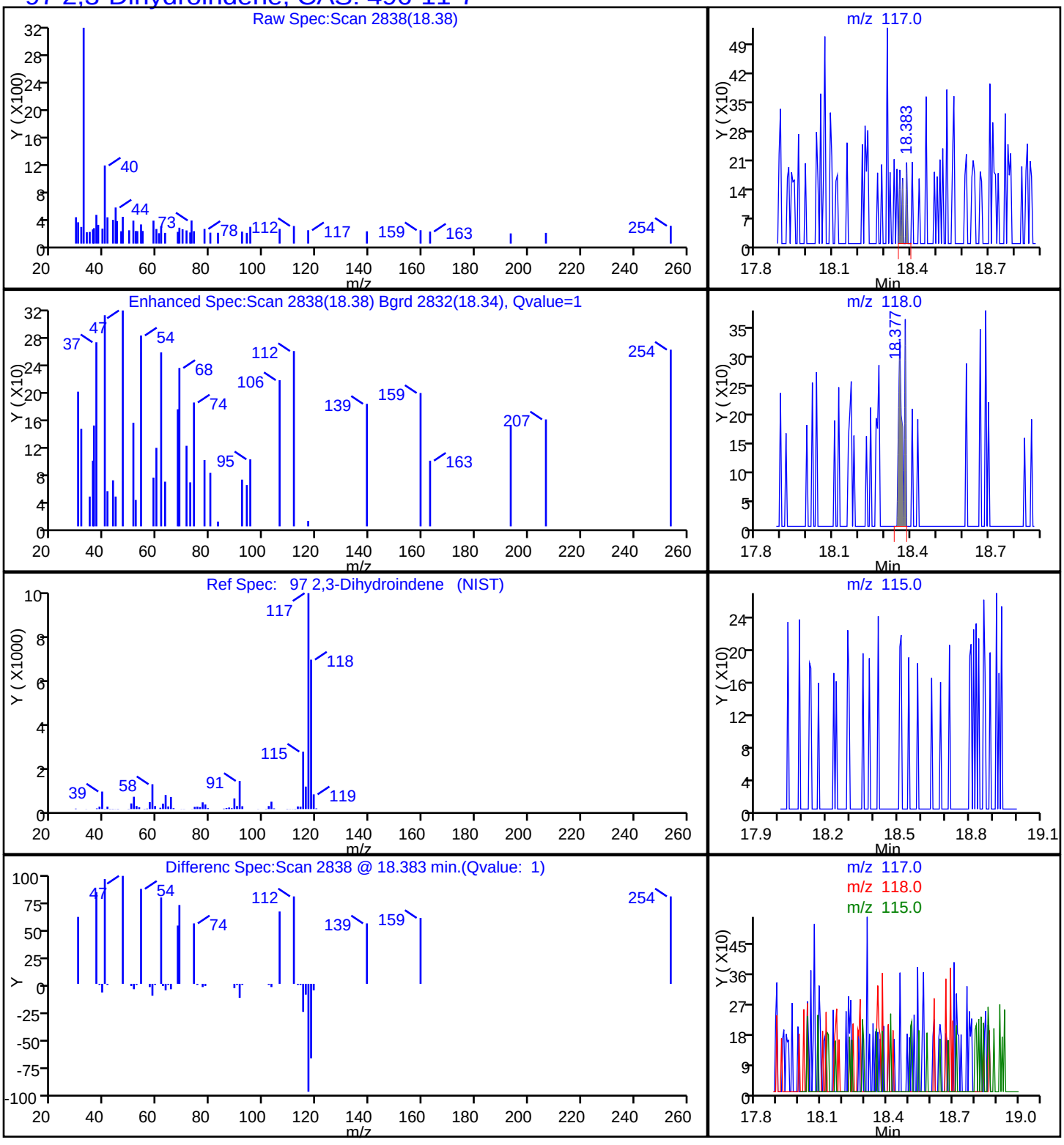
36 2-Methylpentane, CAS: 107-83-5



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171025-6447.b\9664BK05.D				
Injection Date:	28-Oct-2017 04:34:30	Instrument ID:	MG		
Lims ID:	140-9664-A-5	Lab Sample ID:	140-9664-5		
Client ID:	09741				
Operator ID:	7126	ALS Bottle#:	16	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

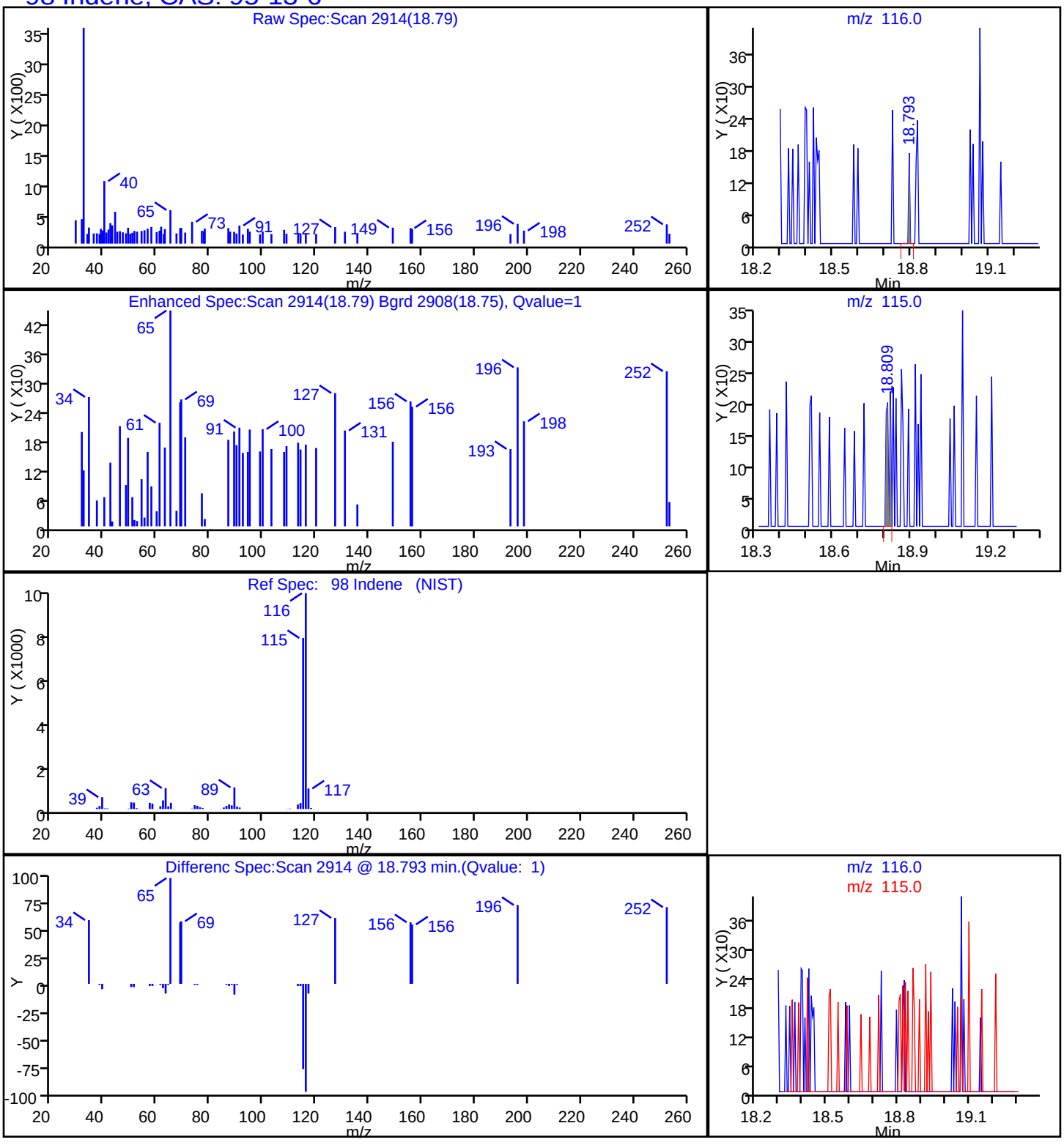
97 2,3-Dihydroindene, CAS: 496-11-7



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171025-6447.b\9664BK05.D				
Injection Date:	28-Oct-2017 04:34:30	Instrument ID:	MG		
Lims ID:	140-9664-A-5	Lab Sample ID:	140-9664-5		
Client ID:	09741				
Operator ID:	7126	ALS Bottle#:	16	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

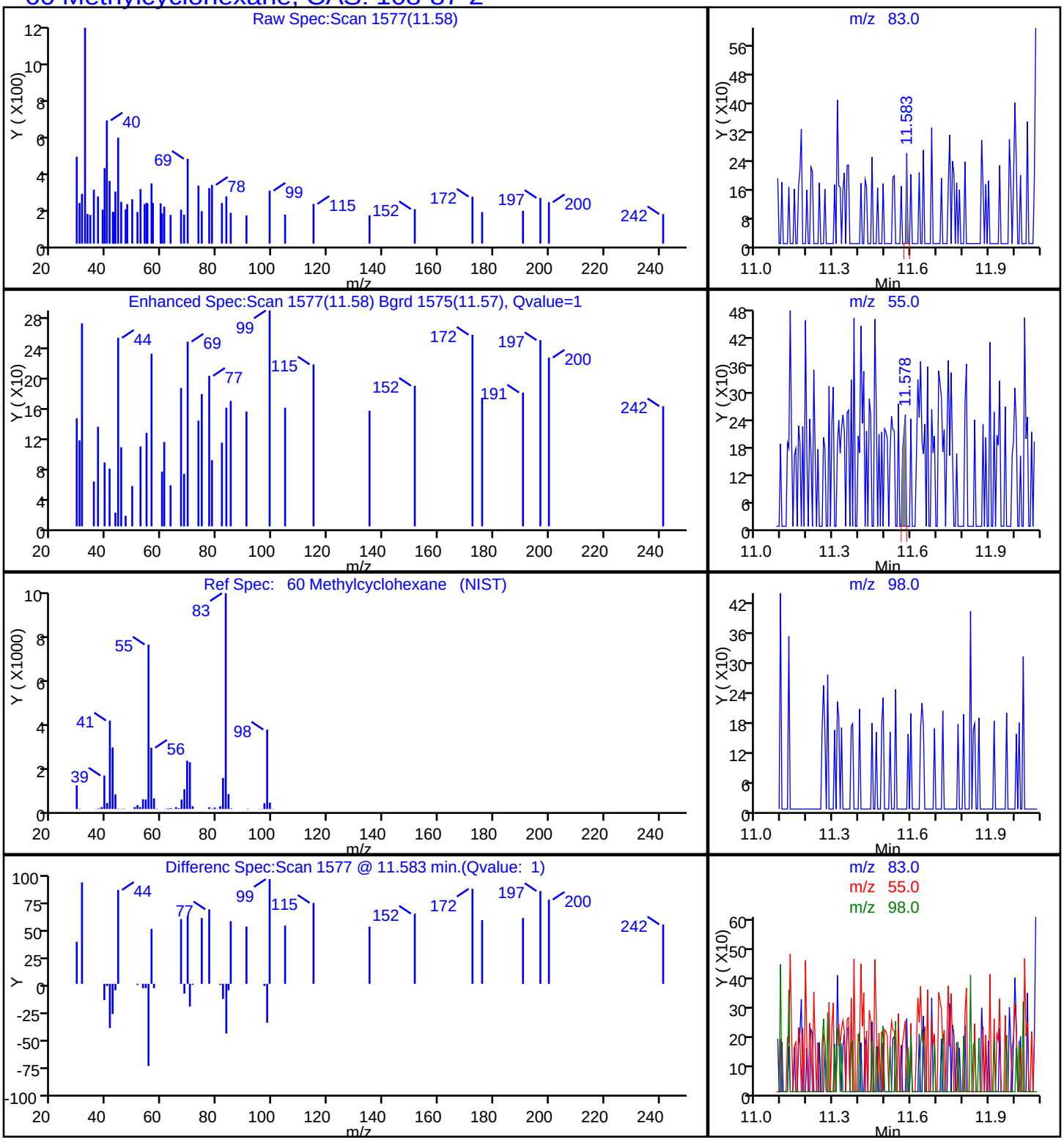
98 Indene, CAS: 95-13-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171025-6447.b\9664BK05.D				
Injection Date:	28-Oct-2017 04:34:30	Instrument ID:	MG		
Lims ID:	140-9664-A-5	Lab Sample ID:	140-9664-5		
Client ID:	09741				
Operator ID:	7126	ALS Bottle#:	16	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

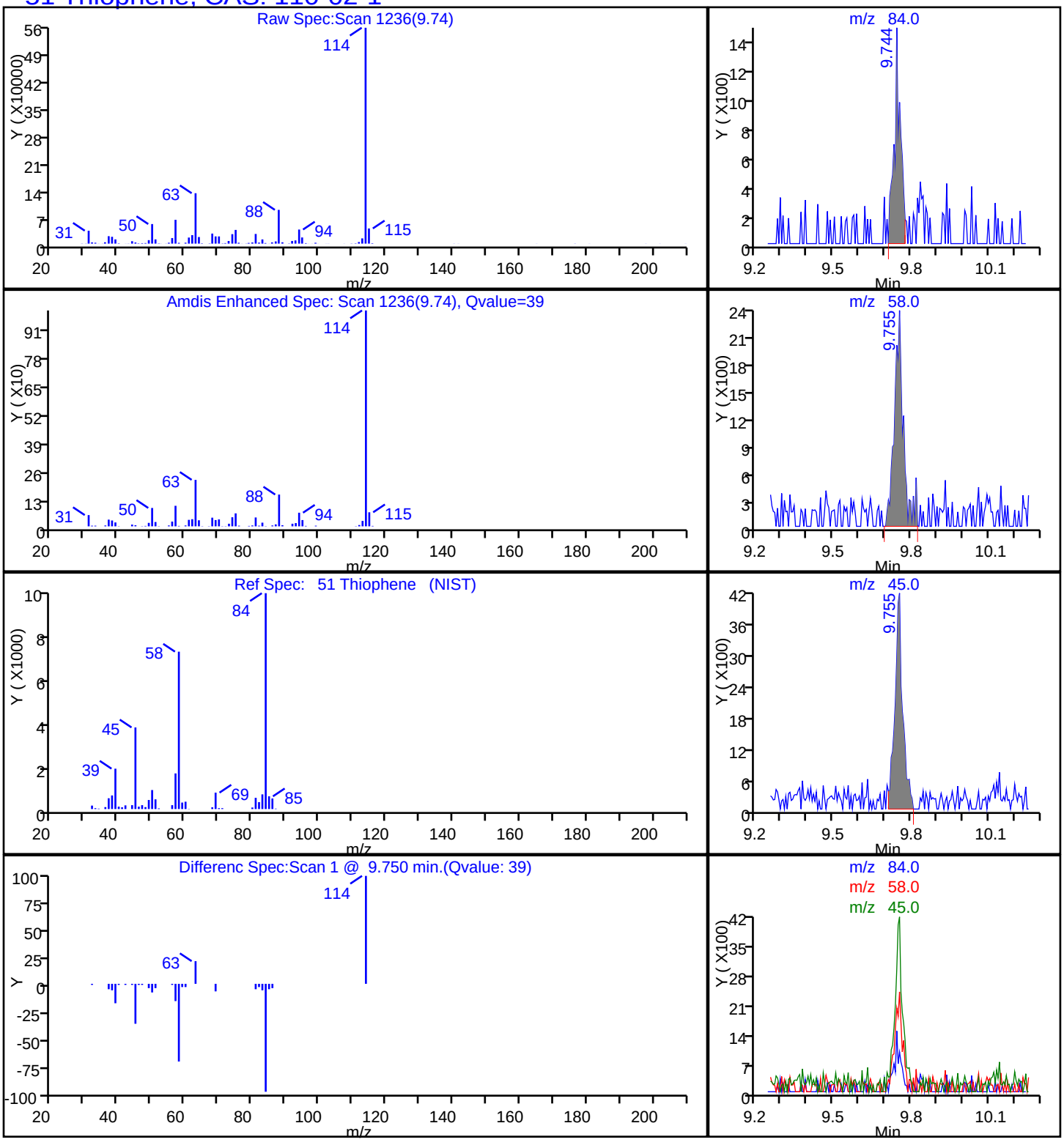
60 Methylcyclohexane, CAS: 108-87-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171025-6447.b\9664BK05.D				
Injection Date:	28-Oct-2017 04:34:30	Instrument ID:	MG		
Lims ID:	140-9664-A-5	Lab Sample ID:	140-9664-5		
Client ID:	09741				
Operator ID:	7126	ALS Bottle#:	16	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

51 Thiophene, CAS: 110-02-1



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9664-1

SDG No.:

Client Sample ID: 09583 | Lab Sample ID: 140-9664-6

Matrix: Air | Lab File ID: 9664BK06.D

Analysis Method: TO-15 | Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) | Date Analyzed: 10/28/2017 04:32

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15466 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	NC		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9664-1

SDG No.:

Client Sample ID: 09583 | Lab Sample ID: 140-9664-6

Matrix: Air | Lab File ID: 9664BK06.D

Analysis Method: TO-15 | Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) | Date Analyzed: 10/28/2017 04:32

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15466 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9664-1

SDG No.:

Client Sample ID: 09583 | Lab Sample ID: 140-9664-6

Matrix: Air | Lab File ID: 9664BK06.D

Analysis Method: TO-15 | Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) | Date Analyzed: 10/28/2017 04:32

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15466 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20171024-6430.b\9664BK06.D				
Lims ID:	140-9664-A-6				
Client ID:	09583				
Sample Type:	Client				
Inject. Date:	28-Oct-2017 04:32:30	ALS Bottle#:	1	Worklist Smp#:	25
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006430-025				
Misc. Info.:	09583				
Operator ID:	007126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20171024-6430.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	30-Oct-2017 11:02:19	Calib Date:	07-Sep-2017 22:36:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20170907-6007.b\JICI07L9.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK026				
First Level Reviewer: barlozhetskayaa		Date:	30-Oct-2017 11:01:39		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.716	9.726	-0.010	94	337162	4.00	
* 2 1,4-Difluorobenzene	114	11.819	11.834	-0.015	95	1866599	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.429	16.439	-0.010	88	1634713	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	18.032	18.037	-0.005	97	1117536	3.74	
33 2-Methylpentane	43	7.757	7.914	-0.157	42	522	NC	
70 Tetrachloroethene	129	15.622	15.622	0.000	94	3392	0.0220	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

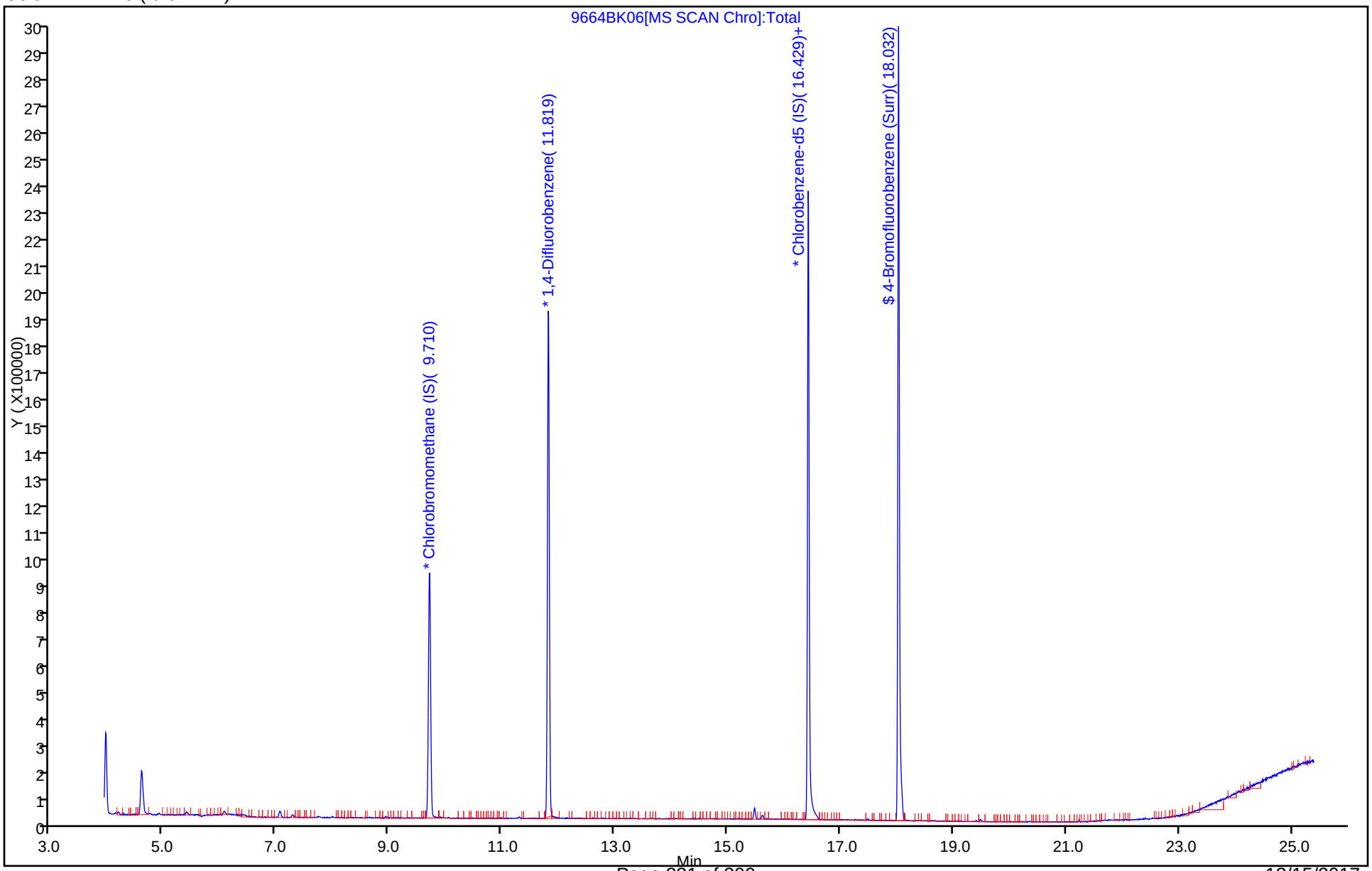
Report Date: 30-Oct-2017 11:15:28 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20171024-6430.b\9664BK06.D

Injection Date:	28-Oct-2017 04:32:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-9664-A-6	Lab Sample ID:	140-9664-6	Worklist Smp#:	25
Client ID:	09583				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

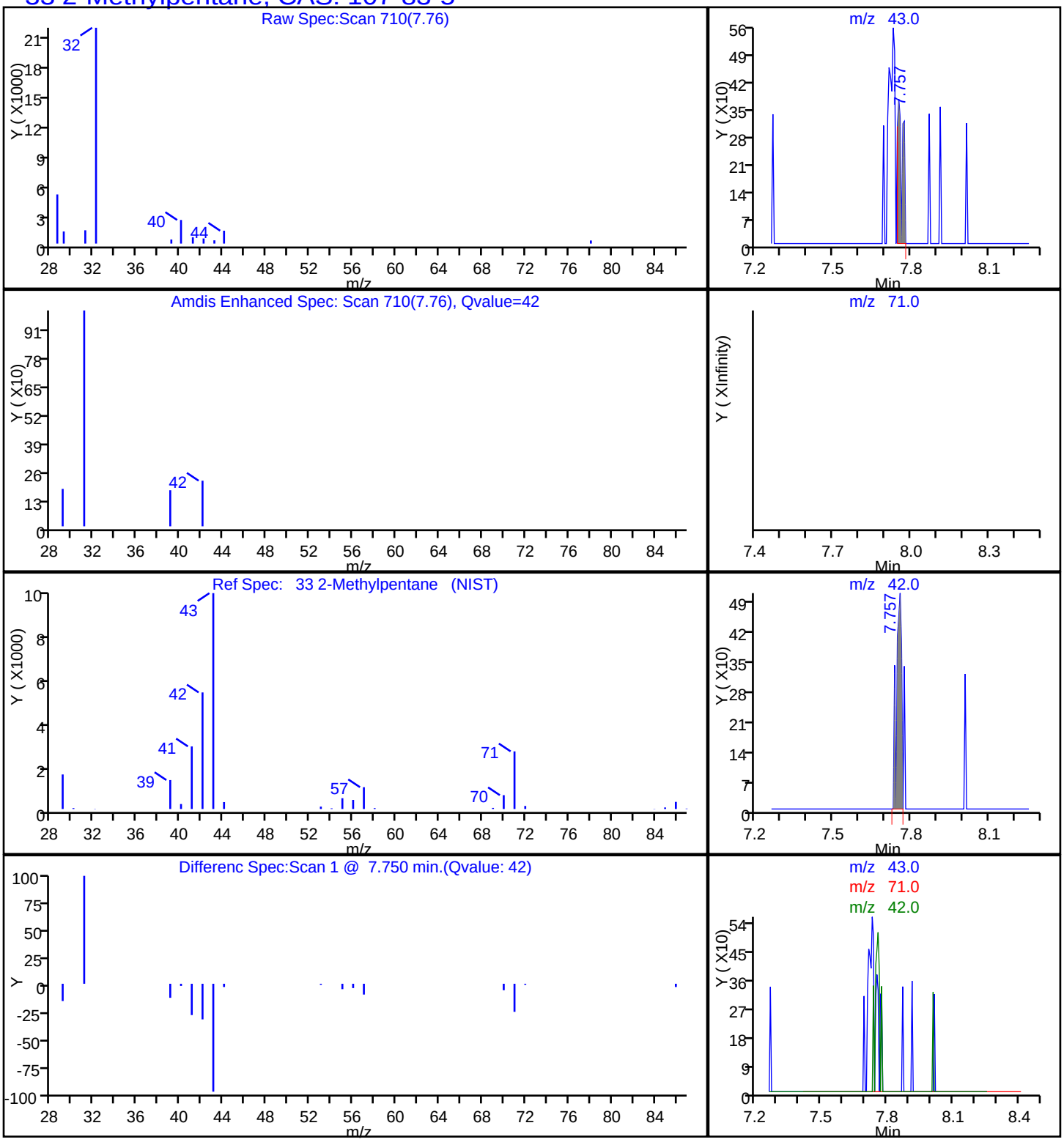
Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20171024-6430.b\9664BK06.D		
Injection Date:	28-Oct-2017 04:32:30	Instrument ID:	MJ
Lims ID:	140-9664-A-6	Lab Sample ID:	140-9664-6
Client ID:	09583		
Operator ID:	007126	ALS Bottle#:	1 Worklist Smp#: 25
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

33 2-Methylpentane, CAS: 107-83-5



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9664-1

SDG No.:

Client Sample ID: 09787 | Lab Sample ID: 140-9664-7

Matrix: Air | Lab File ID: 664BK07.D

Analysis Method: TO-15 | Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) | Date Analyzed: 10/27/2017 22:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15578 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	NC		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	NC		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	NC		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9664-1

SDG No.:

Client Sample ID: 09787 | Lab Sample ID: 140-9664-7

Matrix: Air | Lab File ID: 664BK07.D

Analysis Method: TO-15 | Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) | Date Analyzed: 10/27/2017 22:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15578 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-9664-1

SDG No.:

Client Sample ID: 09787 Lab Sample ID: 140-9664-7

Matrix: Air Lab File ID: 664BK07.D

Analysis Method: TO-15 Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) Date Analyzed: 10/27/2017 22:22

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 15578 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK07.D				
Lims ID:	140-9664-A-7				
Client ID:	09787				
Sample Type:	Client				
Inject. Date:	27-Oct-2017 22:22:30	ALS Bottle#:	11	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006464-017				
Misc. Info.:	09787				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	31-Oct-2017 10:39:31	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				
First Level Reviewer: barlozhetskayaa		Date:	31-Oct-2017 10:41:25		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.778	7.784	-0.006	81	374587	4.00	
* 2 1,4-Difluorobenzene	114	9.919	9.919	0.000	94	2181123	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.901	14.902	-0.001	87	1860714	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.611	16.611	0.000	89	1415166	4.15	
35 2-Methylpentane	43	6.452	6.430	0.022	9	118	NC	
102 1,2,3,5-Tetramethylbenzene	119	19.776	19.749	0.027	1	50	NC	
103 1,2,3,4-Tetramethylbenzene	119	19.965	19.965	0.000	1	225	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

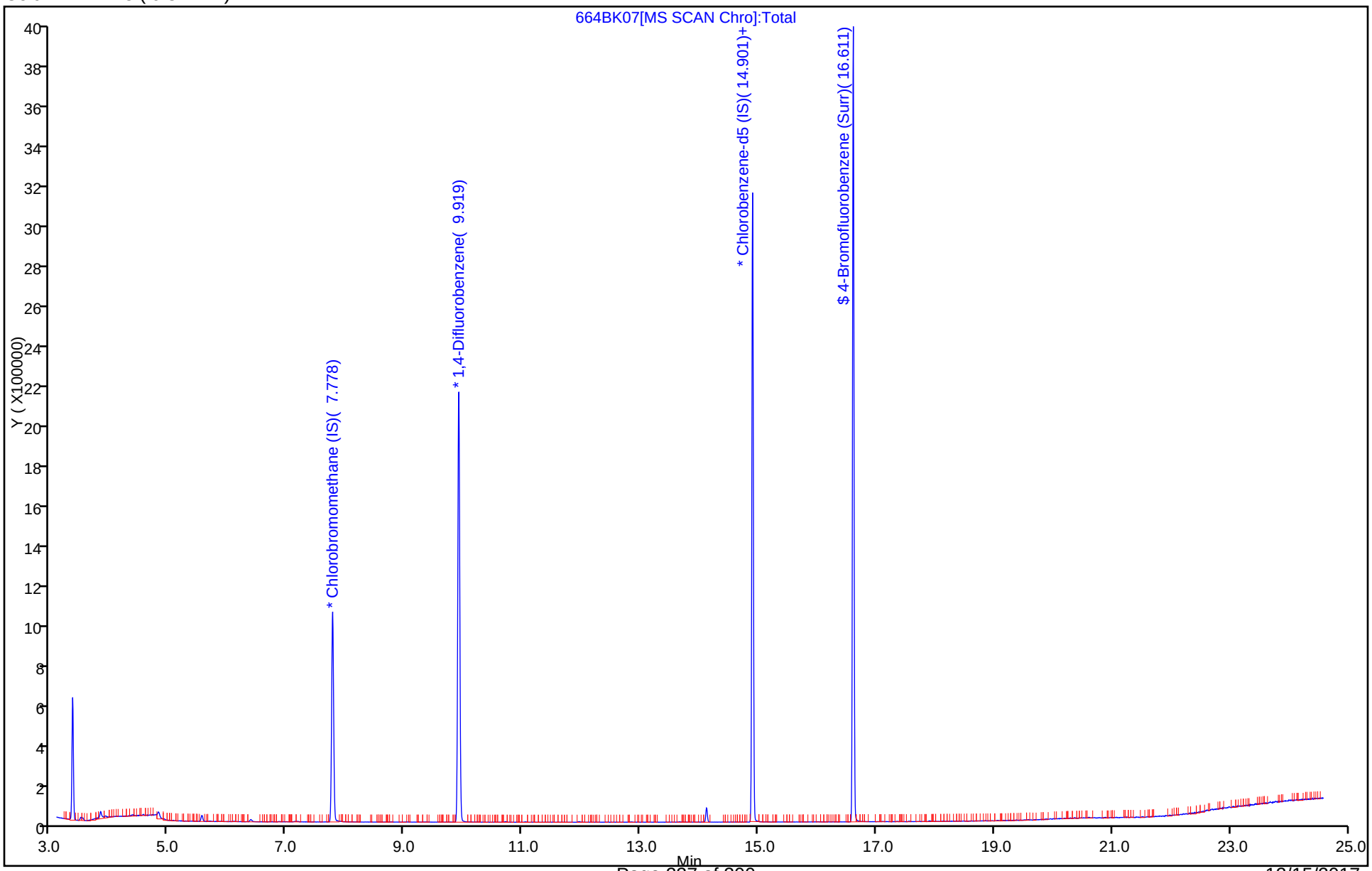
Report Date: 31-Oct-2017 10:41:25 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK07.D

Injection Date:	27-Oct-2017 22:22:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-9664-A-7	Lab Sample ID:	140-9664-7	Worklist Smp#:	17
Client ID:	09787				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

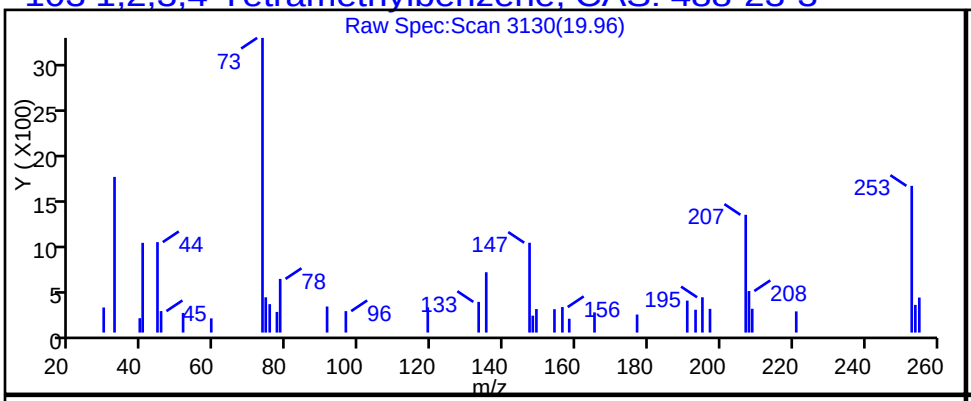
Column: RTX-5 (0.32 mm)

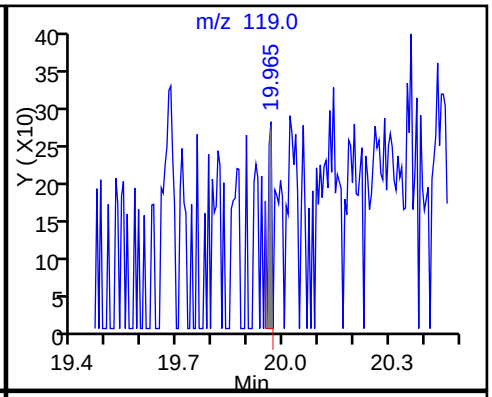


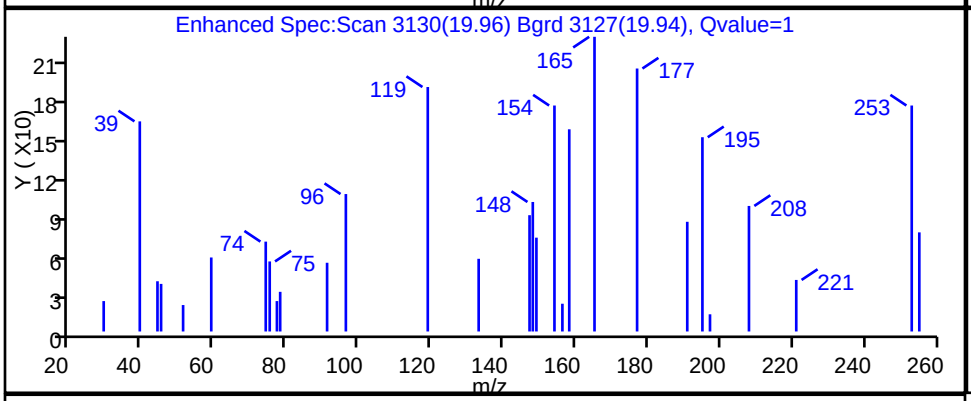
TestAmerica Knoxville

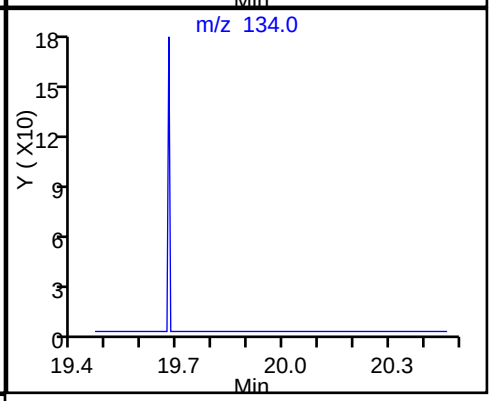
Data File:	\\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK07.D		
Injection Date:	27-Oct-2017 22:22:30	Instrument ID:	MR
Lims ID:	140-9664-A-7	Lab Sample ID:	140-9664-7
Client ID:	09787		
Operator ID:		ALS Bottle#:	11 Worklist Smp#: 17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

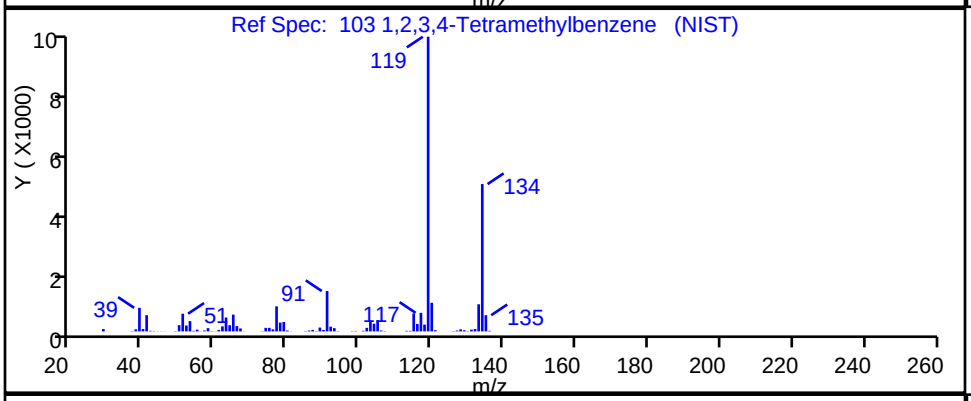
103 1,2,3,4-Tetramethylbenzene, CAS: 488-23-3

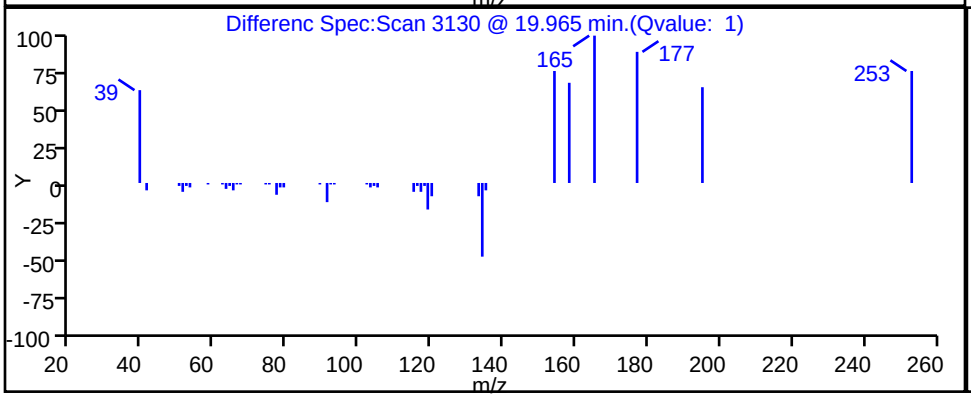


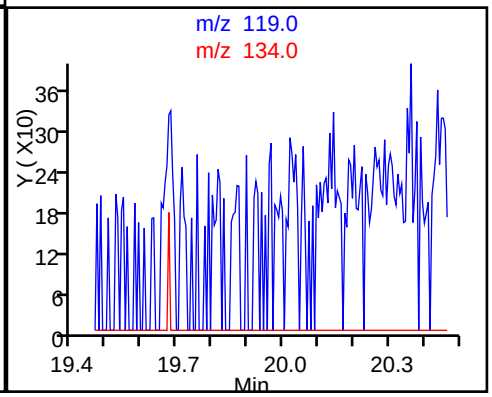








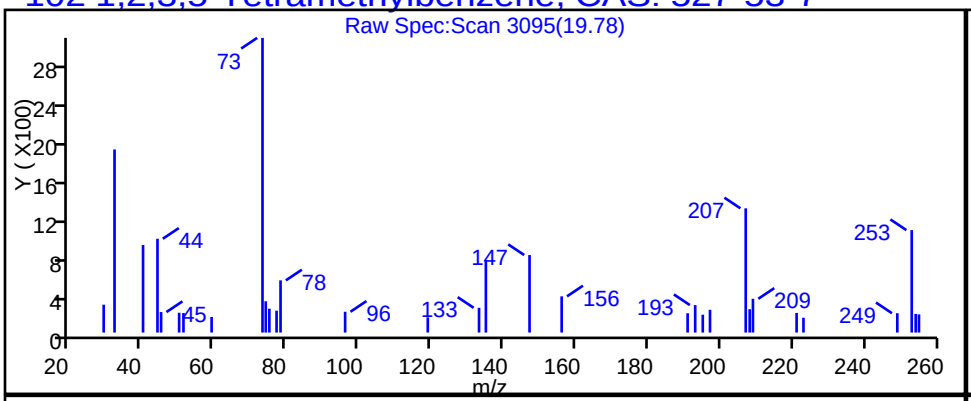


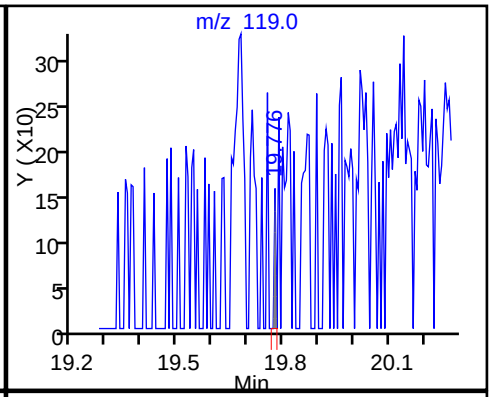


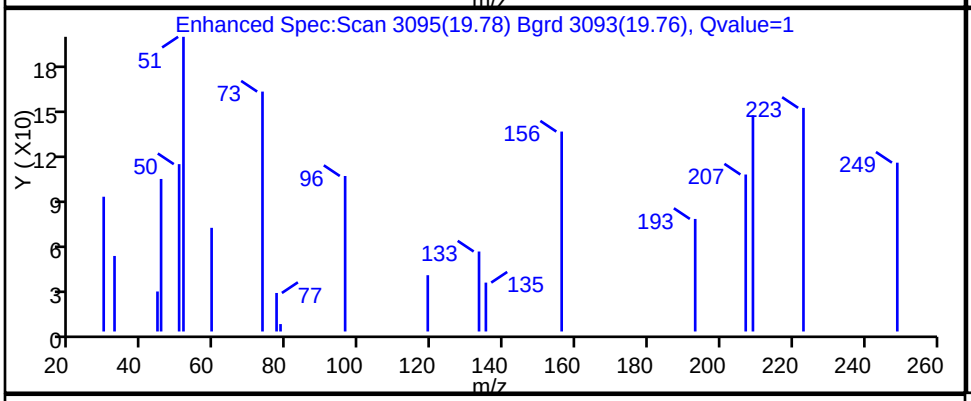
TestAmerica Knoxville

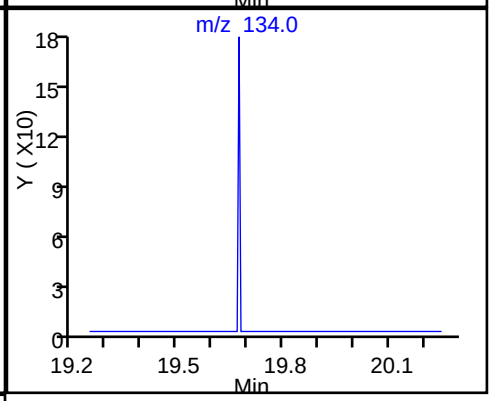
Data File:	\\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK07.D		
Injection Date:	27-Oct-2017 22:22:30	Instrument ID:	MR
Lims ID:	140-9664-A-7	Lab Sample ID:	140-9664-7
Client ID:	09787		
Operator ID:		ALS Bottle#:	11 Worklist Smp#: 17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

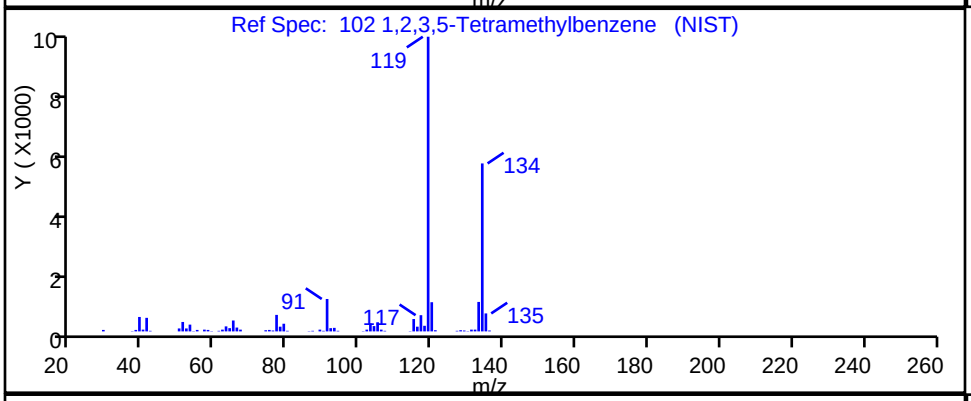
102 1,2,3,5-Tetramethylbenzene, CAS: 527-53-7

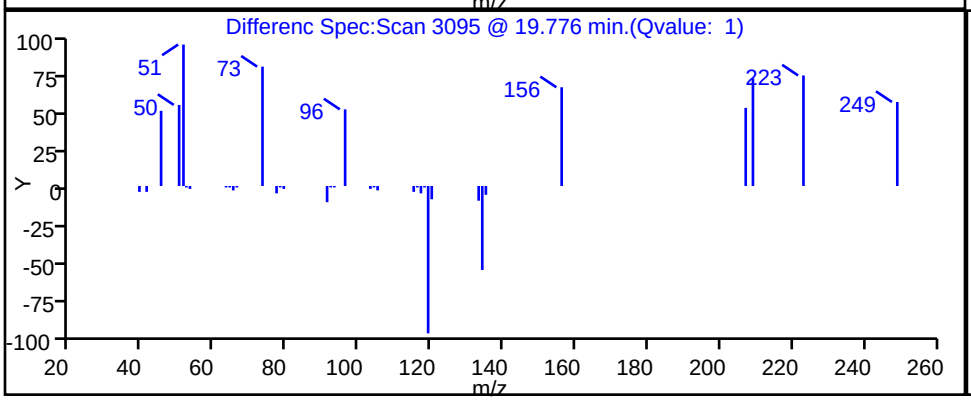


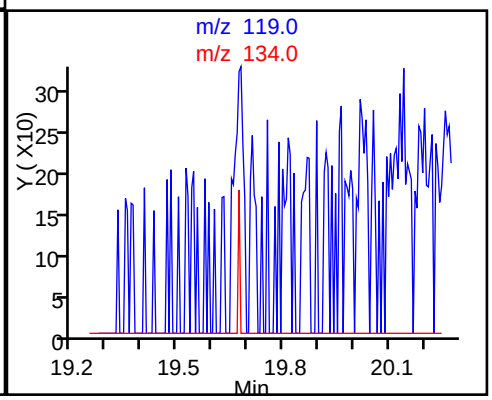












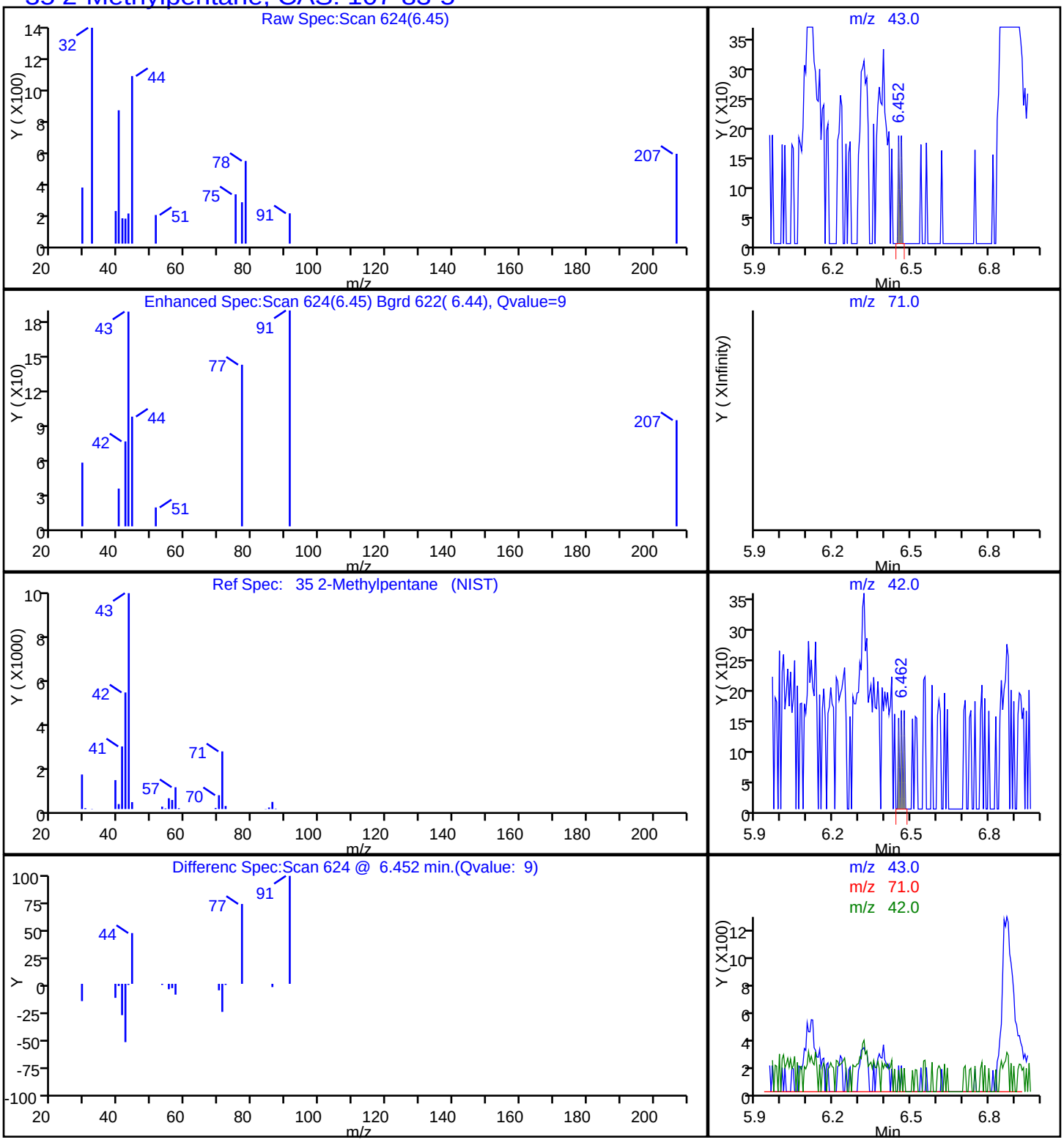
Report Date: 31-Oct-2017 10:41:25 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK07.D

Injection Date:	27-Oct-2017 22:22:30	Instrument ID:	MR
Lims ID:	140-9664-A-7	Lab Sample ID:	140-9664-7
Client ID:	09787		
Operator ID:		ALS Bottle#:	11 Worklist Smp#: 17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

35 2-Methylpentane, CAS: 107-83-5



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9664-1

SDG No.:

Client Sample ID: 11616 | Lab Sample ID: 140-9664-8

Matrix: Air | Lab File ID: 664BK08.D

Analysis Method: TO-15 | Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) | Date Analyzed: 10/27/2017 23:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15578 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	NC		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	NC		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	NC		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9664-1

SDG No.:

Client Sample ID: 11616 | Lab Sample ID: 140-9664-8

Matrix: Air | Lab File ID: 664BK08.D

Analysis Method: TO-15 | Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) | Date Analyzed: 10/27/2017 23:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15578 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9664-1

SDG No.:

Client Sample ID: 11616 | Lab Sample ID: 140-9664-8

Matrix: Air | Lab File ID: 664BK08.D

Analysis Method: TO-15 | Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) | Date Analyzed: 10/27/2017 23:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15578 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK08.D				
Lims ID:	140-9664-A-8				
Client ID:	11616				
Sample Type:	Client				
Inject. Date:	27-Oct-2017 23:10:30	ALS Bottle#:	12	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006464-018				
Misc. Info.:	11616				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	31-Oct-2017 10:39:31	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				
First Level Reviewer: barlozhetskayaa		Date:	31-Oct-2017 10:41:30		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.778	7.784	-0.006	81	360926	4.00	
* 2 1,4-Difluorobenzene	114	9.919	9.919	0.000	94	2109329	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.902	14.902	0.000	87	1807193	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.611	16.611	0.000	88	1387220	4.19	
35 2-Methylpentane	43	6.317	6.430	-0.113	36	992	NC	
102 1,2,3,5-Tetramethylbenzene	119	19.749	19.749	0.000	1	60	NC	
103 1,2,3,4-Tetramethylbenzene	119	19.949	19.965	-0.016	1	272	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

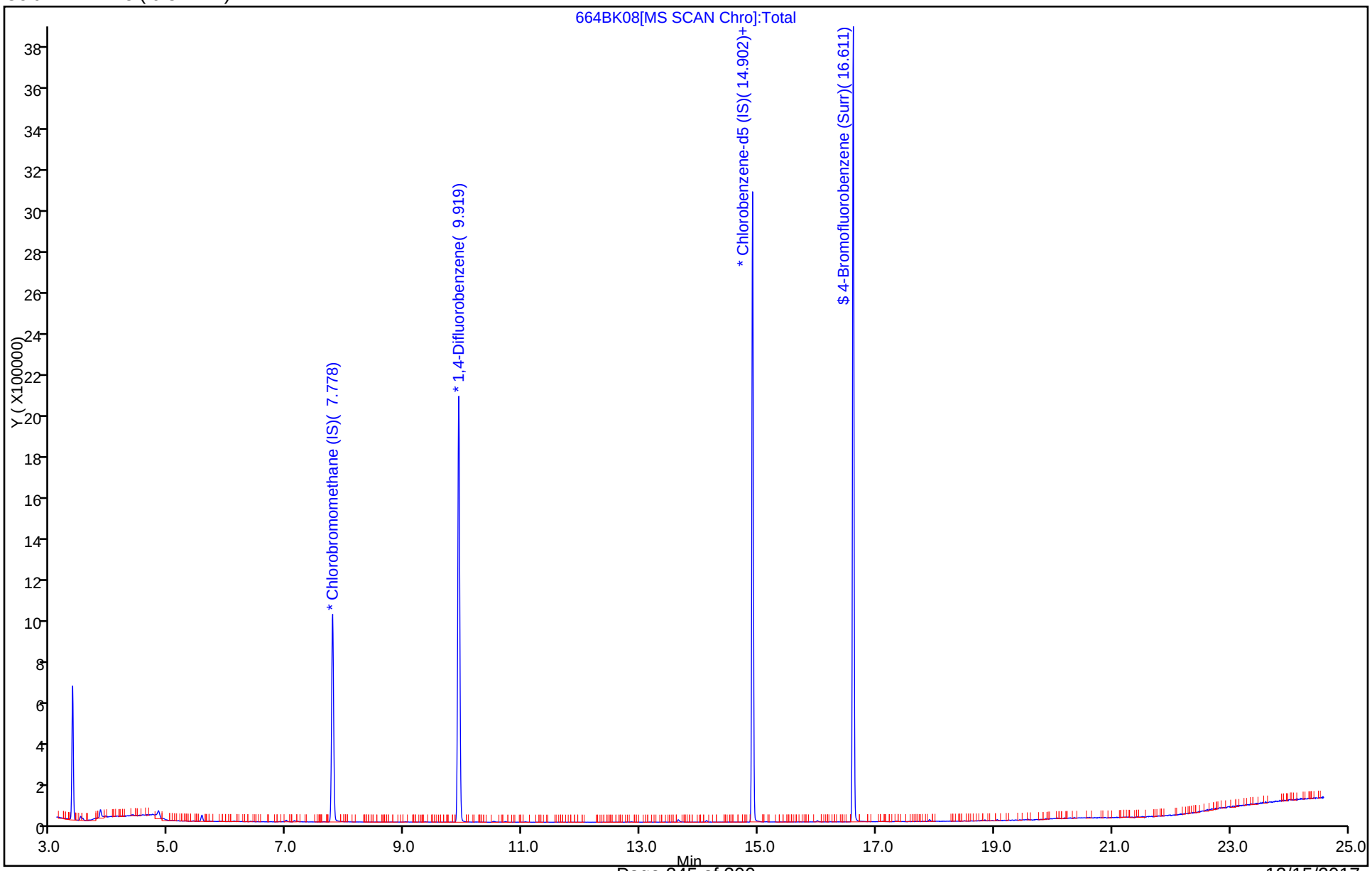
Report Date: 31-Oct-2017 10:41:30 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK08.D

Injection Date:	27-Oct-2017 23:10:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-9664-A-8	Lab Sample ID:	140-9664-8	Worklist Smp#:	18
Client ID:	11616				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

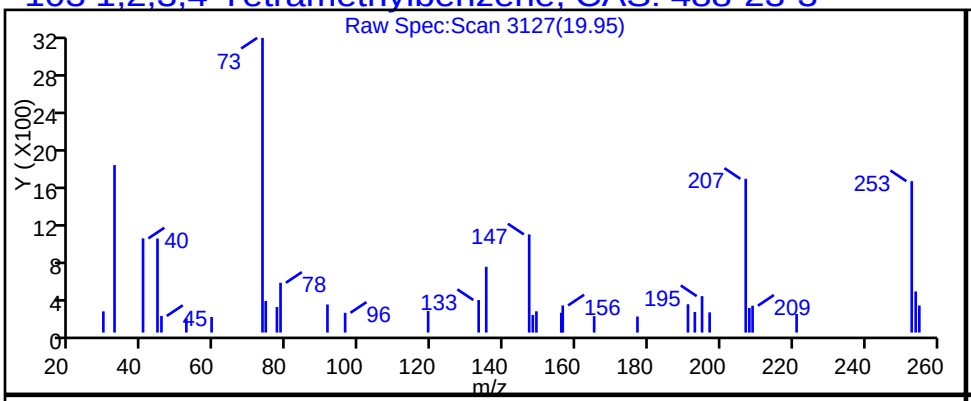
Column: RTX-5 (0.32 mm)

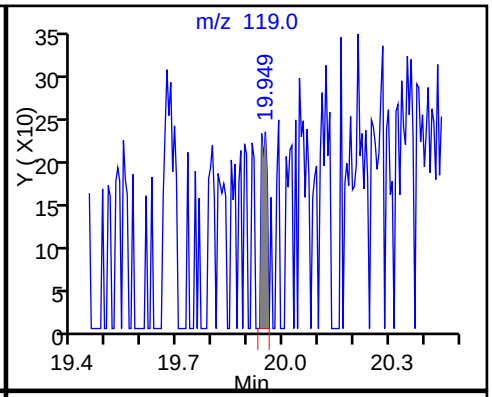


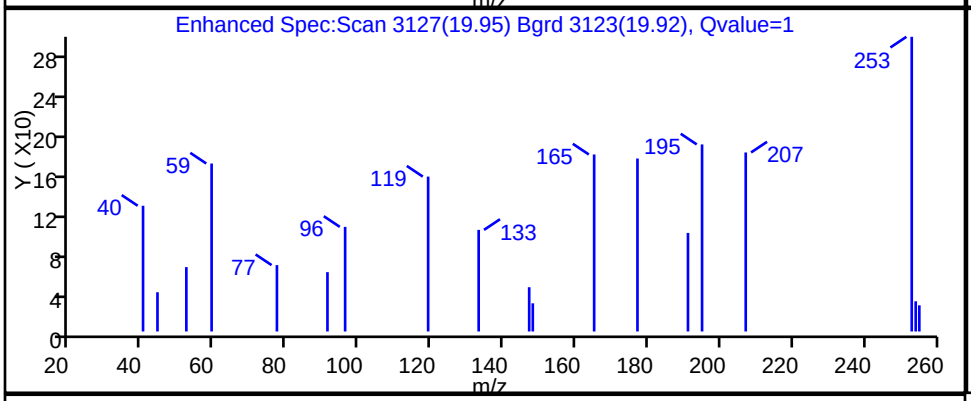
TestAmerica Knoxville

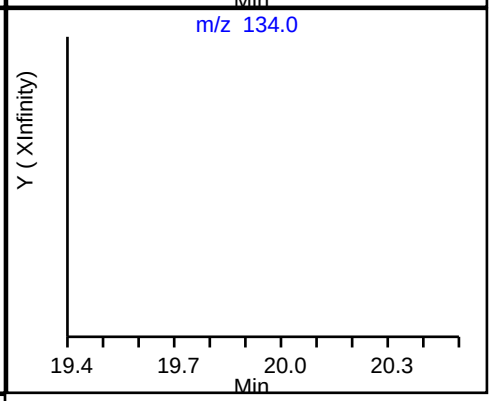
Data File:	\\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK08.D		
Injection Date:	27-Oct-2017 23:10:30	Instrument ID:	MR
Lims ID:	140-9664-A-8	Lab Sample ID:	140-9664-8
Client ID:	11616		
Operator ID:		ALS Bottle#:	12 Worklist Smp#: 18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

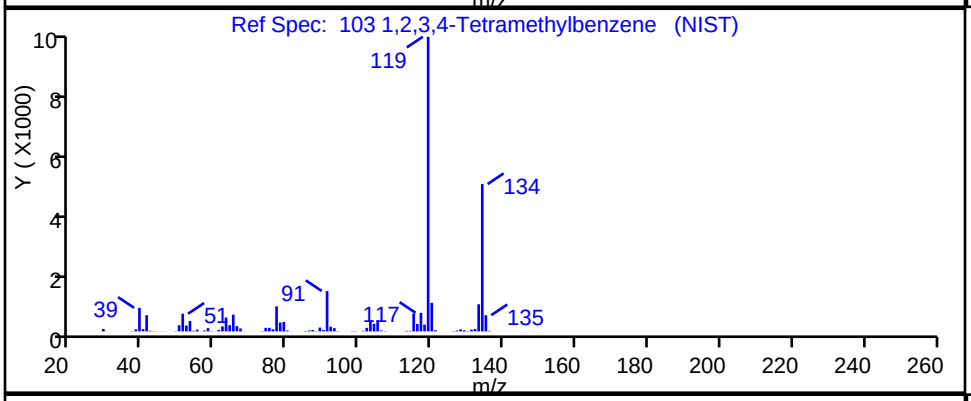
103 1,2,3,4-Tetramethylbenzene, CAS: 488-23-3

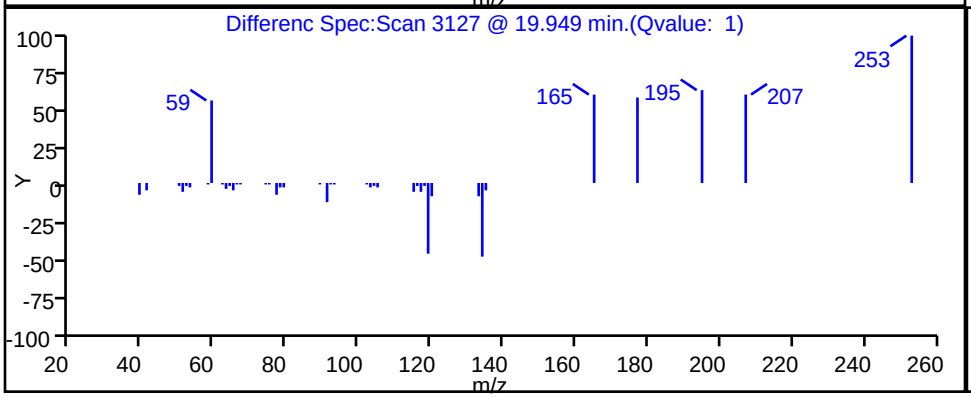


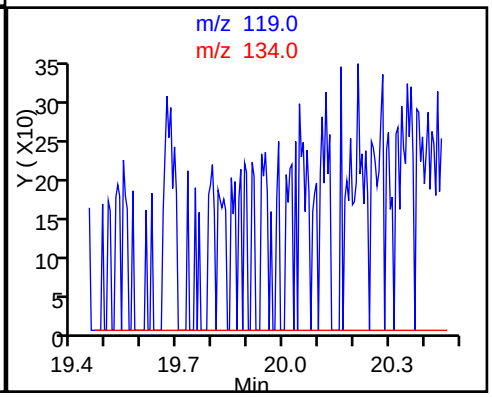








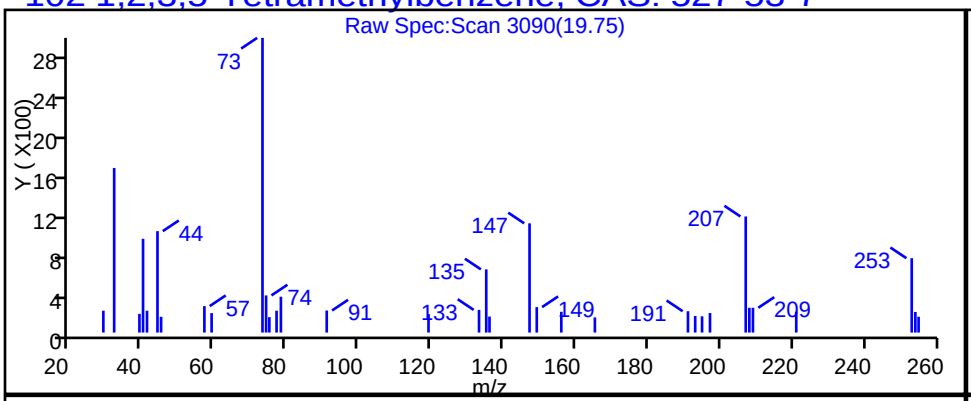


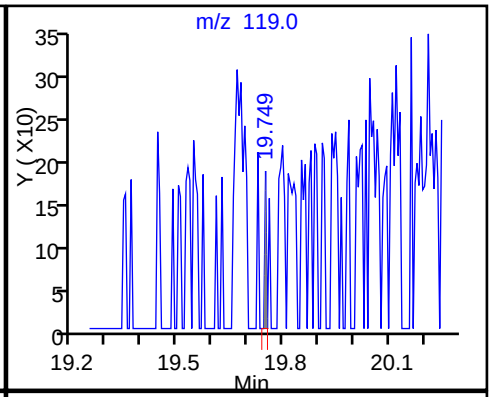


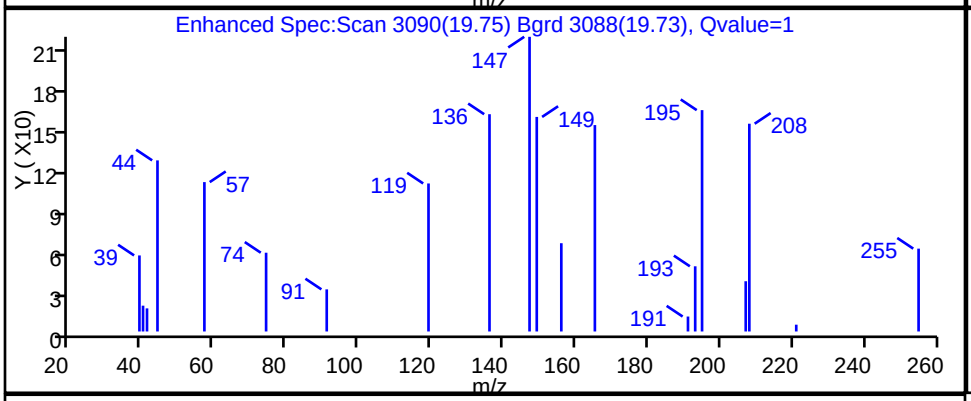
TestAmerica Knoxville

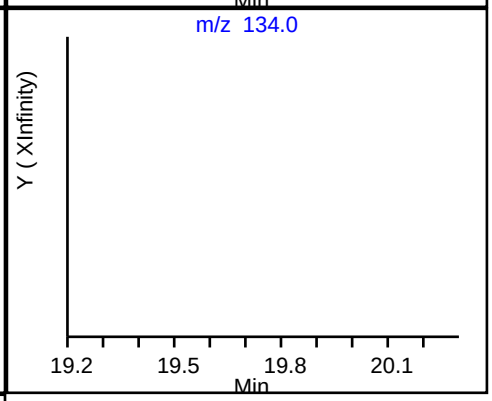
Data File:	\\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK08.D		
Injection Date:	27-Oct-2017 23:10:30	Instrument ID:	MR
Lims ID:	140-9664-A-8	Lab Sample ID:	140-9664-8
Client ID:	11616		
Operator ID:		ALS Bottle#:	12 Worklist Smp#: 18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

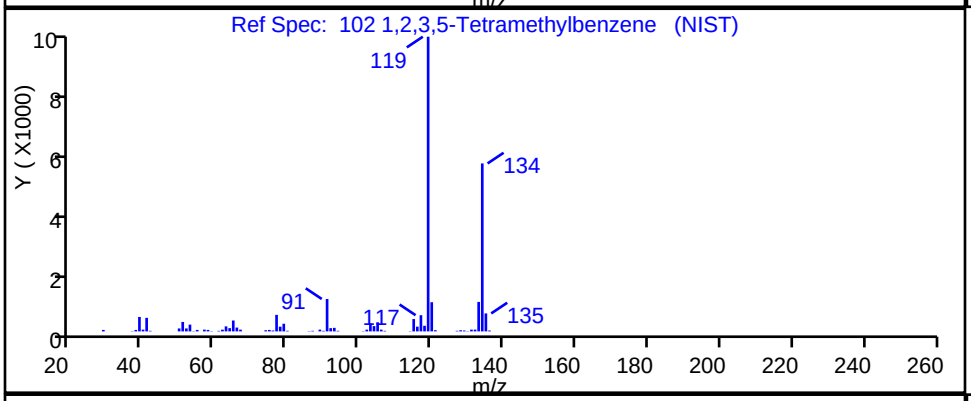
102 1,2,3,5-Tetramethylbenzene, CAS: 527-53-7

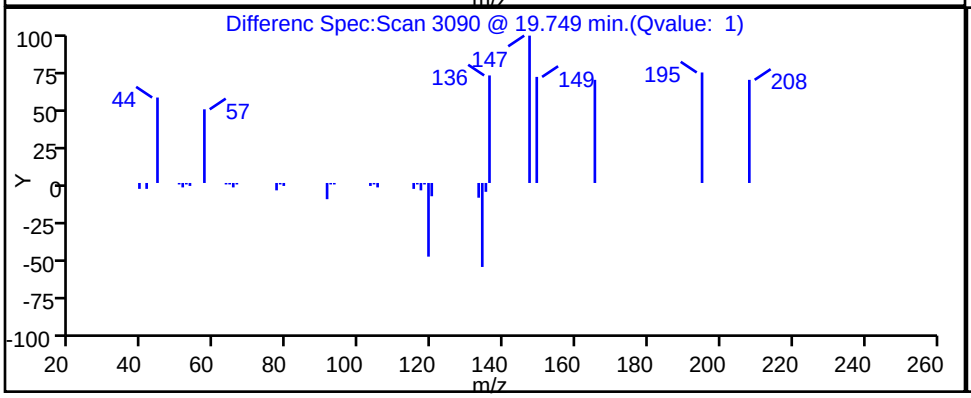


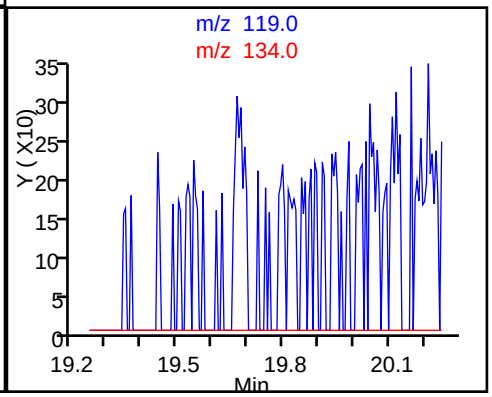








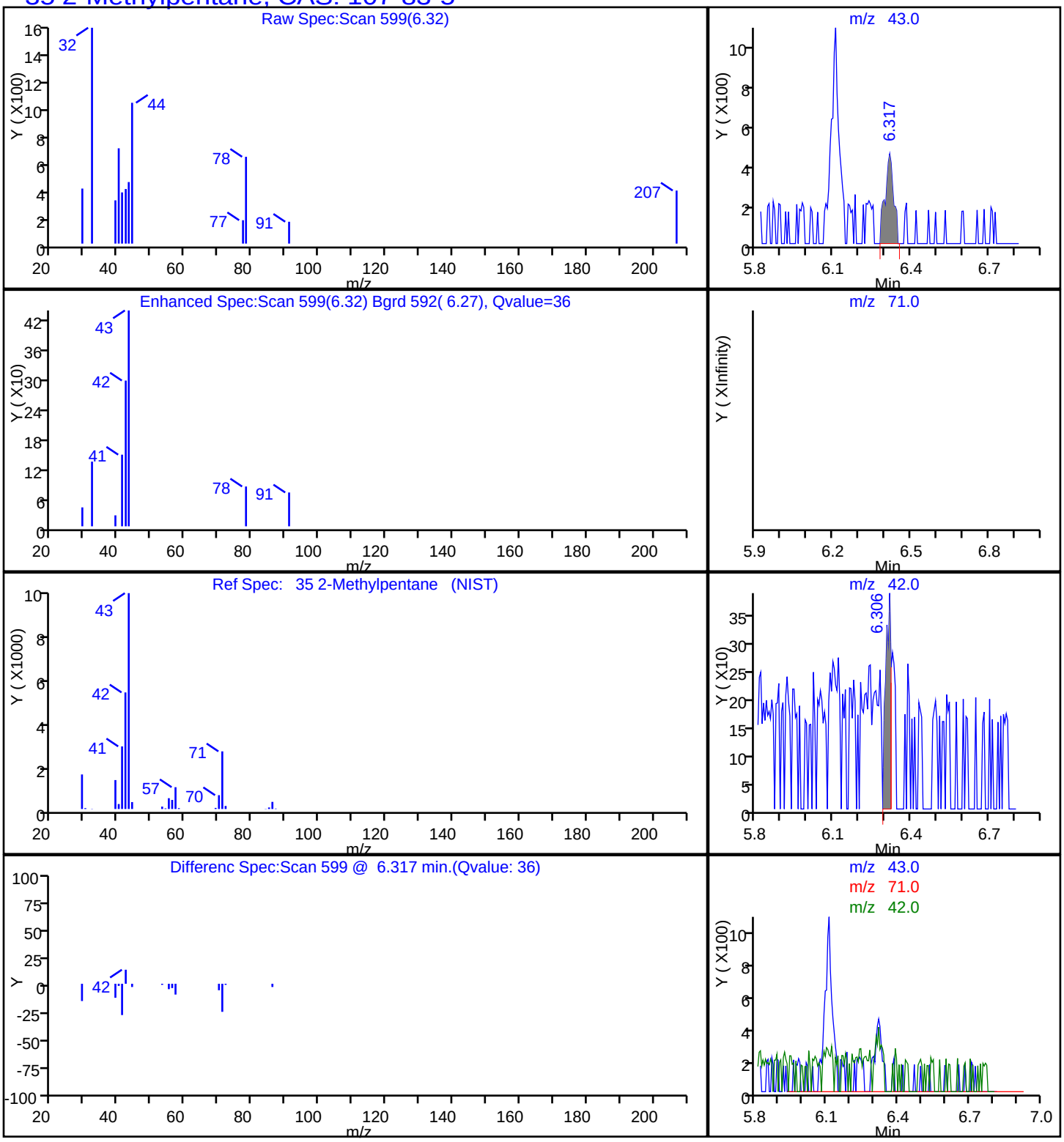




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK08.D		
Injection Date:	27-Oct-2017 23:10:30	Instrument ID:	MR
Lims ID:	140-9664-A-8	Lab Sample ID:	140-9664-8
Client ID:	11616		
Operator ID:		ALS Bottle#:	12 Worklist Smp#: 18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

35 2-Methylpentane, CAS: 107-83-5



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9664-1

SDG No.:

Client Sample ID: 11577 | Lab Sample ID: 140-9664-11

Matrix: Air | Lab File ID: 664BK11.D

Analysis Method: TO-15 | Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) | Date Analyzed: 10/28/2017 01:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15578 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	NC		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	NC		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	NC		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9664-1

SDG No.:

Client Sample ID: 11577 | Lab Sample ID: 140-9664-11

Matrix: Air | Lab File ID: 664BK11.D

Analysis Method: TO-15 | Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) | Date Analyzed: 10/28/2017 01:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15578 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-9664-1

SDG No.:

Client Sample ID: 11577 Lab Sample ID: 140-9664-11

Matrix: Air Lab File ID: 664BK11.D

Analysis Method: TO-15 Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) Date Analyzed: 10/28/2017 01:33

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 15578 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK11.D
Lims ID: 140-9664-A-11
Client ID: 11577
Sample Type: Client
Inject. Date: 28-Oct-2017 01:33:30 ALS Bottle#: 15 Worklist Smp#: 21
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006464-021
Misc. Info.: 11577
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 31-Oct-2017 10:41:52 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 31-Oct-2017 10:42:01

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.778	7.784	-0.006	82	349194	4.00	
* 2 1,4-Difluorobenzene	114	9.919	9.919	0.000	94	2040515	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.901	14.902	-0.001	88	1731145	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.611	16.611	0.000	89	1323419	4.17	
35 2-Methylpentane	43	6.398	6.430	-0.032	38	51	NC	
102 1,2,3,5-Tetramethylbenzene	119	19.744	19.749	-0.005	1	117	NC	
103 1,2,3,4-Tetramethylbenzene	119	19.959	19.965	-0.006	1	376	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

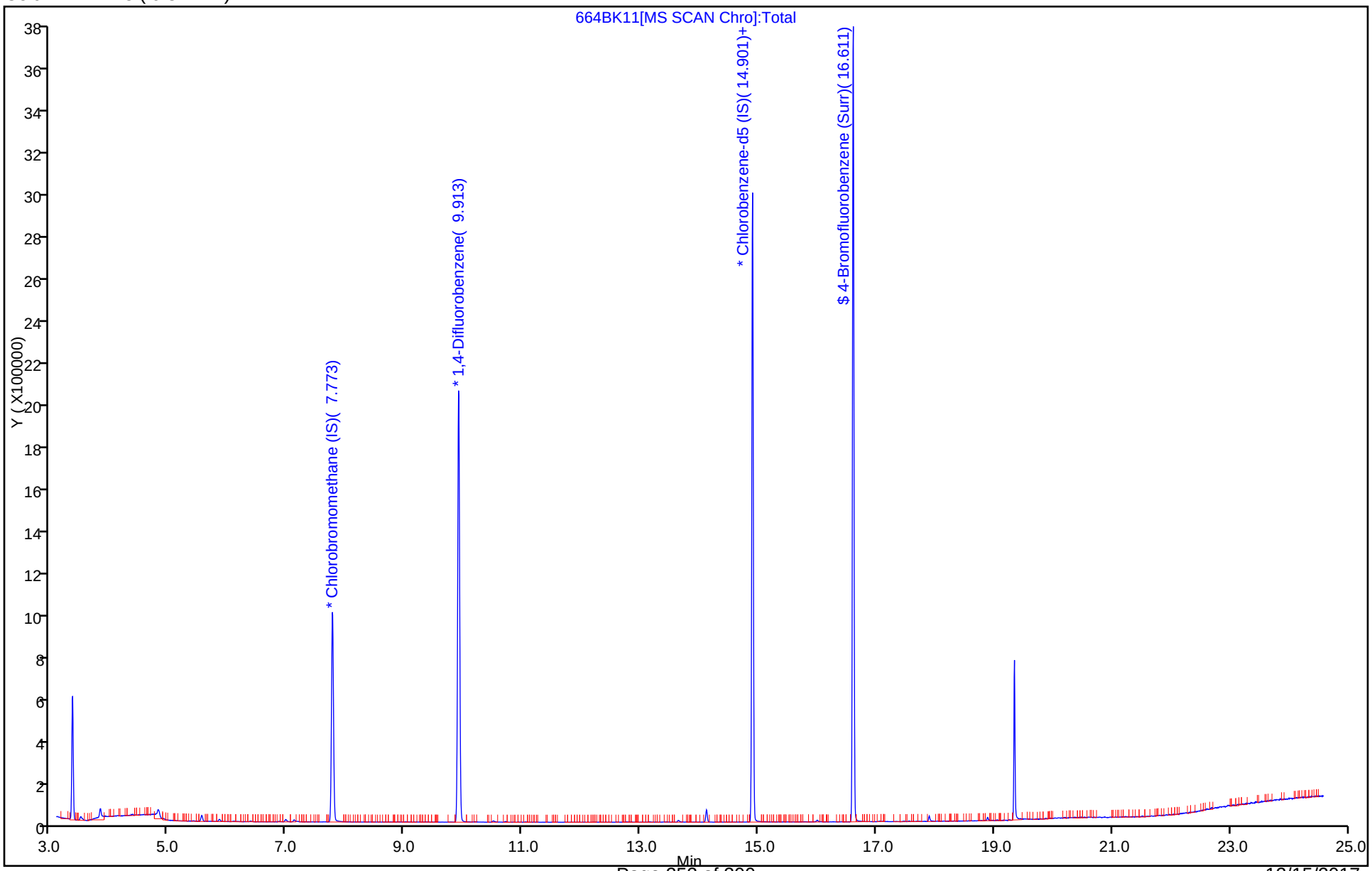
Report Date: 31-Oct-2017 10:42:02 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK11.D

Injection Date:	28-Oct-2017 01:33:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-9664-A-11	Lab Sample ID:	140-9664-11	Worklist Smp#:	21
Client ID:	11577				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

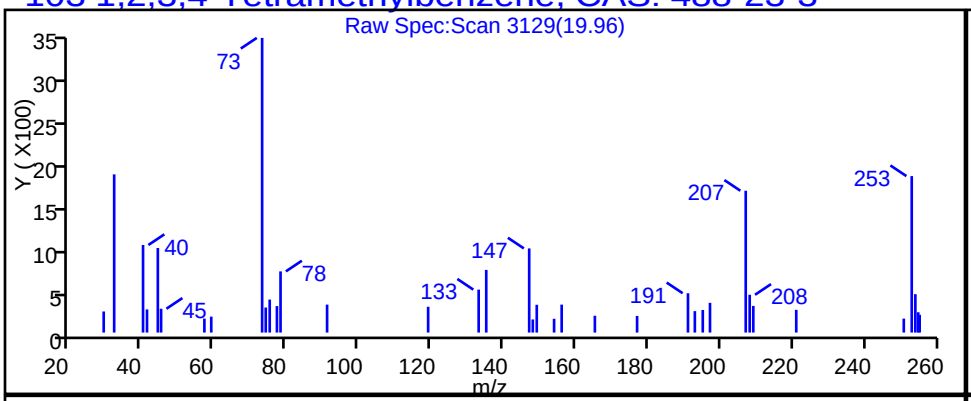
Column: RTX-5 (0.32 mm)

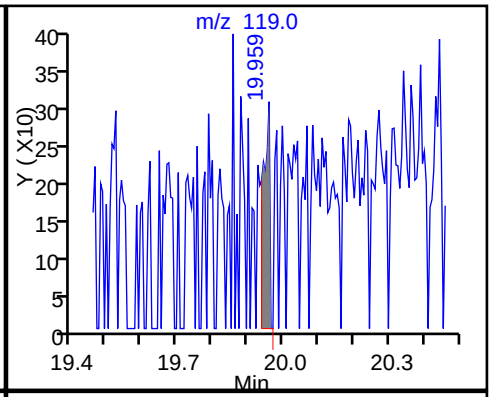


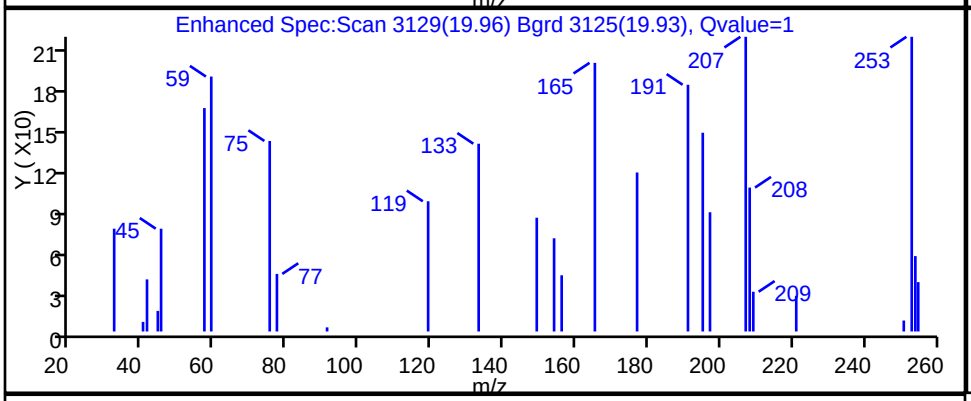
TestAmerica Knoxville

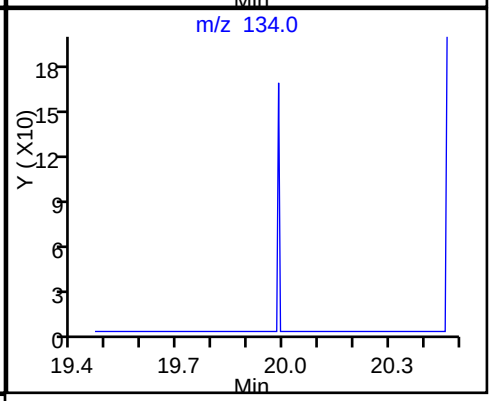
Data File:	\\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK11.D		
Injection Date:	28-Oct-2017 01:33:30	Instrument ID:	MR
Lims ID:	140-9664-A-11	Lab Sample ID:	140-9664-11
Client ID:	11577		
Operator ID:		ALS Bottle#:	15 Worklist Smp#: 21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

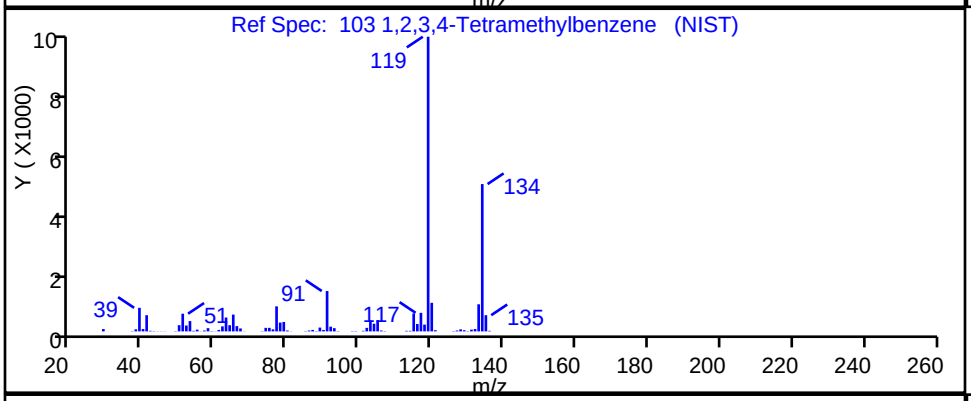
103 1,2,3,4-Tetramethylbenzene, CAS: 488-23-3

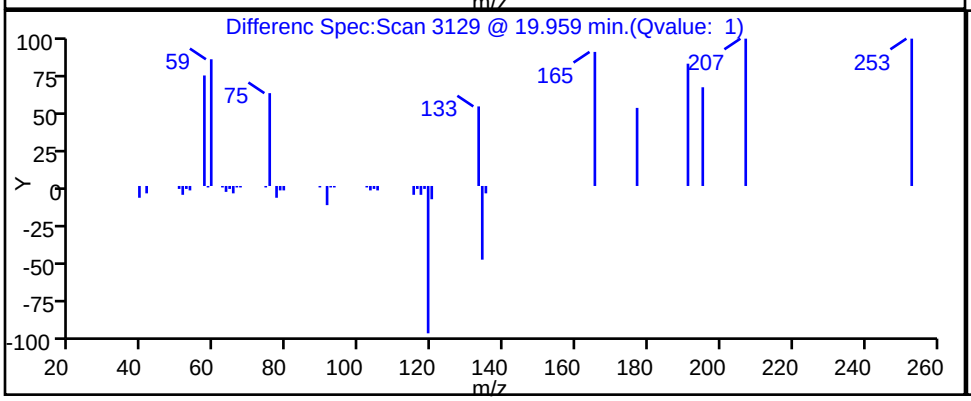


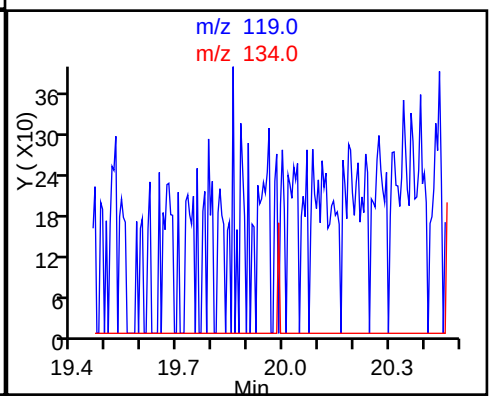








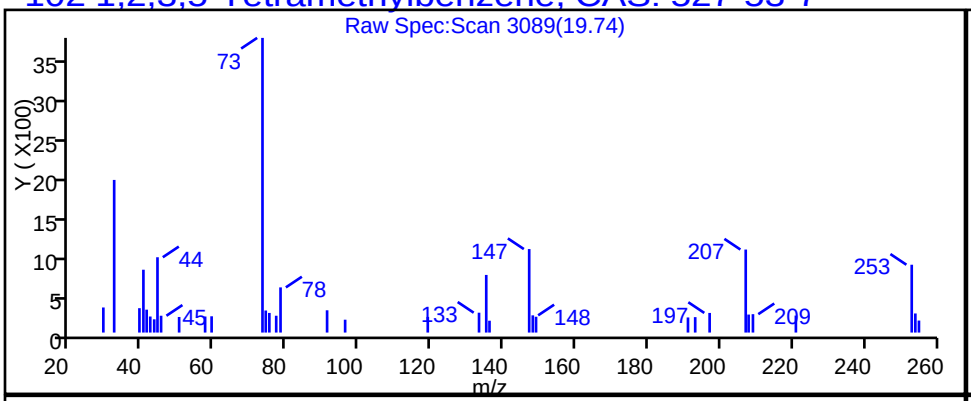


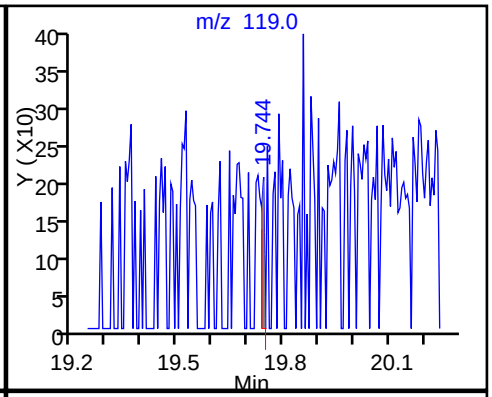


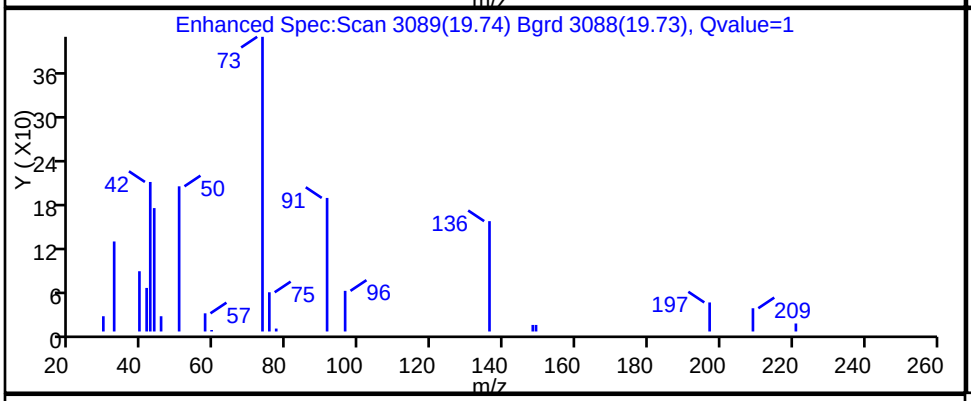
TestAmerica Knoxville

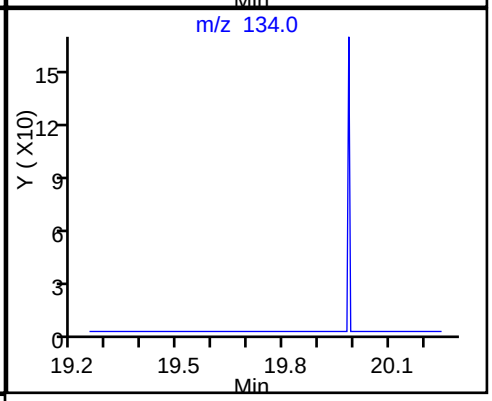
Data File:	\\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK11.D		
Injection Date:	28-Oct-2017 01:33:30	Instrument ID:	MR
Lims ID:	140-9664-A-11	Lab Sample ID:	140-9664-11
Client ID:	11577		
Operator ID:		ALS Bottle#:	15 Worklist Smp#: 21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

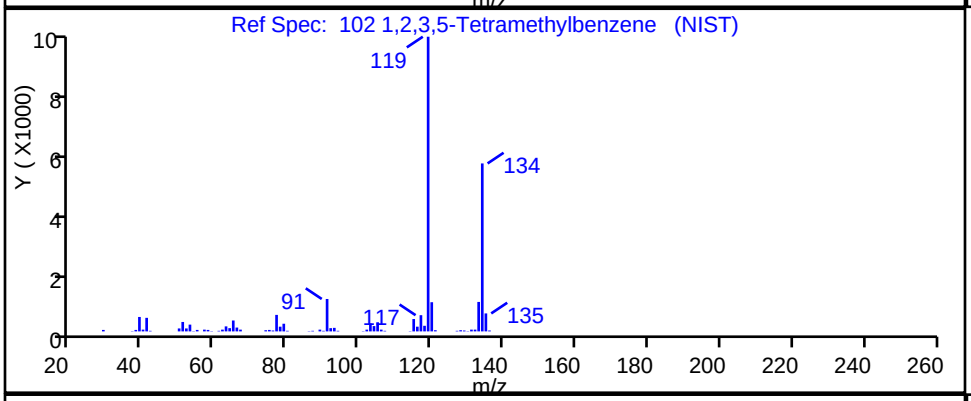
102 1,2,3,5-Tetramethylbenzene, CAS: 527-53-7

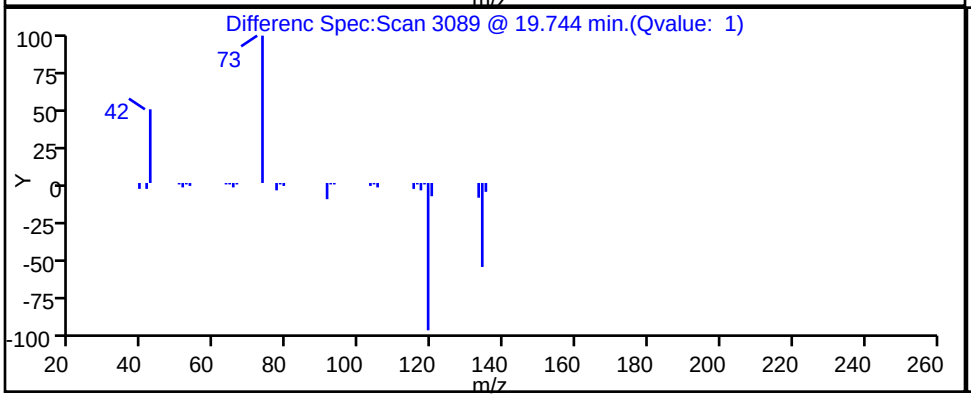


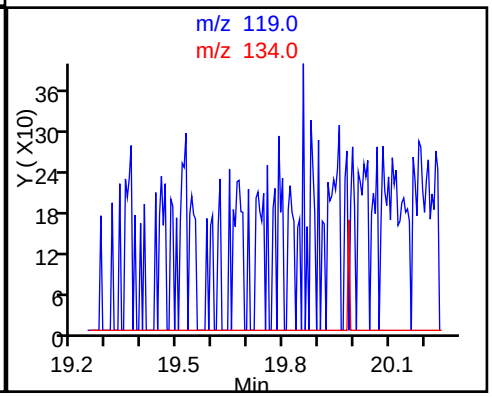








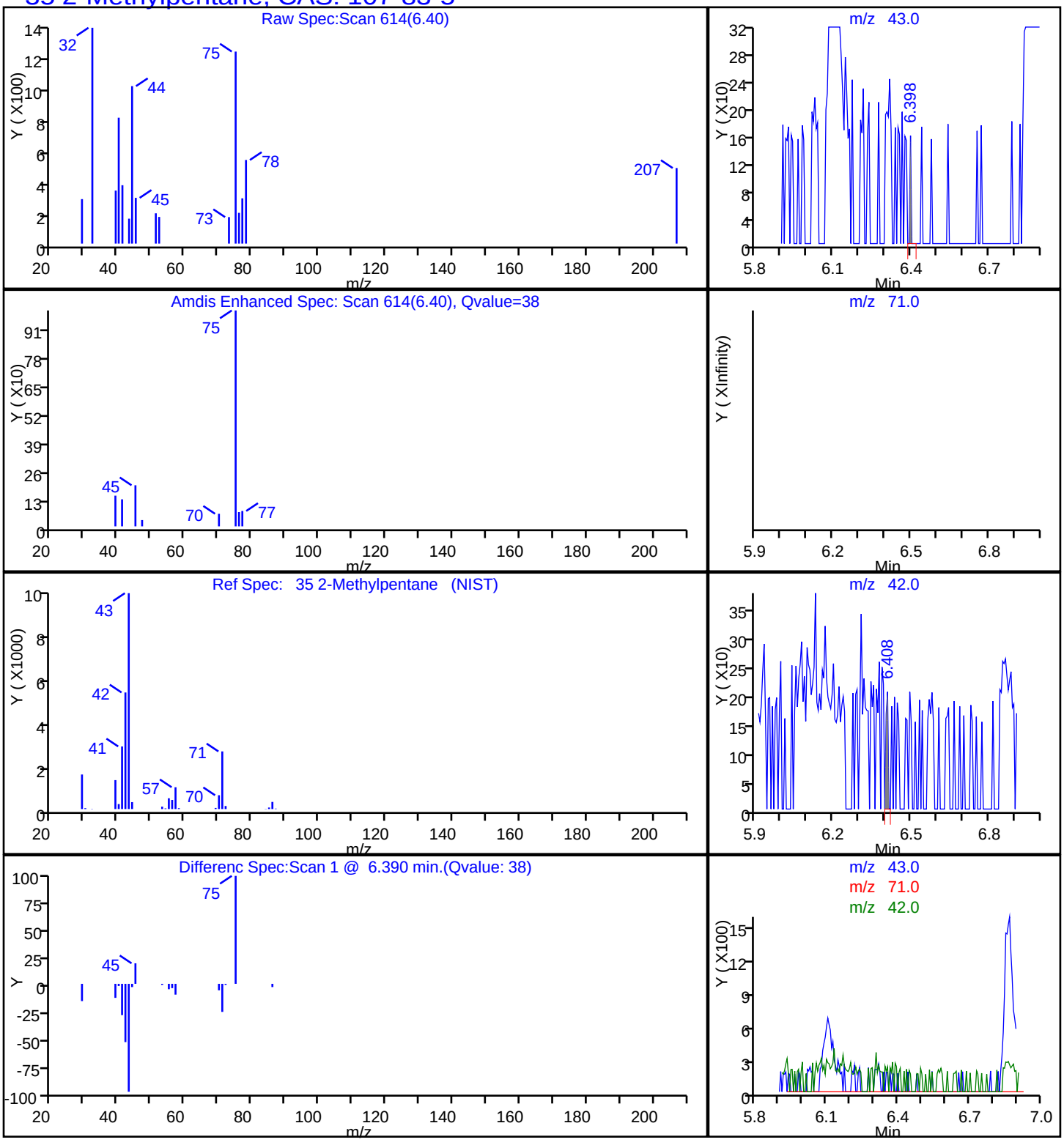




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK11.D		
Injection Date:	28-Oct-2017 01:33:30	Instrument ID:	MR
Lims ID:	140-9664-A-11	Lab Sample ID:	140-9664-11
Client ID:	11577		
Operator ID:		ALS Bottle#:	15 Worklist Smp#: 21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

35 2-Methylpentane, CAS: 107-83-5



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9664-1

SDG No.:

Client Sample ID: 11277 | Lab Sample ID: 140-9664-12

Matrix: Air | Lab File ID: 664BK12.D

Analysis Method: TO-15 | Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) | Date Analyzed: 10/28/2017 02:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15578 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	NC		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	NC		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	NC		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9664-1

SDG No.:

Client Sample ID: 11277 | Lab Sample ID: 140-9664-12

Matrix: Air | Lab File ID: 664BK12.D

Analysis Method: TO-15 | Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) | Date Analyzed: 10/28/2017 02:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15578 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9664-1

SDG No.:

Client Sample ID: 11277 | Lab Sample ID: 140-9664-12

Matrix: Air | Lab File ID: 664BK12.D

Analysis Method: TO-15 | Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) | Date Analyzed: 10/28/2017 02:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15578 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK12.D				
Lims ID:	140-9664-A-12				
Client ID:	11277				
Sample Type:	Client				
Inject. Date:	28-Oct-2017 02:21:30	ALS Bottle#:	16	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006464-022				
Misc. Info.:	11277				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	31-Oct-2017 10:41:52	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				
First Level Reviewer: barlozhetskayaa		Date:	31-Oct-2017 10:42:07		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.773	7.784	-0.011	81	358488	4.00	
* 2 1,4-Difluorobenzene	114	9.914	9.919	-0.005	94	2077275	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.902	14.902	0.000	87	1779344	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.606	16.611	-0.005	88	1373060	4.21	
12 Butane	43	3.917	3.912	0.005	89	3339	0.0298	
19 Acrolein	56	4.710	4.710	0.000	77	2540	0.0874	
35 2-Methylpentane	43	6.473	6.430	0.043	1	50	NC	
102 1,2,3,5-Tetramethylbenzene	119	19.766	19.749	0.017	1	62	NC	
103 1,2,3,4-Tetramethylbenzene	119	19.954	19.965	-0.011	57	774	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

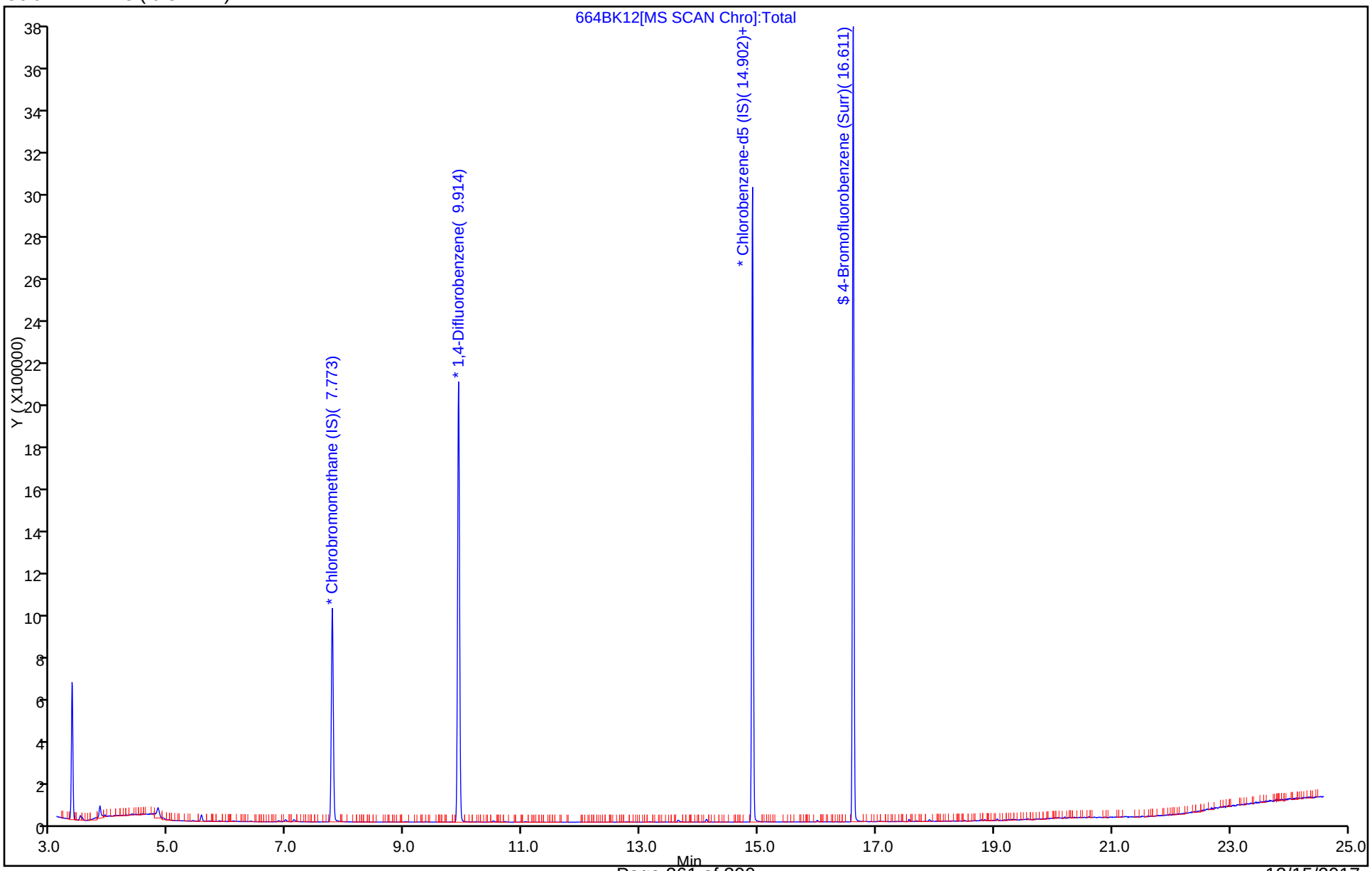
Report Date: 31-Oct-2017 10:42:08 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK12.D

Injection Date:	28-Oct-2017 02:21:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-9664-A-12	Lab Sample ID:	140-9664-12	Worklist Smp#:	22
Client ID:	11277				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

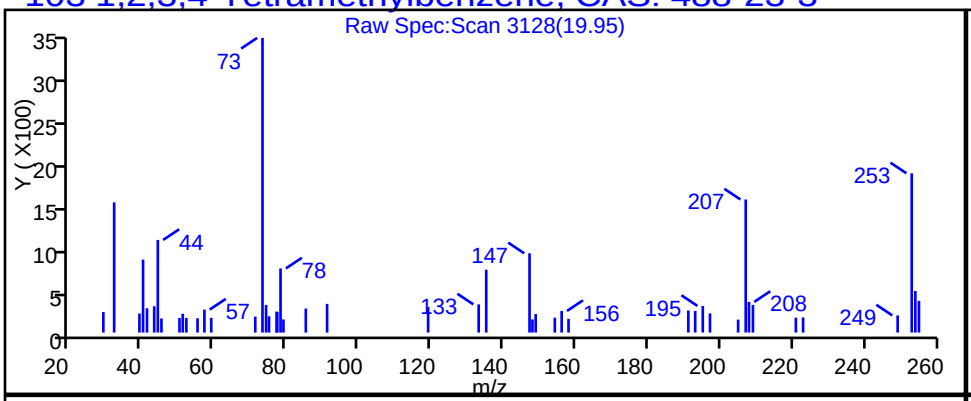
Column: RTX-5 (0.32 mm)

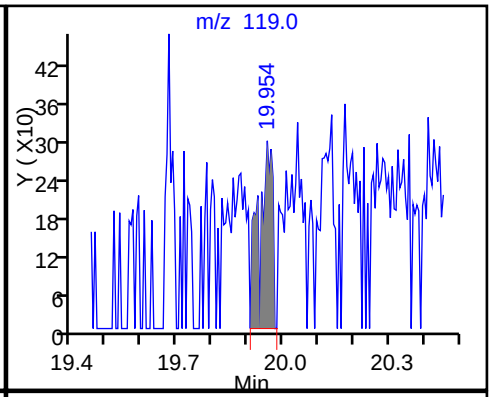


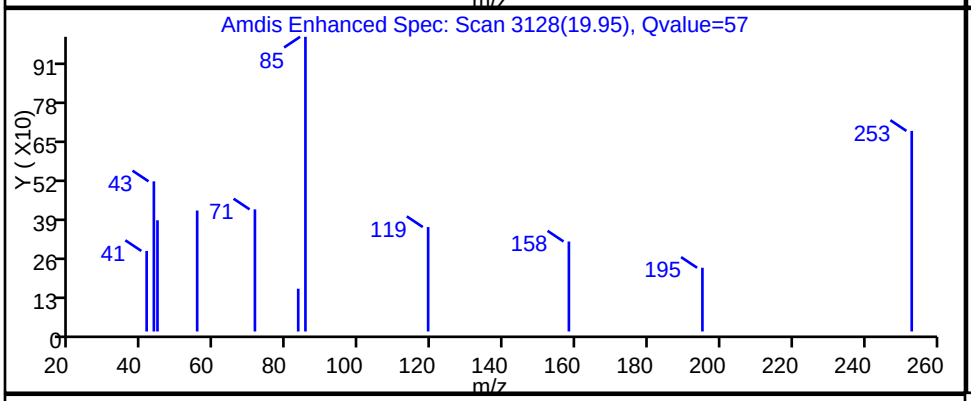
TestAmerica Knoxville

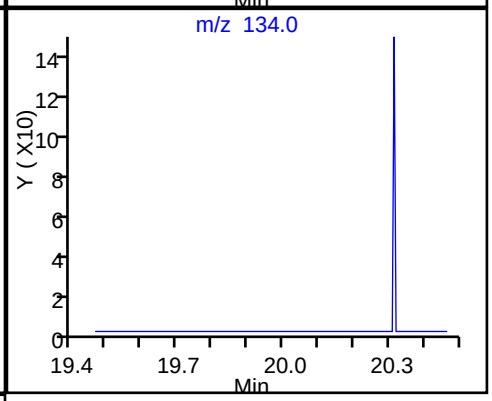
Data File:	\\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK12.D		
Injection Date:	28-Oct-2017 02:21:30	Instrument ID:	MR
Lims ID:	140-9664-A-12	Lab Sample ID:	140-9664-12
Client ID:	11277		
Operator ID:		ALS Bottle#:	16 Worklist Smp#: 22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

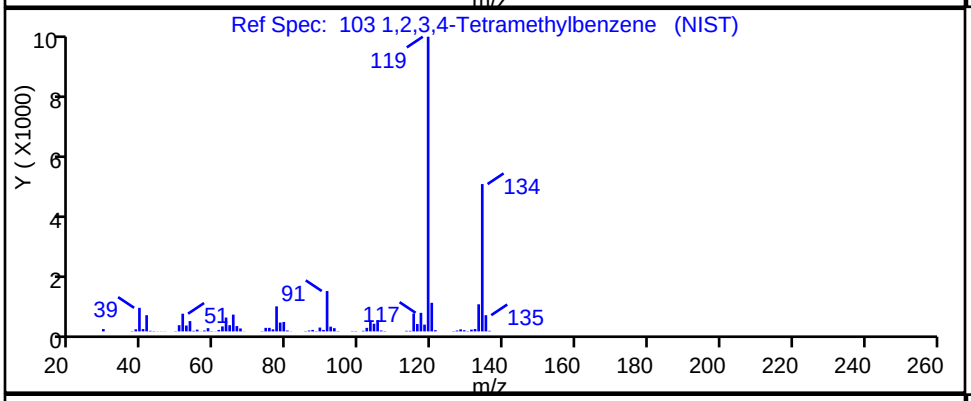
103 1,2,3,4-Tetramethylbenzene, CAS: 488-23-3

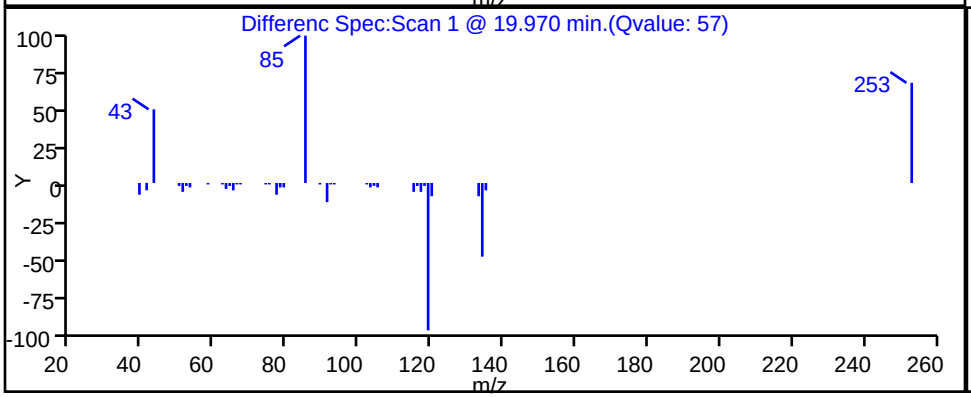


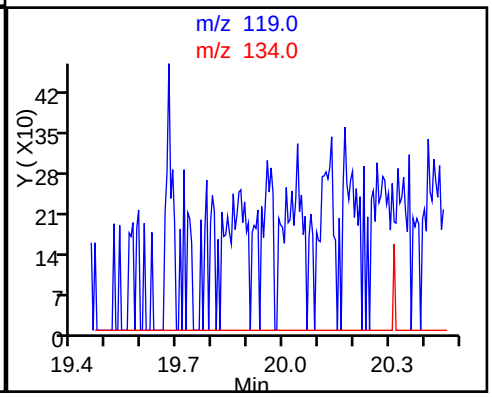






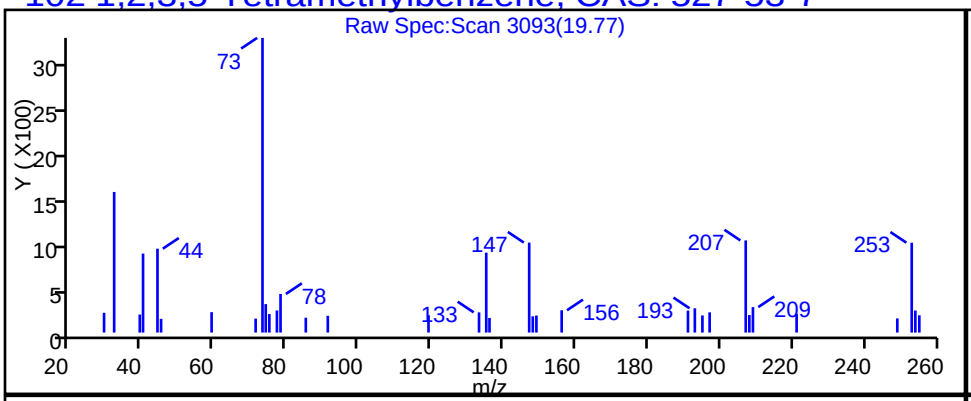


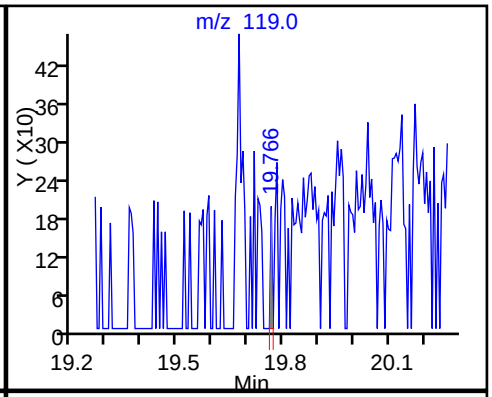


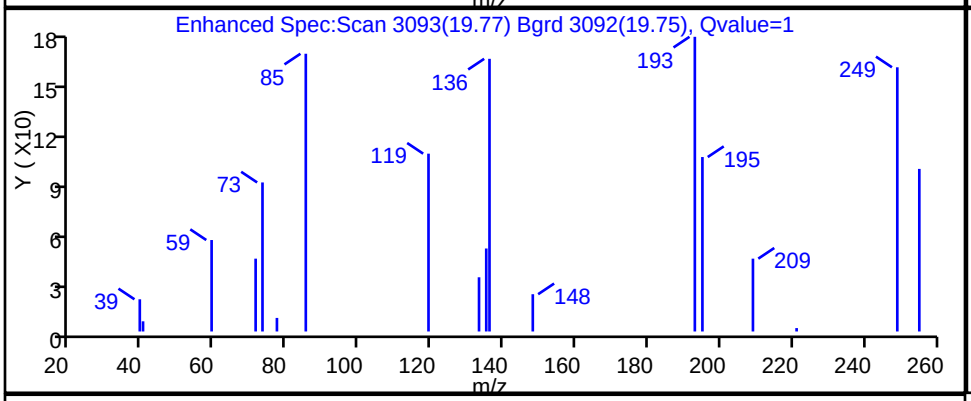


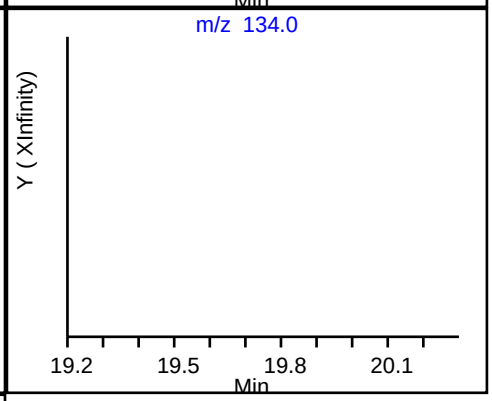
Data File: \\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK12.D
Injection Date: 28-Oct-2017 02:21:30 Instrument ID: MR
Lims ID: 140-9664-A-12 Lab Sample ID: 140-9664-12
Client ID: 11277
Operator ID: ALS Bottle#: 16 Worklist Smp#: 22
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

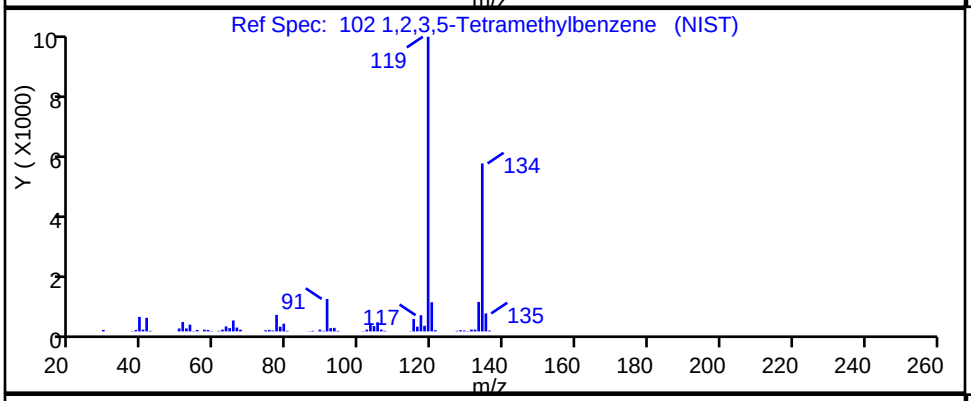
102 1,2,3,5-Tetramethylbenzene, CAS: 527-53-7

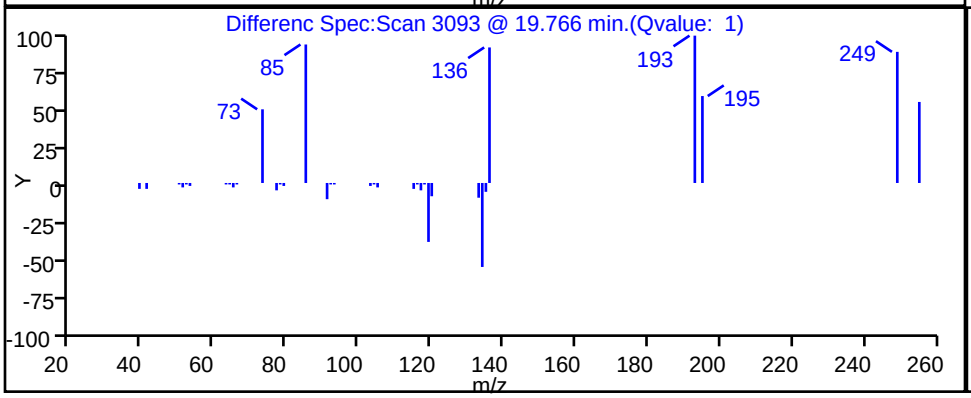


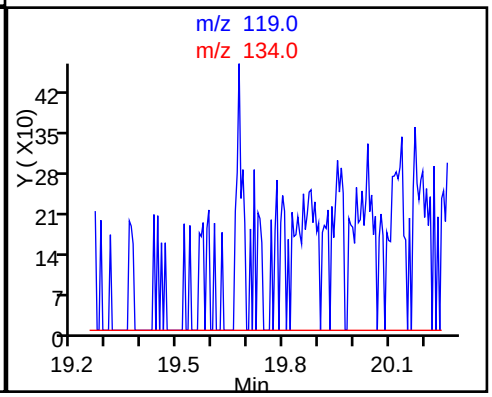








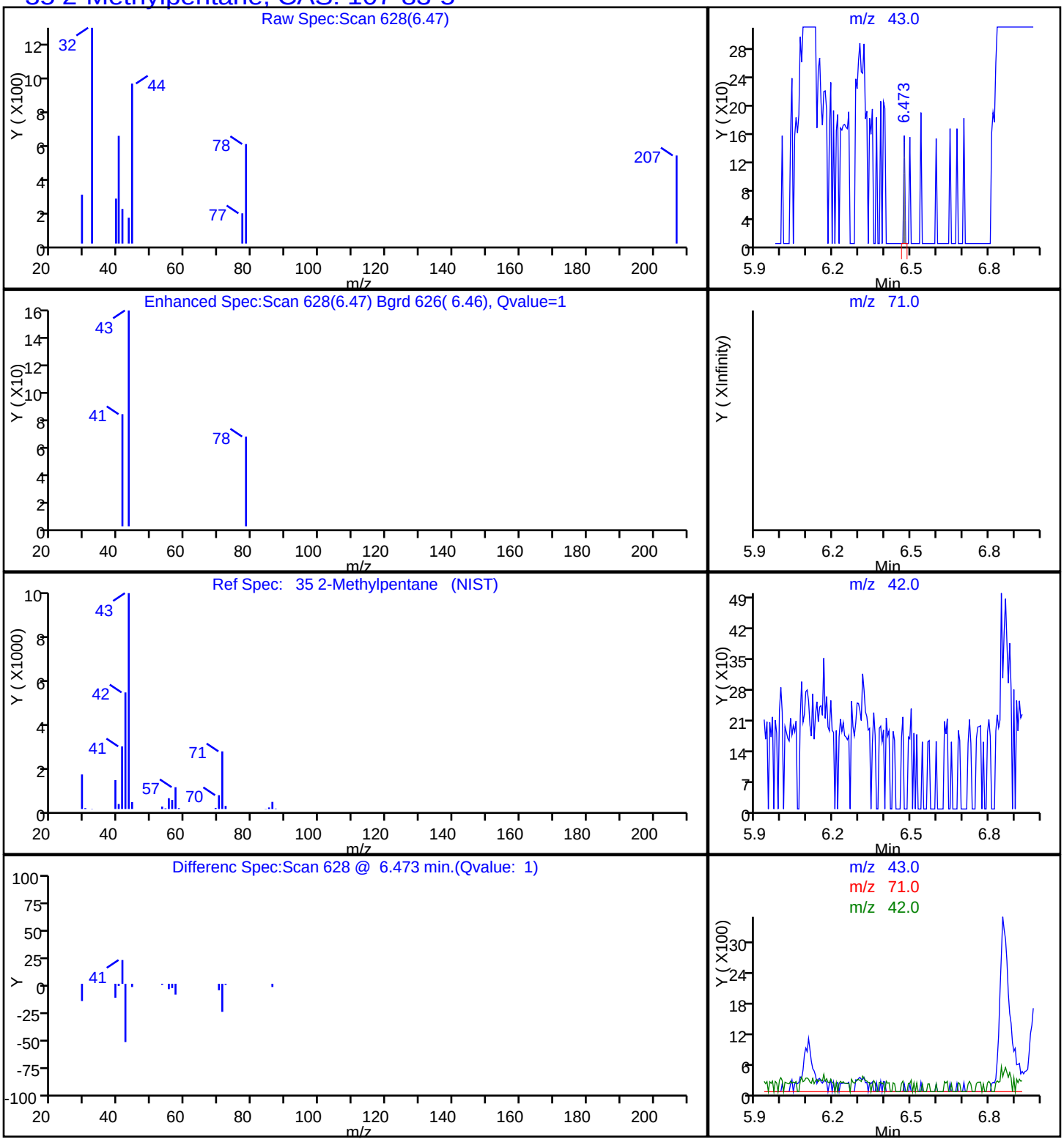




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK12.D		
Injection Date:	28-Oct-2017 02:21:30	Instrument ID:	MR
Lims ID:	140-9664-A-12	Lab Sample ID:	140-9664-12
Client ID:	11277		
Operator ID:		ALS Bottle#:	16 Worklist Smp#: 22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

35 2-Methylpentane, CAS: 107-83-5



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9664-1

SDG No.:

Client Sample ID: 11111 | Lab Sample ID: 140-9664-13

Matrix: Air | Lab File ID: 664BK13.D

Analysis Method: TO-15 | Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) | Date Analyzed: 10/28/2017 03:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15578 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	NC		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	NC		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	NC		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9664-1

SDG No.:

Client Sample ID: 11111 | Lab Sample ID: 140-9664-13

Matrix: Air | Lab File ID: 664BK13.D

Analysis Method: TO-15 | Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) | Date Analyzed: 10/28/2017 03:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15578 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9664-1

SDG No.:

Client Sample ID: 11111 | Lab Sample ID: 140-9664-13

Matrix: Air | Lab File ID: 664BK13.D

Analysis Method: TO-15 | Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) | Date Analyzed: 10/28/2017 03:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15578 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK13.D
Lims ID: 140-9664-A-13
Client ID: 11111
Sample Type: Client
Inject. Date: 28-Oct-2017 03:09:30 ALS Bottle#: 1 Worklist Smp#: 23
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006464-023
Misc. Info.: 11111
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 31-Oct-2017 10:41:52 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 31-Oct-2017 10:42:13

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.767	7.784	-0.017	82	369142	4.00	
* 2 1,4-Difluorobenzene	114	9.913	9.919	-0.006	94	2139425	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.901	14.902	-0.001	88	1816540	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.611	16.611	0.000	89	1405088	4.22	
35 2-Methylpentane	43	6.392	6.430	-0.038	33	160	NC	
55 Trichloroethene	130	10.668	10.669	-0.001	97	10684	0.0517	
102 1,2,3,5-Tetramethylbenzene	119	19.733	19.749	-0.016	1	154	NC	
103 1,2,3,4-Tetramethylbenzene	119	19.992	19.965	0.027	1	302	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

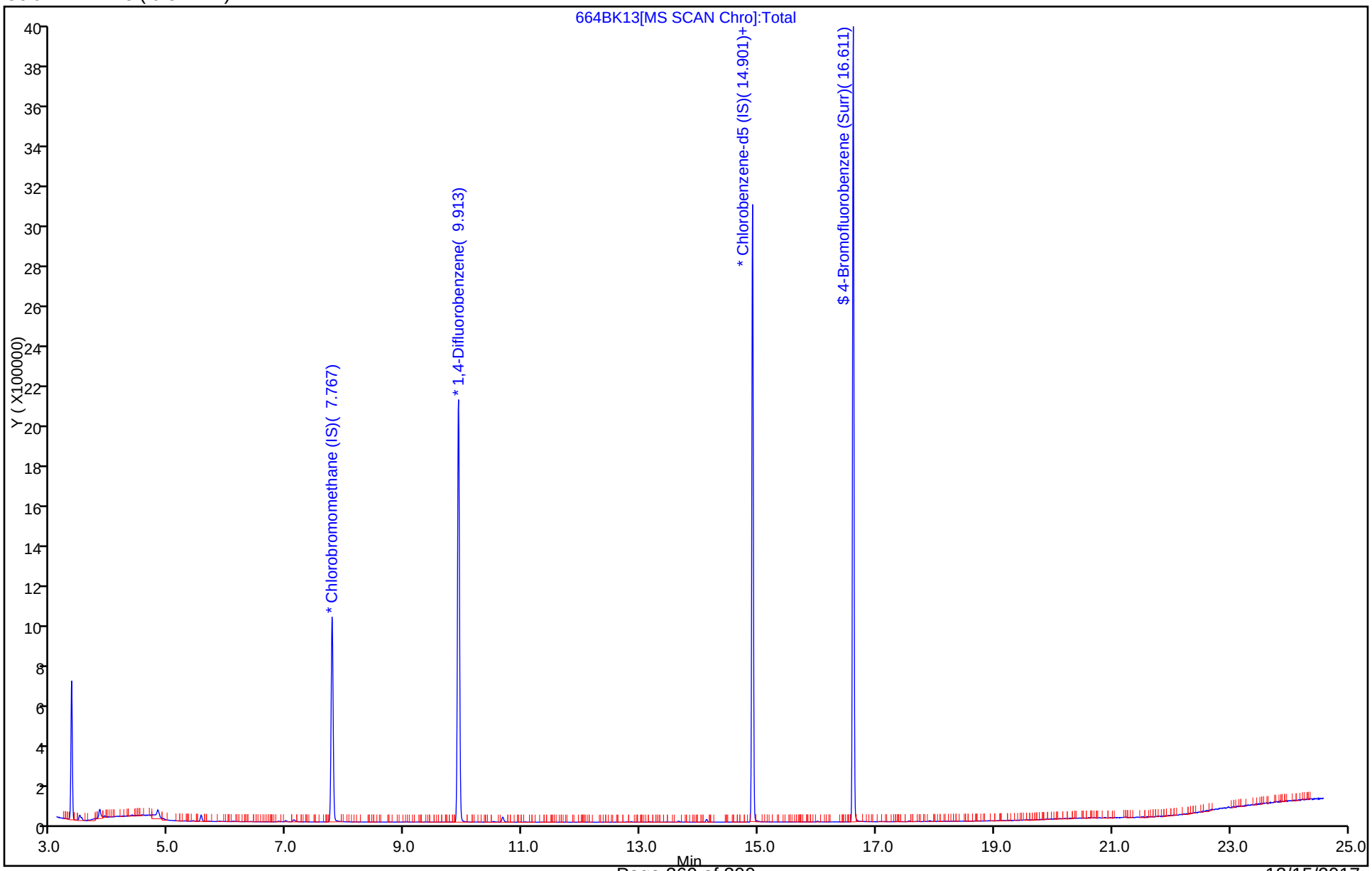
Report Date: 31-Oct-2017 10:42:13 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK13.D

Injection Date:	28-Oct-2017 03:09:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-9664-A-13	Lab Sample ID:	140-9664-13	Worklist Smp#:	23
Client ID:	11111				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

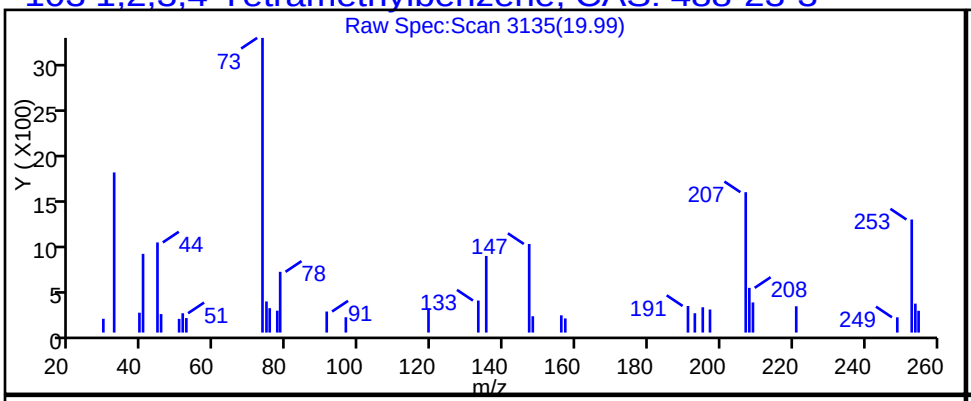
Column: RTX-5 (0.32 mm)

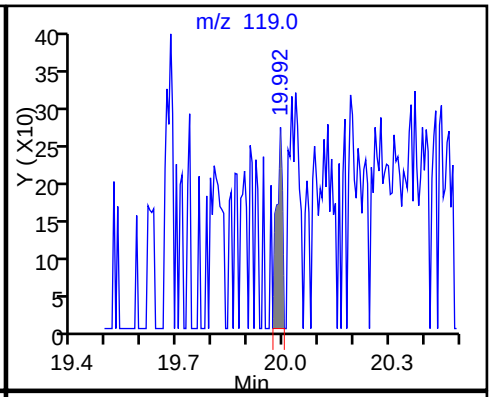


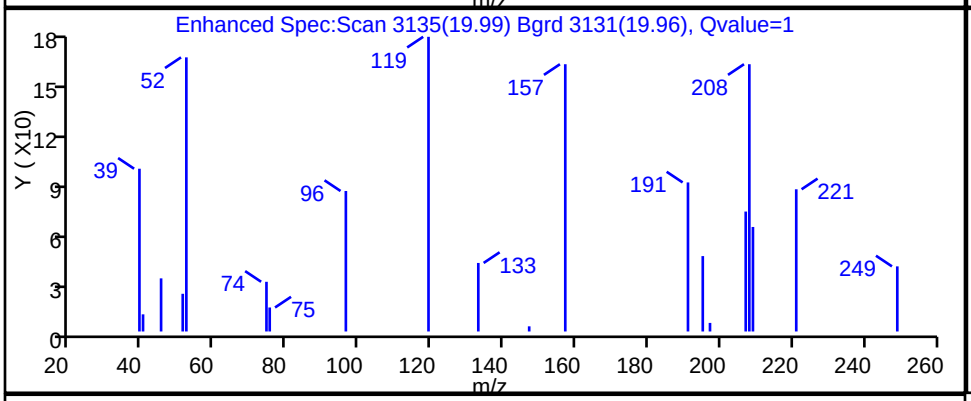
TestAmerica Knoxville

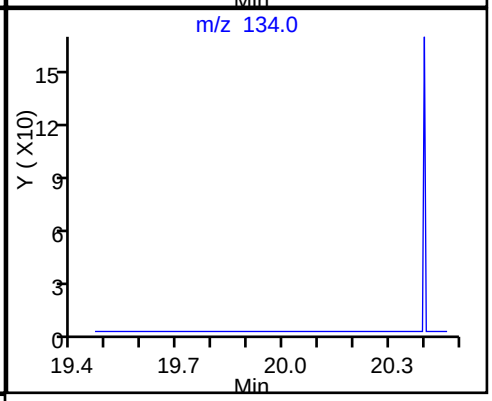
Data File:	\\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK13.D		
Injection Date:	28-Oct-2017 03:09:30	Instrument ID:	MR
Lims ID:	140-9664-A-13	Lab Sample ID:	140-9664-13
Client ID:	11111		
Operator ID:		ALS Bottle#:	1 Worklist Smp#: 23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

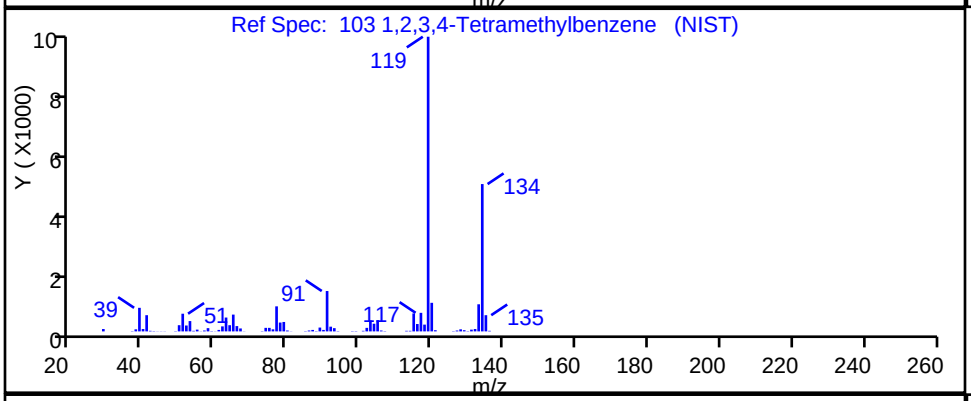
103 1,2,3,4-Tetramethylbenzene, CAS: 488-23-3

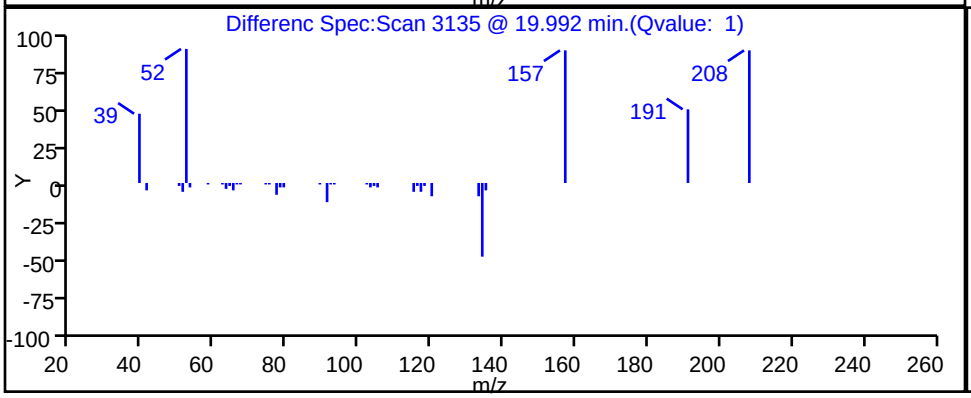


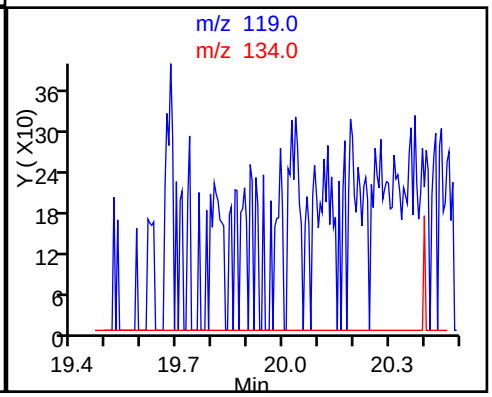








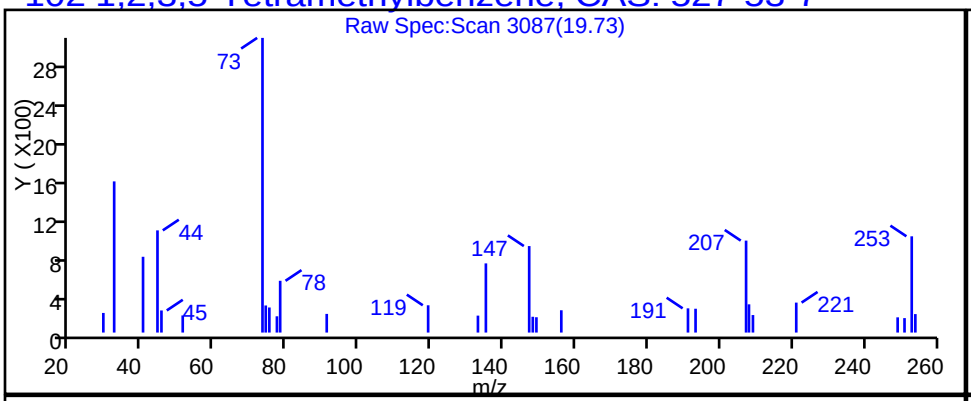


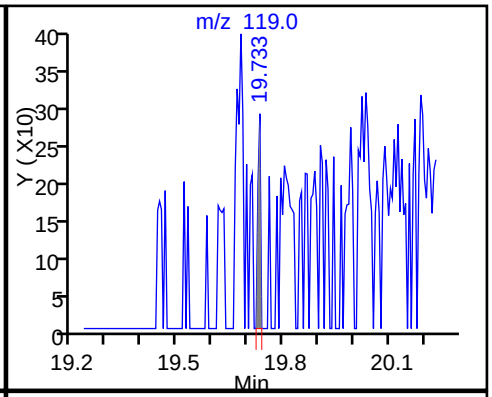


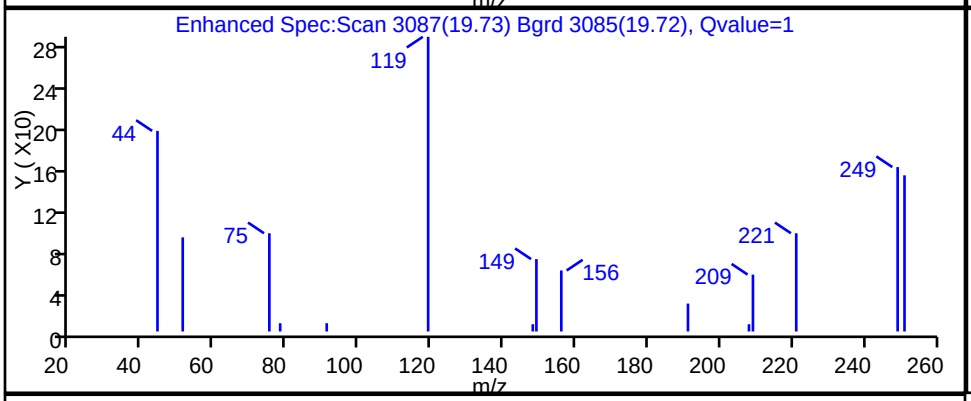
TestAmerica Knoxville

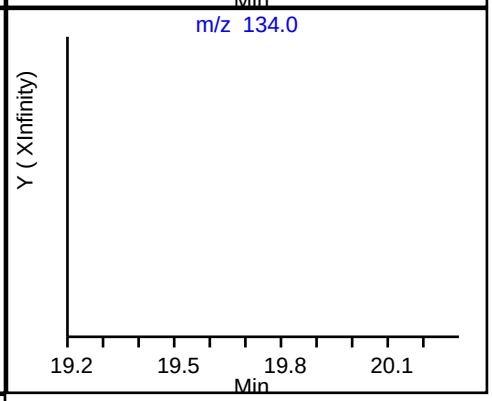
Data File:	\\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK13.D		
Injection Date:	28-Oct-2017 03:09:30	Instrument ID:	MR
Lims ID:	140-9664-A-13	Lab Sample ID:	140-9664-13
Client ID:	11111		
Operator ID:		ALS Bottle#:	1 Worklist Smp#: 23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

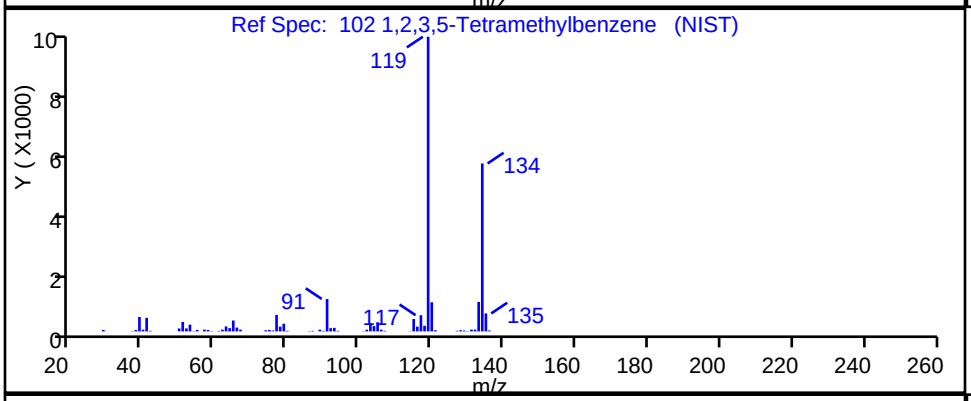
102 1,2,3,5-Tetramethylbenzene, CAS: 527-53-7

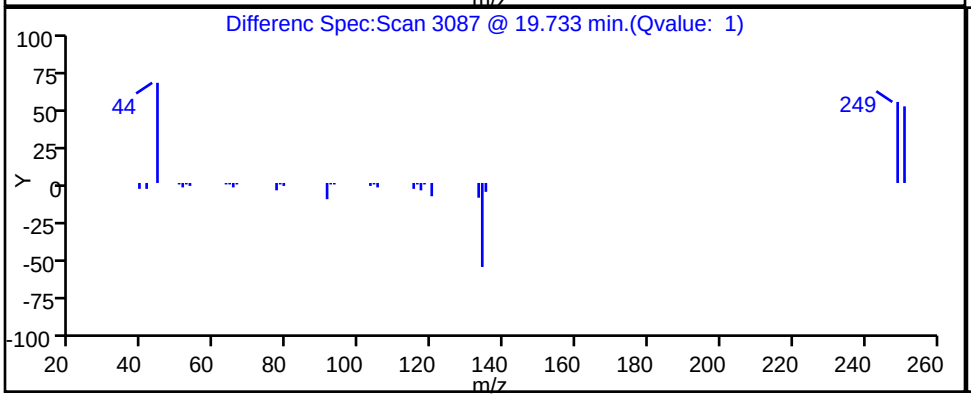


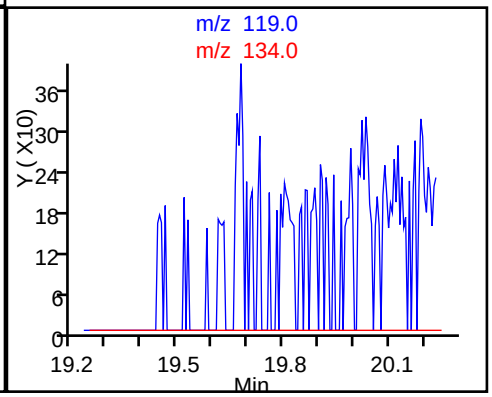








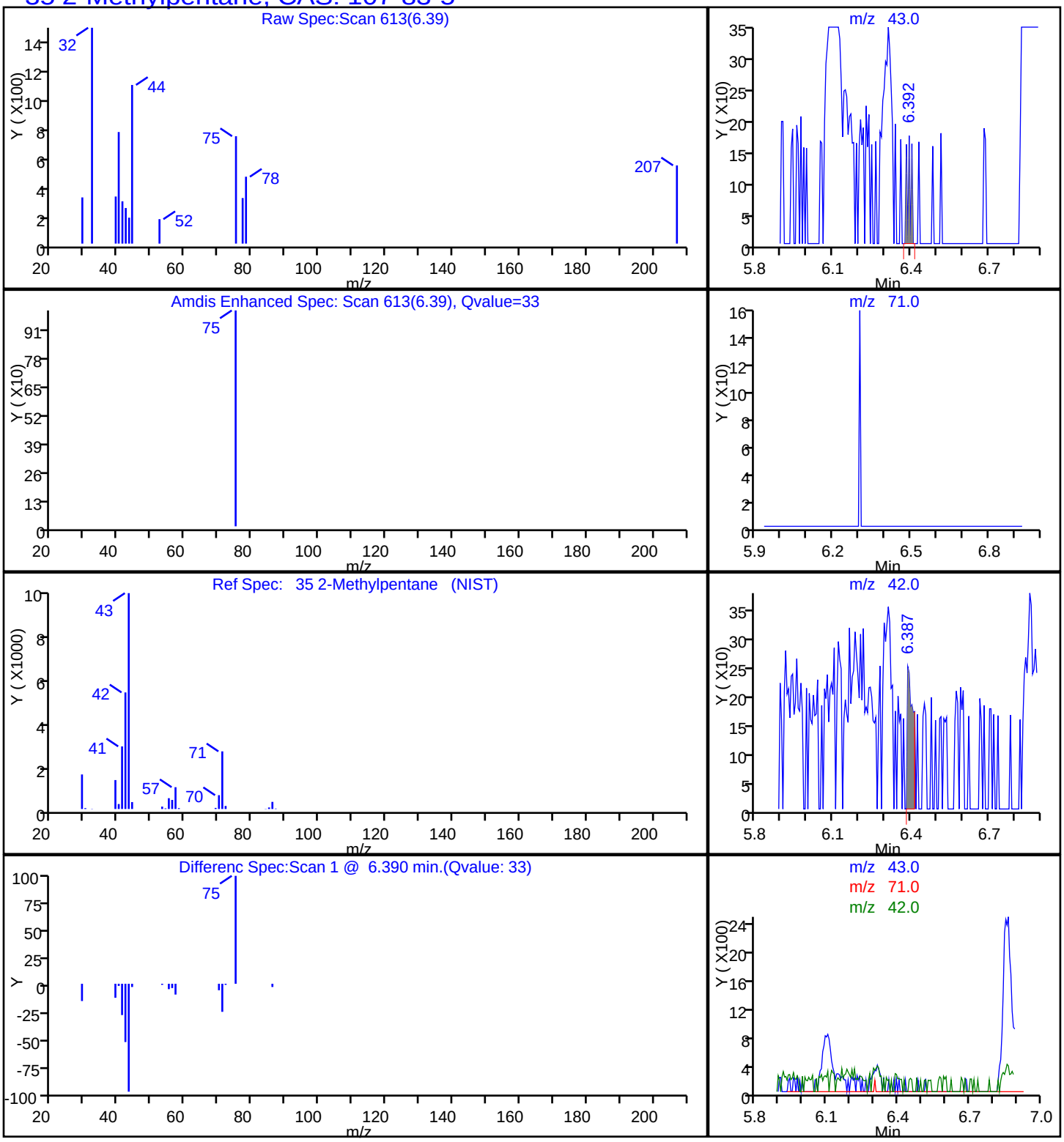




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK13.D		
Injection Date:	28-Oct-2017 03:09:30	Instrument ID:	MR
Lims ID:	140-9664-A-13	Lab Sample ID:	140-9664-13
Client ID:	11111		
Operator ID:		ALS Bottle#:	1 Worklist Smp#: 23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

35 2-Methylpentane, CAS: 107-83-5



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9664-1

SDG No.:

Client Sample ID: 11619 | Lab Sample ID: 140-9664-14

Matrix: Air | Lab File ID: 664BK14.D

Analysis Method: TO-15 | Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) | Date Analyzed: 10/28/2017 03:56

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15578 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	NC		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	NC		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	NC		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9664-1

SDG No.:

Client Sample ID: 11619 | Lab Sample ID: 140-9664-14

Matrix: Air | Lab File ID: 664BK14.D

Analysis Method: TO-15 | Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) | Date Analyzed: 10/28/2017 03:56

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15578 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9664-1

SDG No.:

Client Sample ID: 11619 | Lab Sample ID: 140-9664-14

Matrix: Air | Lab File ID: 664BK14.D

Analysis Method: TO-15 | Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) | Date Analyzed: 10/28/2017 03:56

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15578 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK14.D				
Lims ID:	140-9664-A-14				
Client ID:	11619				
Sample Type:	Client				
Inject. Date:	28-Oct-2017 03:56:30	ALS Bottle#:	2	Worklist Smp#:	24
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006464-024				
Misc. Info.:	11619				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	31-Oct-2017 10:41:52	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				
First Level Reviewer: barlozhetskayaa		Date:	31-Oct-2017 10:42:21		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.778	7.784	-0.006	82	358098	4.00	
* 2 1,4-Difluorobenzene	114	9.919	9.919	0.000	94	2083632	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.902	14.902	0.000	88	1794950	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.611	16.611	0.000	89	1376384	4.18	
35 2-Methylpentane	43	6.419	6.430	-0.011	35	229	NC	
102 1,2,3,5-Tetramethylbenzene	119	19.765	19.749	0.016	1	109	NC	
103 1,2,3,4-Tetramethylbenzene	119	20.040	19.965	0.075	52	737	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

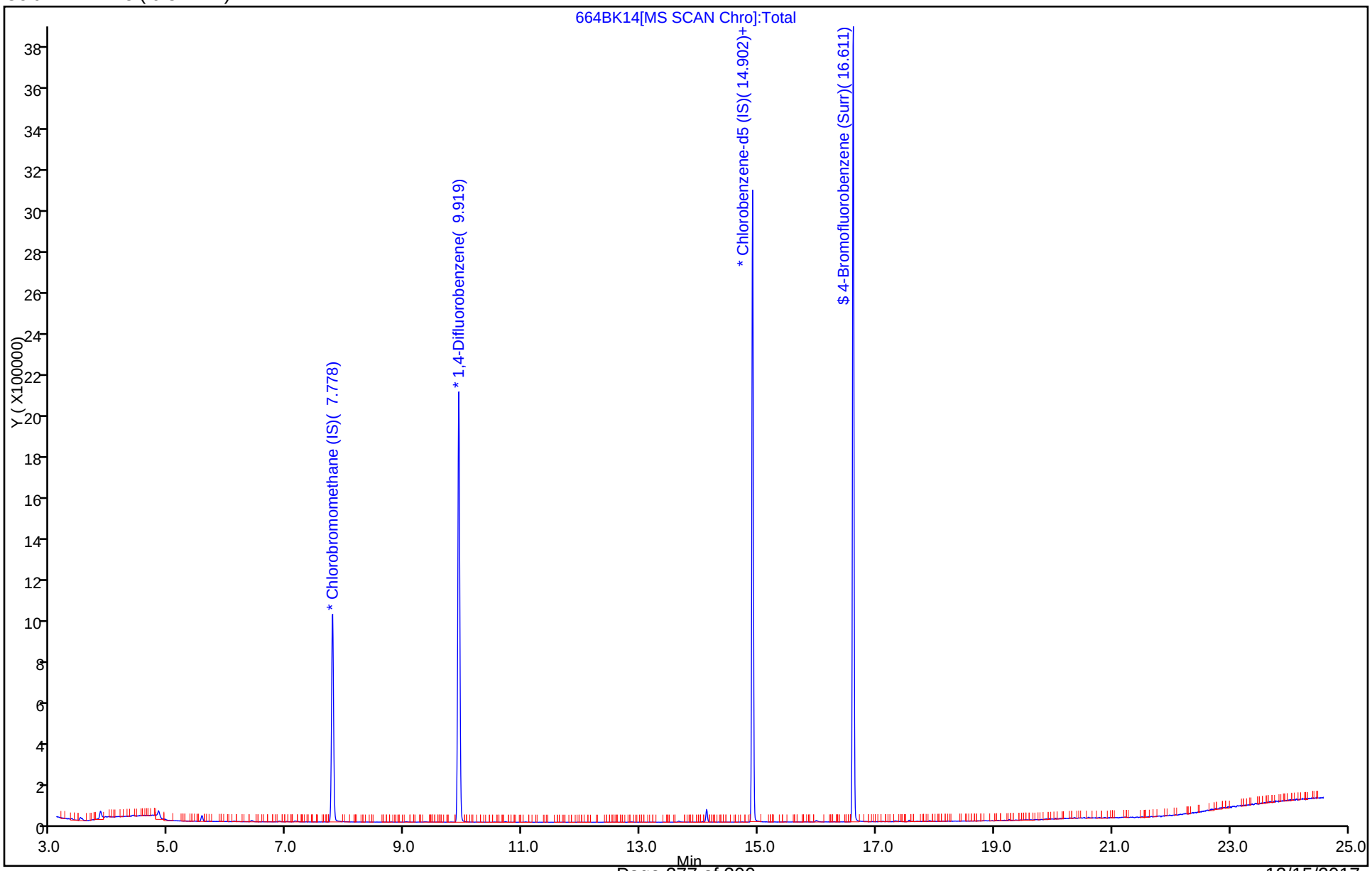
Report Date: 31-Oct-2017 10:42:22 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK14.D

Injection Date:	28-Oct-2017 03:56:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-9664-A-14	Lab Sample ID:	140-9664-14	Worklist Smp#:	24
Client ID:	11619				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

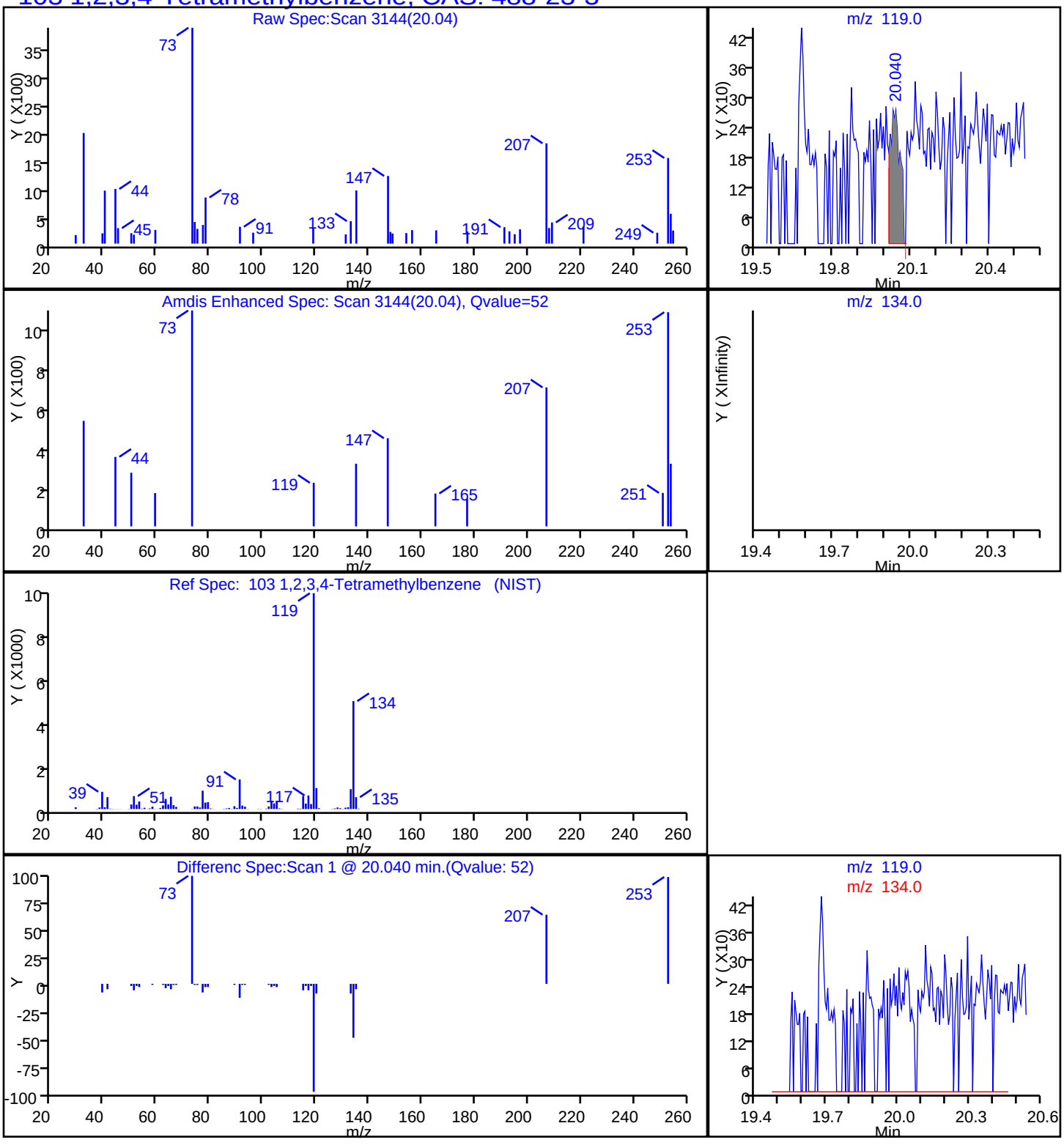
Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK14.D		
Injection Date:	28-Oct-2017 03:56:30	Instrument ID:	MR
Lims ID:	140-9664-A-14	Lab Sample ID:	140-9664-14
Client ID:	11619		
Operator ID:		ALS Bottle#:	2 Worklist Smp#: 24
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

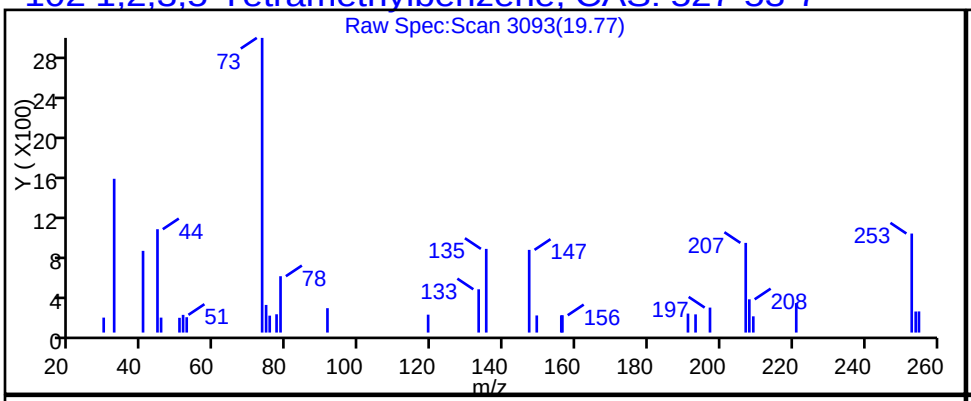
103 1,2,3,4-Tetramethylbenzene, CAS: 488-23-3

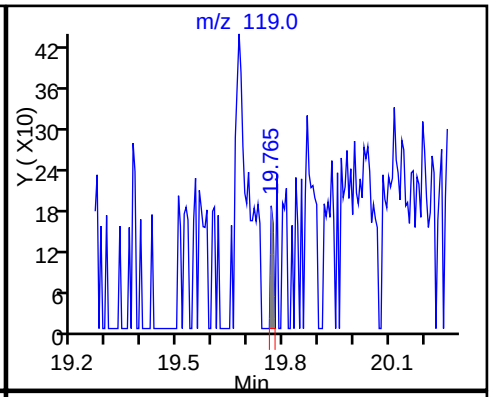


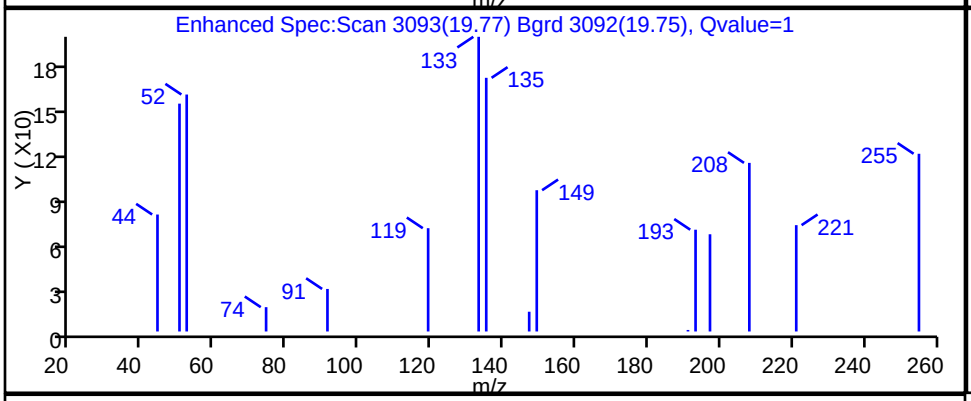
TestAmerica Knoxville

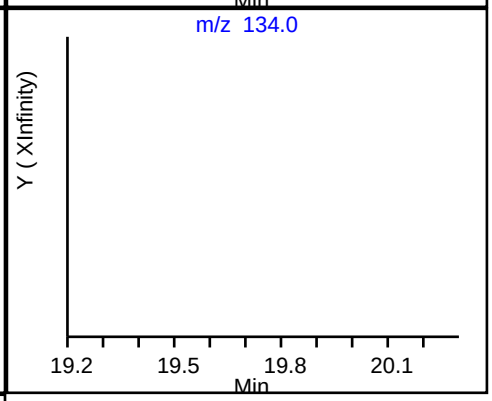
Data File:	\\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK14.D		
Injection Date:	28-Oct-2017 03:56:30	Instrument ID:	MR
Lims ID:	140-9664-A-14	Lab Sample ID:	140-9664-14
Client ID:	11619		
Operator ID:		ALS Bottle#:	2 Worklist Smp#: 24
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

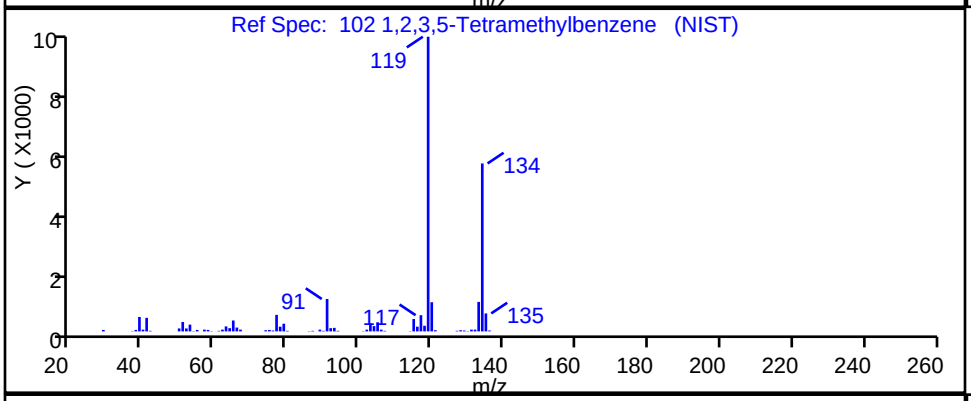
102 1,2,3,5-Tetramethylbenzene, CAS: 527-53-7

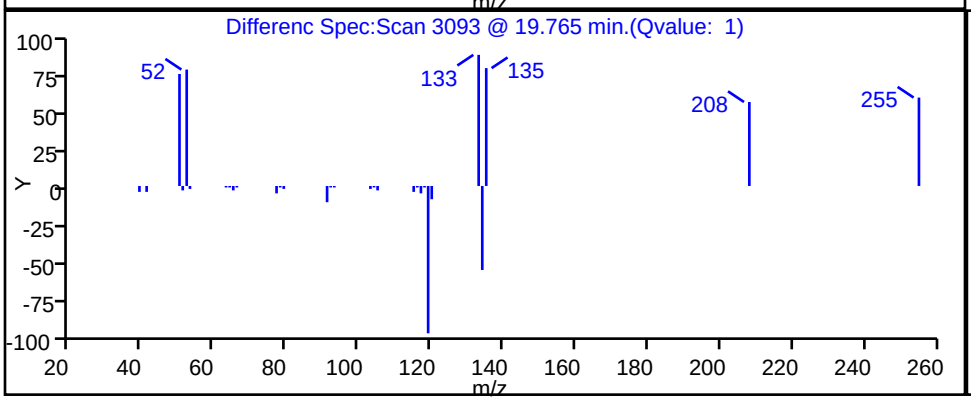


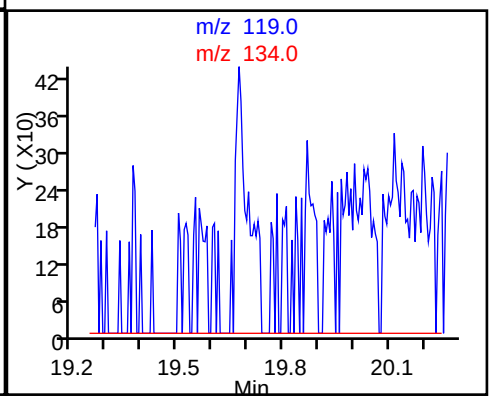








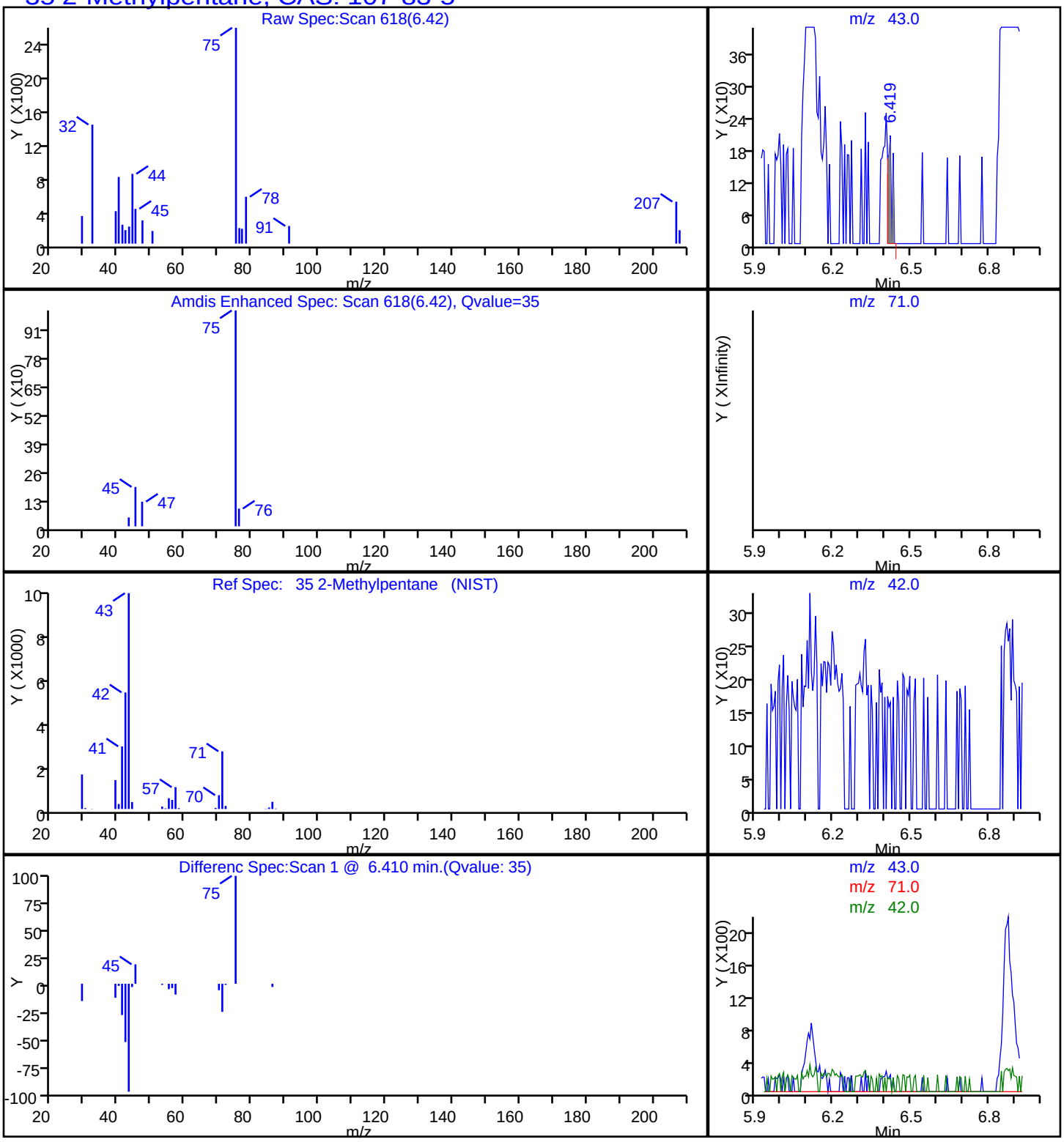




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK14.D		
Injection Date:	28-Oct-2017 03:56:30	Instrument ID:	MR
Lims ID:	140-9664-A-14	Lab Sample ID:	140-9664-14
Client ID:	11619		
Operator ID:		ALS Bottle#:	2 Worklist Smp#: 24
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

35 2-Methylpentane, CAS: 107-83-5



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9664-1

SDG No.:

Client Sample ID: 09796 | Lab Sample ID: 140-9664-15

Matrix: Air | Lab File ID: 664BK15.D

Analysis Method: TO-15 | Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) | Date Analyzed: 10/28/2017 04:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15578 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	NC		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	NC		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	NC		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9664-1

SDG No.:

Client Sample ID: 09796 | Lab Sample ID: 140-9664-15

Matrix: Air | Lab File ID: 664BK15.D

Analysis Method: TO-15 | Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) | Date Analyzed: 10/28/2017 04:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15578 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9664-1

SDG No.:

Client Sample ID: 09796 | Lab Sample ID: 140-9664-15

Matrix: Air | Lab File ID: 664BK15.D

Analysis Method: TO-15 | Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) | Date Analyzed: 10/28/2017 04:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15578 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK15.D				
Lims ID:	140-9664-A-15				
Client ID:	09796				
Sample Type:	Client				
Inject. Date:	28-Oct-2017 04:44:30	ALS Bottle#:	3	Worklist Smp#:	25
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006464-025				
Misc. Info.:	09796				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	31-Oct-2017 10:41:52	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				
First Level Reviewer: barlozhetskayaa		Date:	31-Oct-2017 10:42:27		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.762	7.784	-0.022	83	370294	4.00	
* 2 1,4-Difluorobenzene	114	9.908	9.919	-0.011	94	2150541	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.896	14.902	-0.006	88	1799144	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.606	16.611	-0.005	88	1367674	4.15	
35 2-Methylpentane	43	6.425	6.430	-0.005	1	59	NC	
102 1,2,3,5-Tetramethylbenzene	119	19.733	19.749	-0.016	1	168	NC	
103 1,2,3,4-Tetramethylbenzene	119	19.960	19.965	-0.005	1	236	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

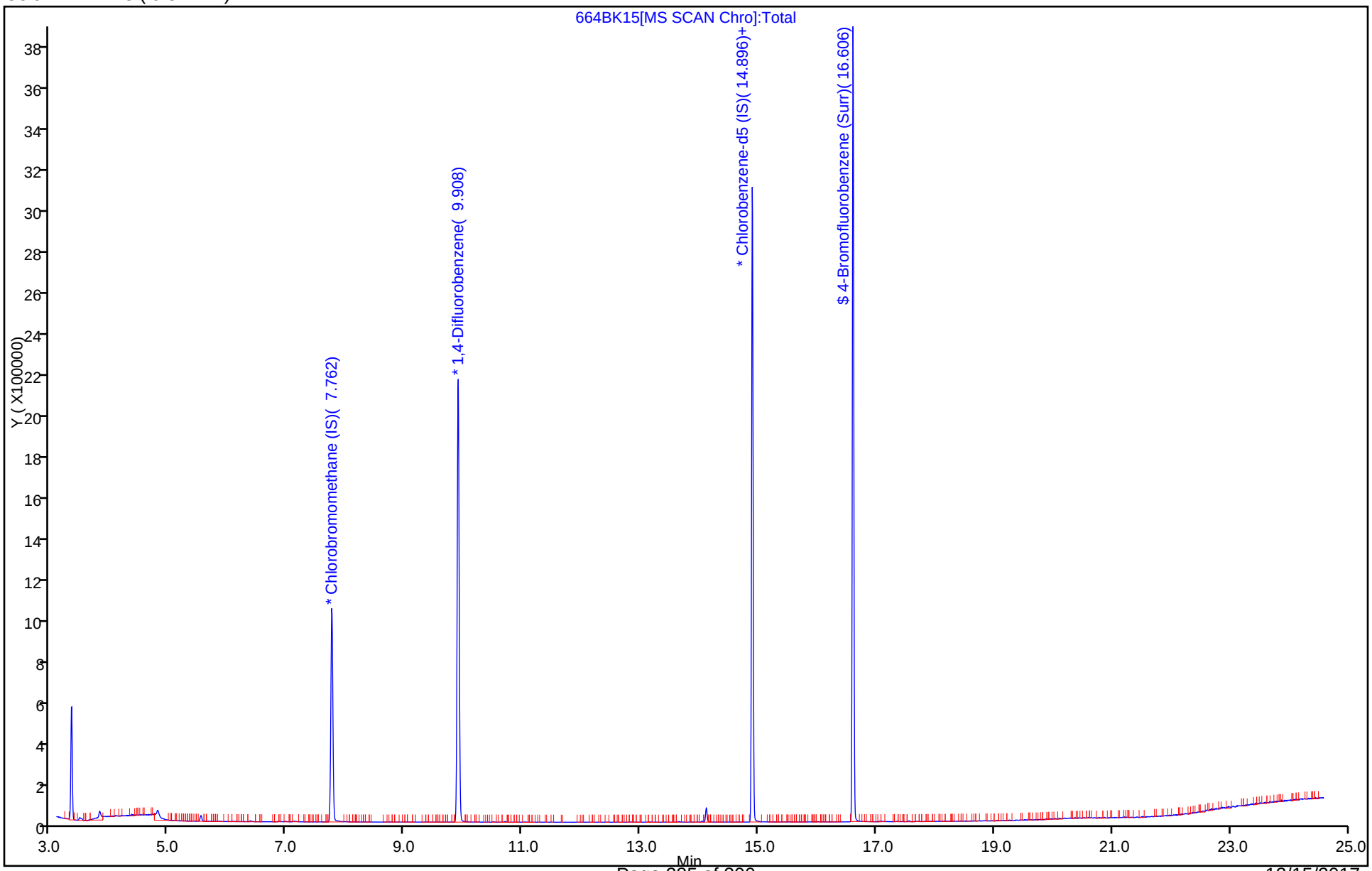
Report Date: 31-Oct-2017 10:42:28 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK15.D

Injection Date:	28-Oct-2017 04:44:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-9664-A-15	Lab Sample ID:	140-9664-15	Worklist Smp#:	25
Client ID:	09796				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

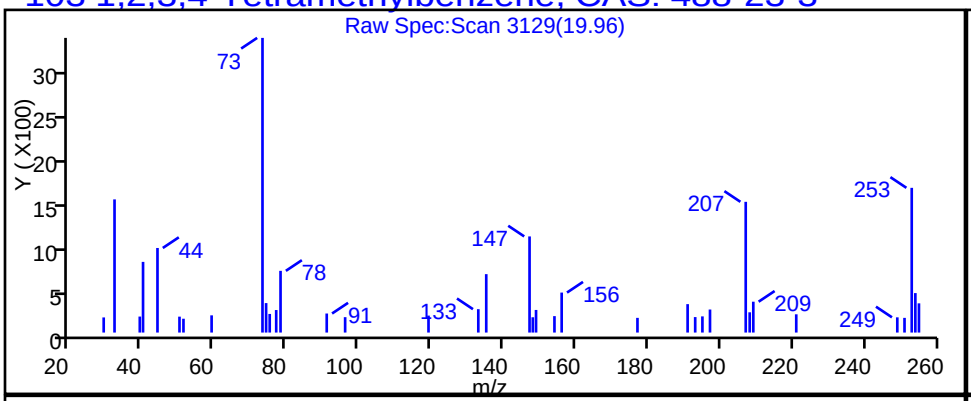
Column: RTX-5 (0.32 mm)

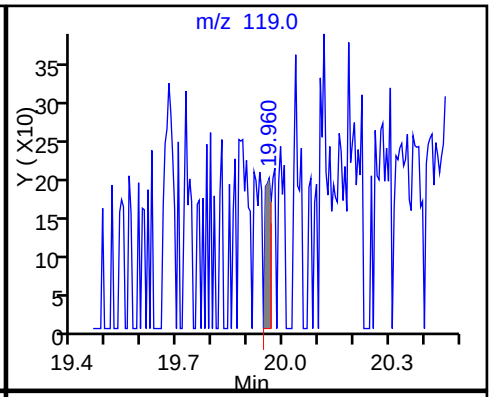


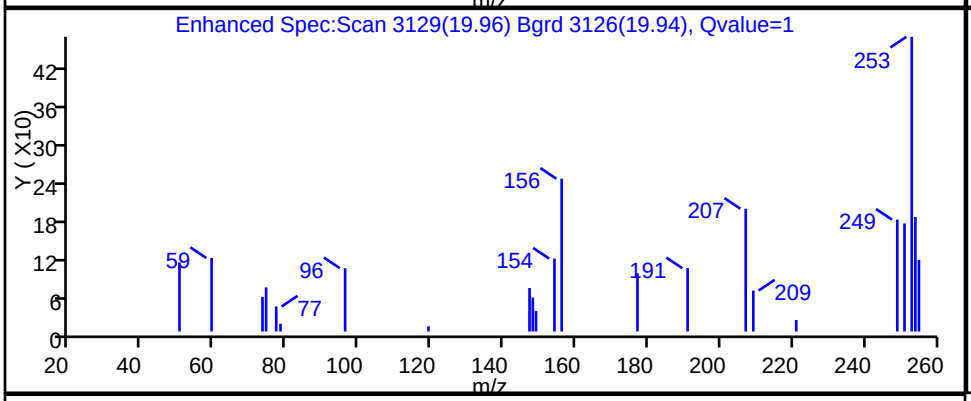
TestAmerica Knoxville

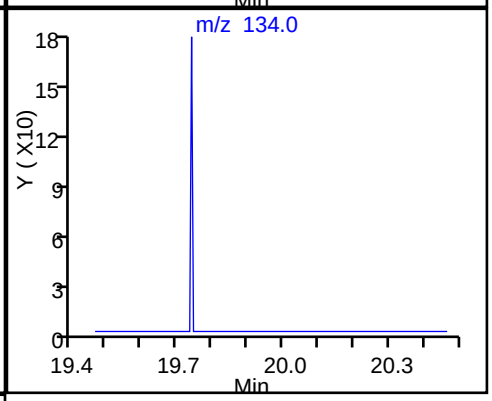
Data File:	\\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK15.D		
Injection Date:	28-Oct-2017 04:44:30	Instrument ID:	MR
Lims ID:	140-9664-A-15	Lab Sample ID:	140-9664-15
Client ID:	09796		
Operator ID:		ALS Bottle#:	3 Worklist Smp#: 25
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

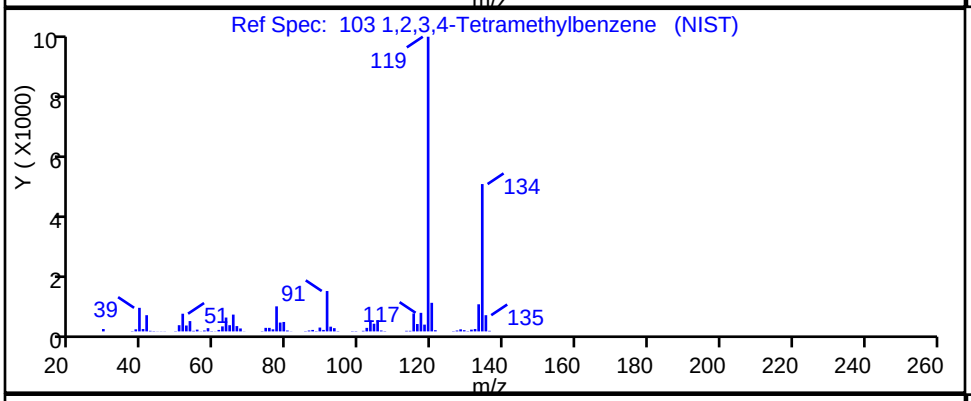
103 1,2,3,4-Tetramethylbenzene, CAS: 488-23-3

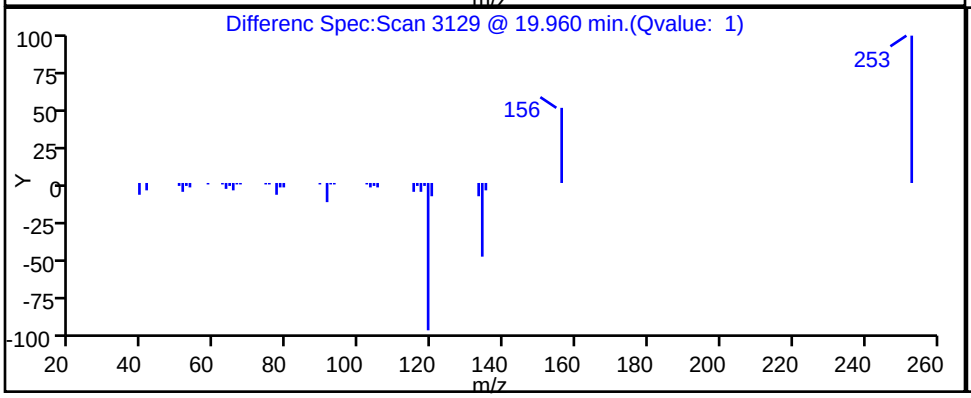


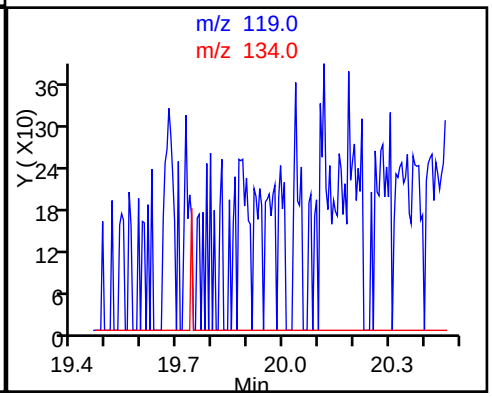








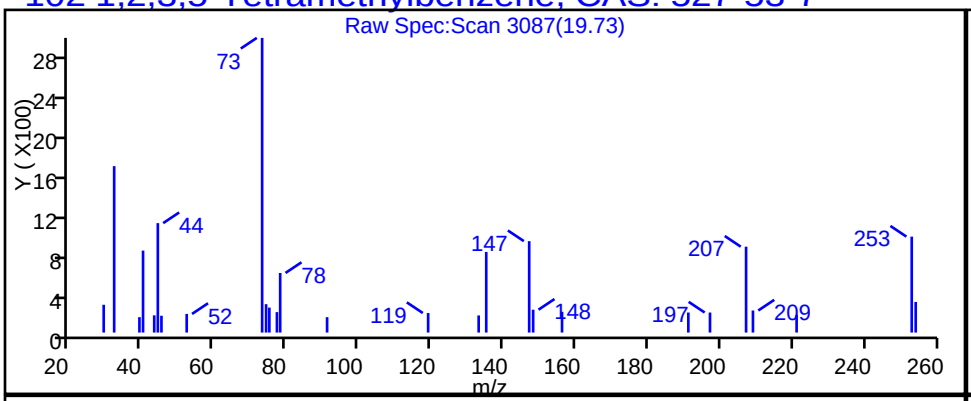


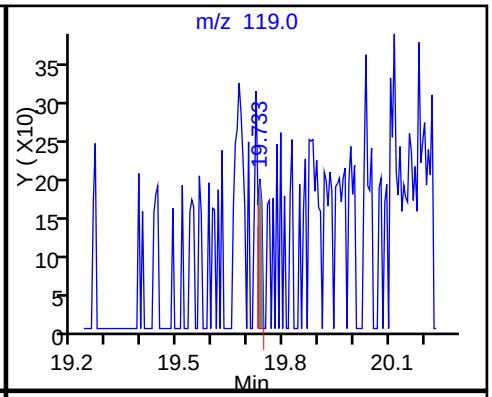


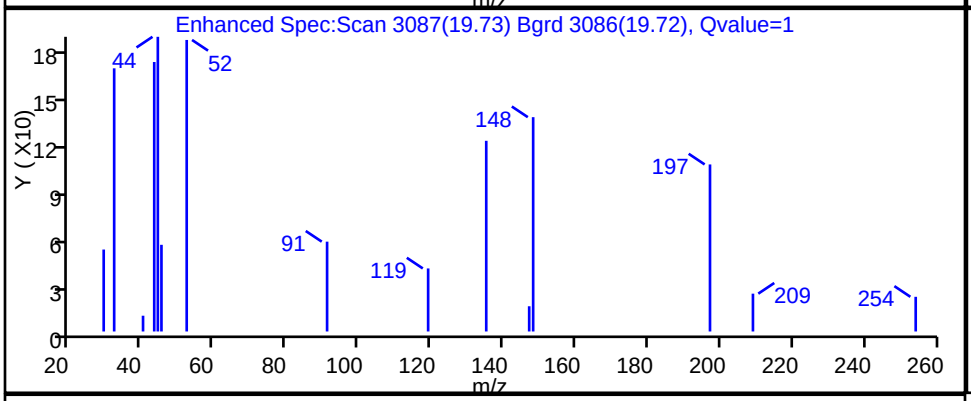
TestAmerica Knoxville

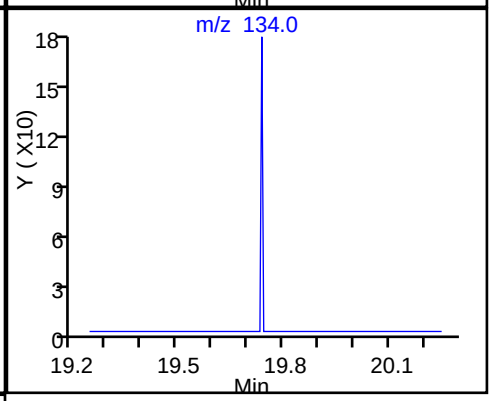
Data File:	\\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK15.D		
Injection Date:	28-Oct-2017 04:44:30	Instrument ID:	MR
Lims ID:	140-9664-A-15	Lab Sample ID:	140-9664-15
Client ID:	09796		
Operator ID:		ALS Bottle#:	3 Worklist Smp#: 25
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

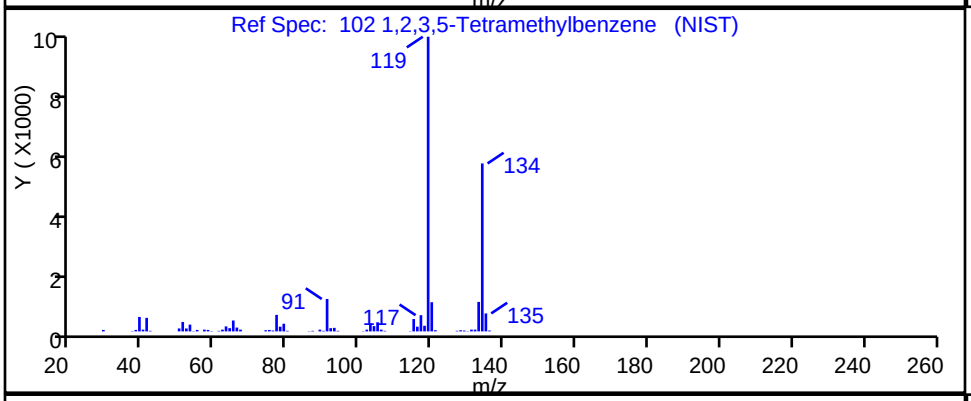
102 1,2,3,5-Tetramethylbenzene, CAS: 527-53-7

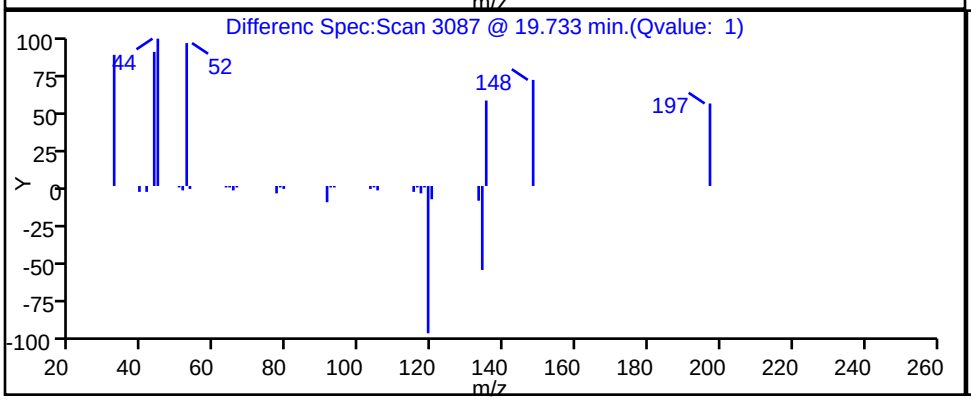


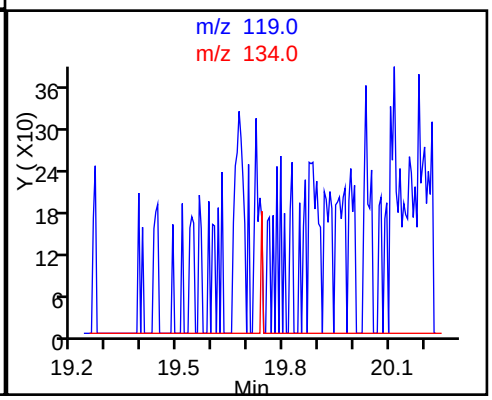












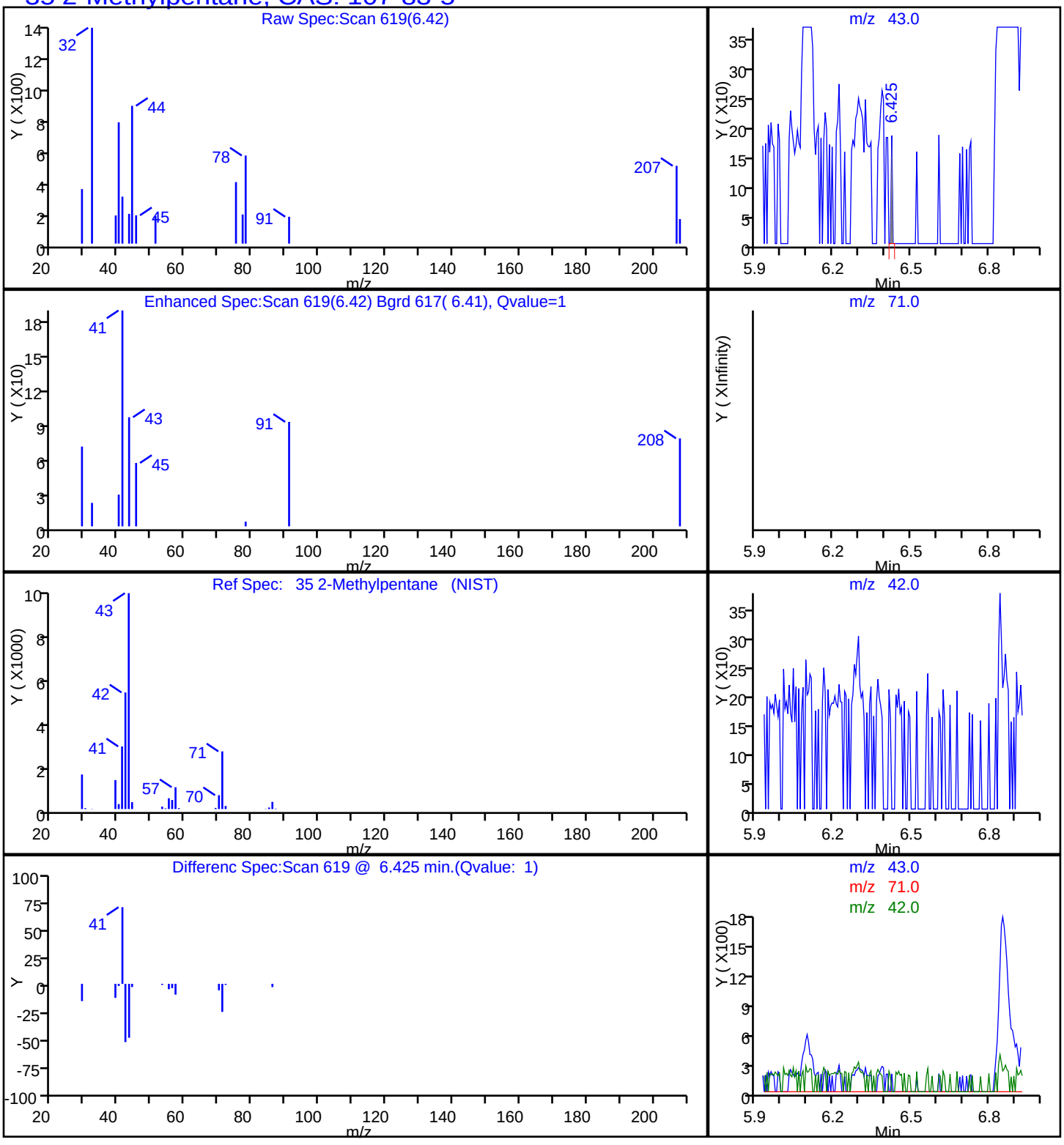
Report Date: 31-Oct-2017 10:42:28 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK15.D

Injection Date:	28-Oct-2017 04:44:30	Instrument ID:	MR
Lims ID:	140-9664-A-15	Lab Sample ID:	140-9664-15
Client ID:	09796		
Operator ID:		ALS Bottle#:	3 Worklist Smp#: 25
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

35 2-Methylpentane, CAS: 107-83-5



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9664-1

SDG No.:

Client Sample ID: 09591 | Lab Sample ID: 140-9664-16

Matrix: Air | Lab File ID: 664BK16.D

Analysis Method: TO-15 | Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) | Date Analyzed: 10/28/2017 05:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15578 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	NC		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	NC		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	NC		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9664-1

SDG No.:

Client Sample ID: 09591 | Lab Sample ID: 140-9664-16

Matrix: Air | Lab File ID: 664BK16.D

Analysis Method: TO-15 | Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) | Date Analyzed: 10/28/2017 05:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15578 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-9664-1

SDG No.:

Client Sample ID: 09591 | Lab Sample ID: 140-9664-16

Matrix: Air | Lab File ID: 664BK16.D

Analysis Method: TO-15 | Date Collected: 10/24/2017 14:25

Sample wt/vol: 200(mL) | Date Analyzed: 10/28/2017 05:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 15578 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK16.D
Lims ID: 140-9664-A-16
Client ID: 09591
Sample Type: Client
Inject. Date: 28-Oct-2017 05:33:30 ALS Bottle#: 4 Worklist Smp#: 26
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006464-026
Misc. Info.: 09591
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 31-Oct-2017 10:41:52 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 31-Oct-2017 10:42:47

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.773	7.784	-0.011	82	354456	4.00	
* 2 1,4-Difluorobenzene	114	9.913	9.919	-0.006	94	2046970	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.901	14.902	-0.001	88	1725826	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.605	16.611	-0.006	88	1297931	4.10	
22 Acetone	58	4.818	4.807	0.011	99	22351	0.5721	
35 2-Methylpentane	43	6.392	6.430	-0.038	36	358	NC	
102 1,2,3,5-Tetramethylbenzene	119	19.900	19.749	0.151	40	193	NC	
103 1,2,3,4-Tetramethylbenzene	119	20.121	19.965	0.156	49	226	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

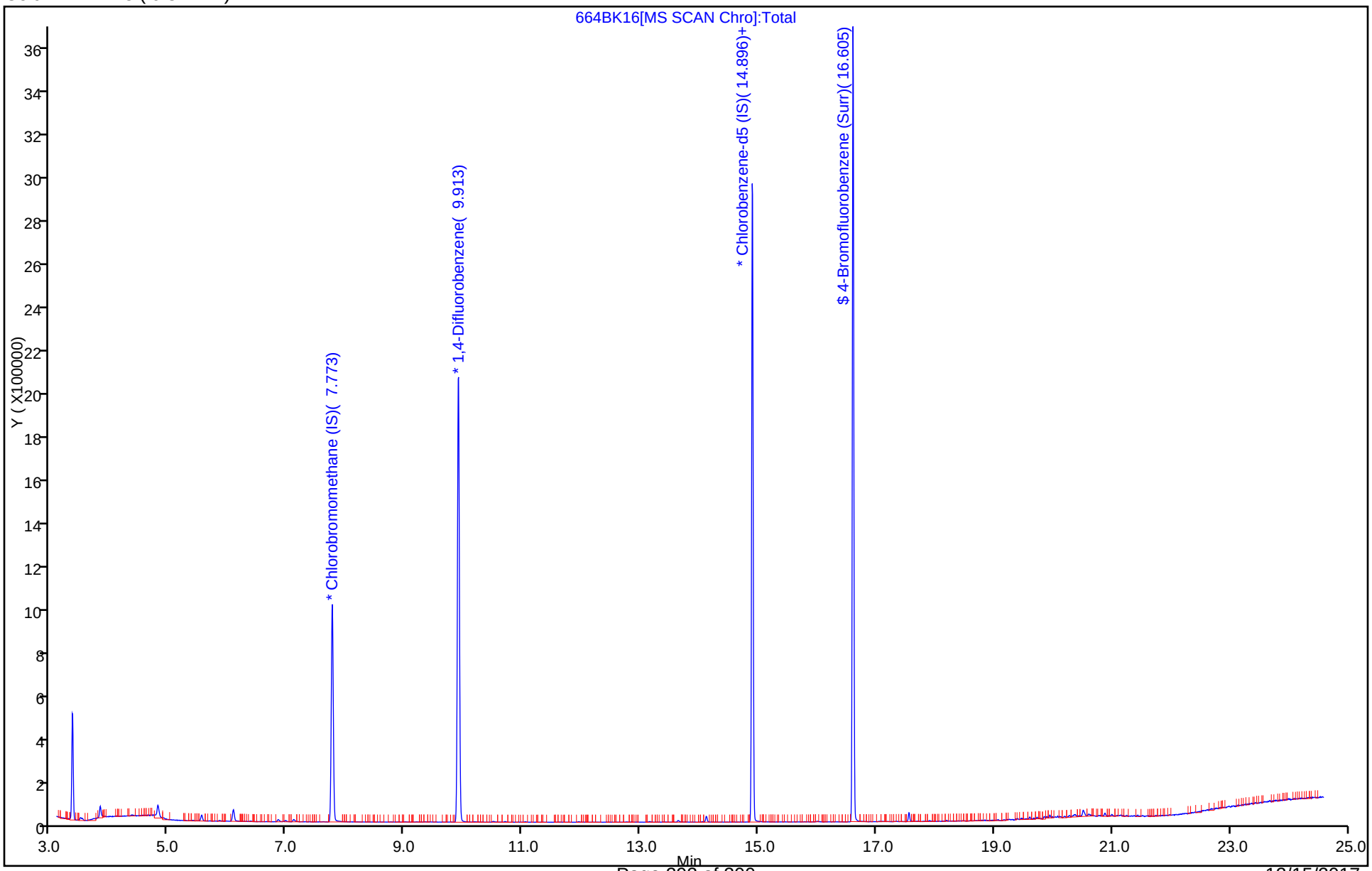
Report Date: 31-Oct-2017 10:42:48 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK16.D

Injection Date:	28-Oct-2017 05:33:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-9664-A-16	Lab Sample ID:	140-9664-16	Worklist Smp#:	26
Client ID:	09591				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

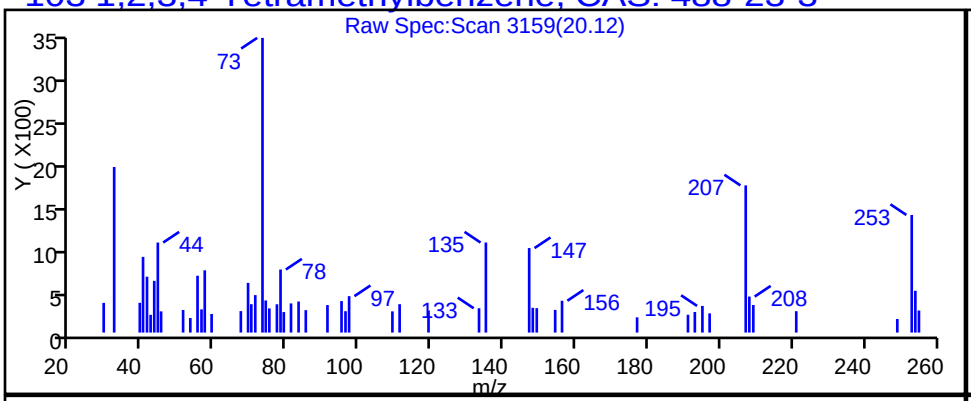
Column: RTX-5 (0.32 mm)

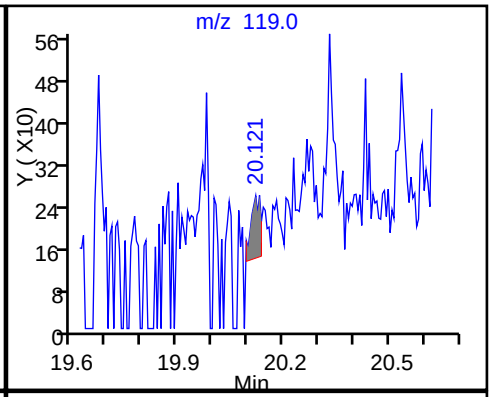


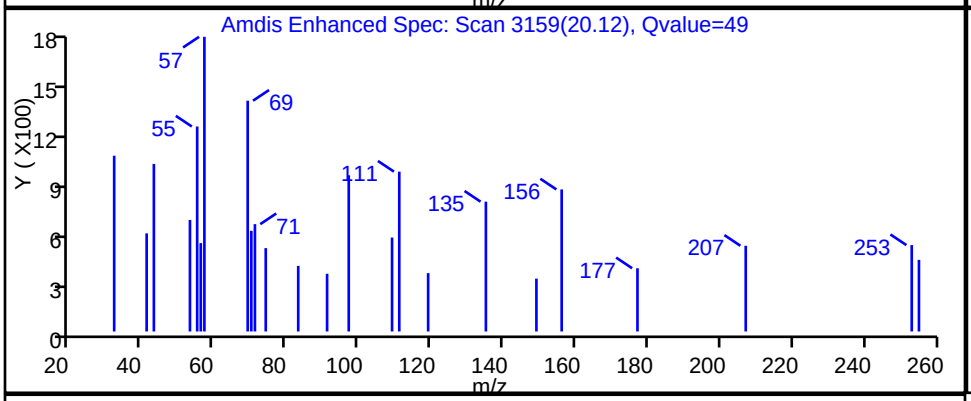
TestAmerica Knoxville

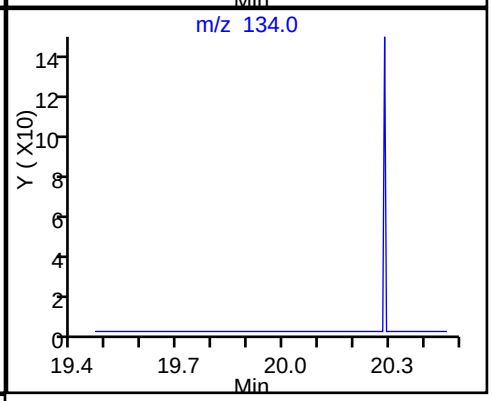
Data File:	\\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK16.D		
Injection Date:	28-Oct-2017 05:33:30	Instrument ID:	MR
Lims ID:	140-9664-A-16	Lab Sample ID:	140-9664-16
Client ID:	09591		
Operator ID:		ALS Bottle#:	4 Worklist Smp#: 26
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

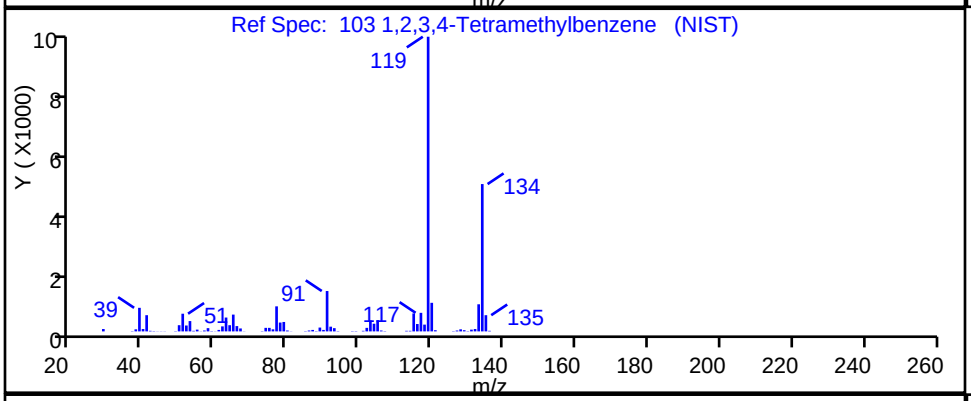
103 1,2,3,4-Tetramethylbenzene, CAS: 488-23-3

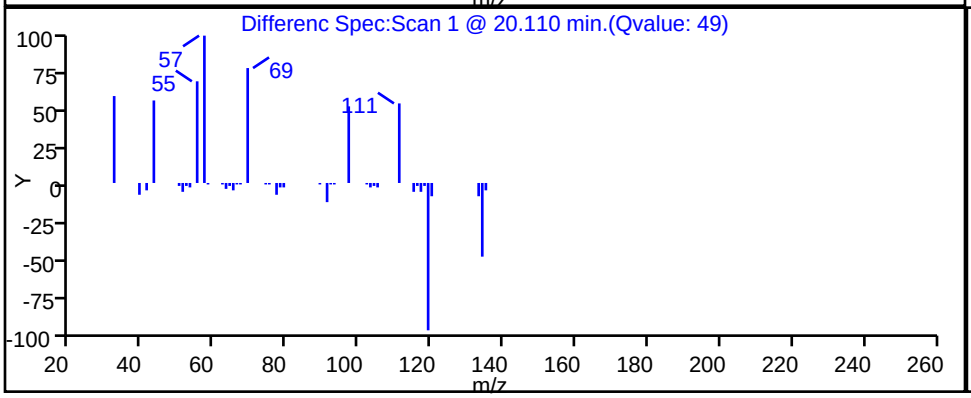


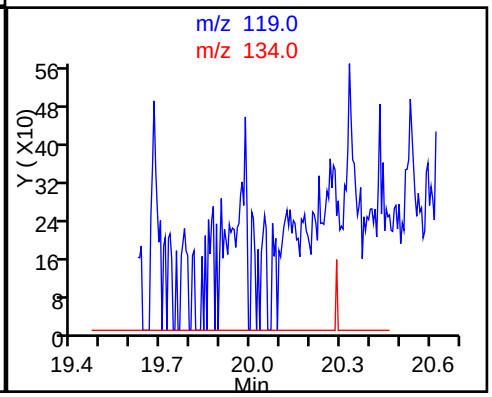








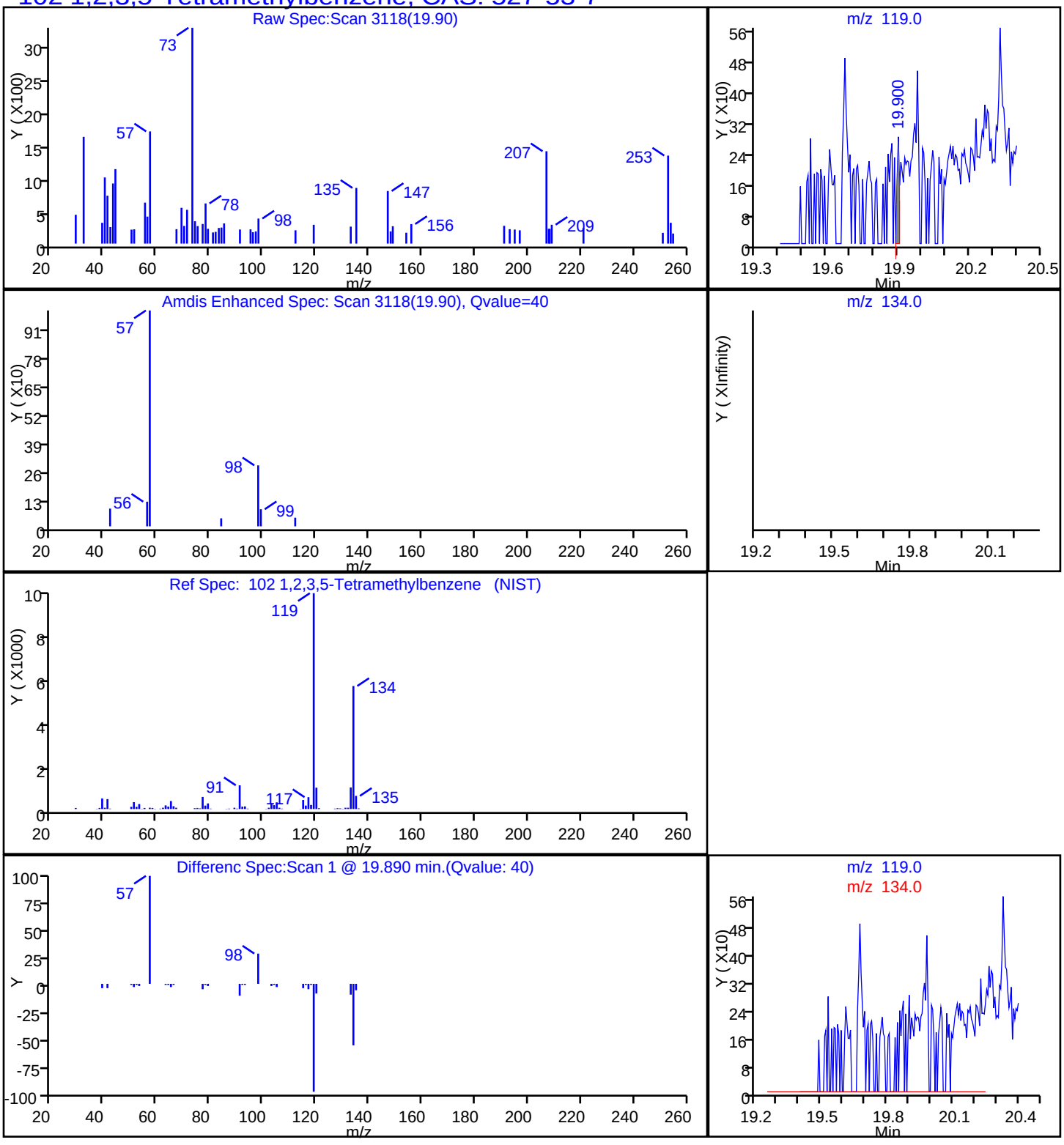




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK16.D		
Injection Date:	28-Oct-2017 05:33:30	Instrument ID:	MR
Lims ID:	140-9664-A-16	Lab Sample ID:	140-9664-16
Client ID:	09591		
Operator ID:		ALS Bottle#:	4 Worklist Smp#: 26
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

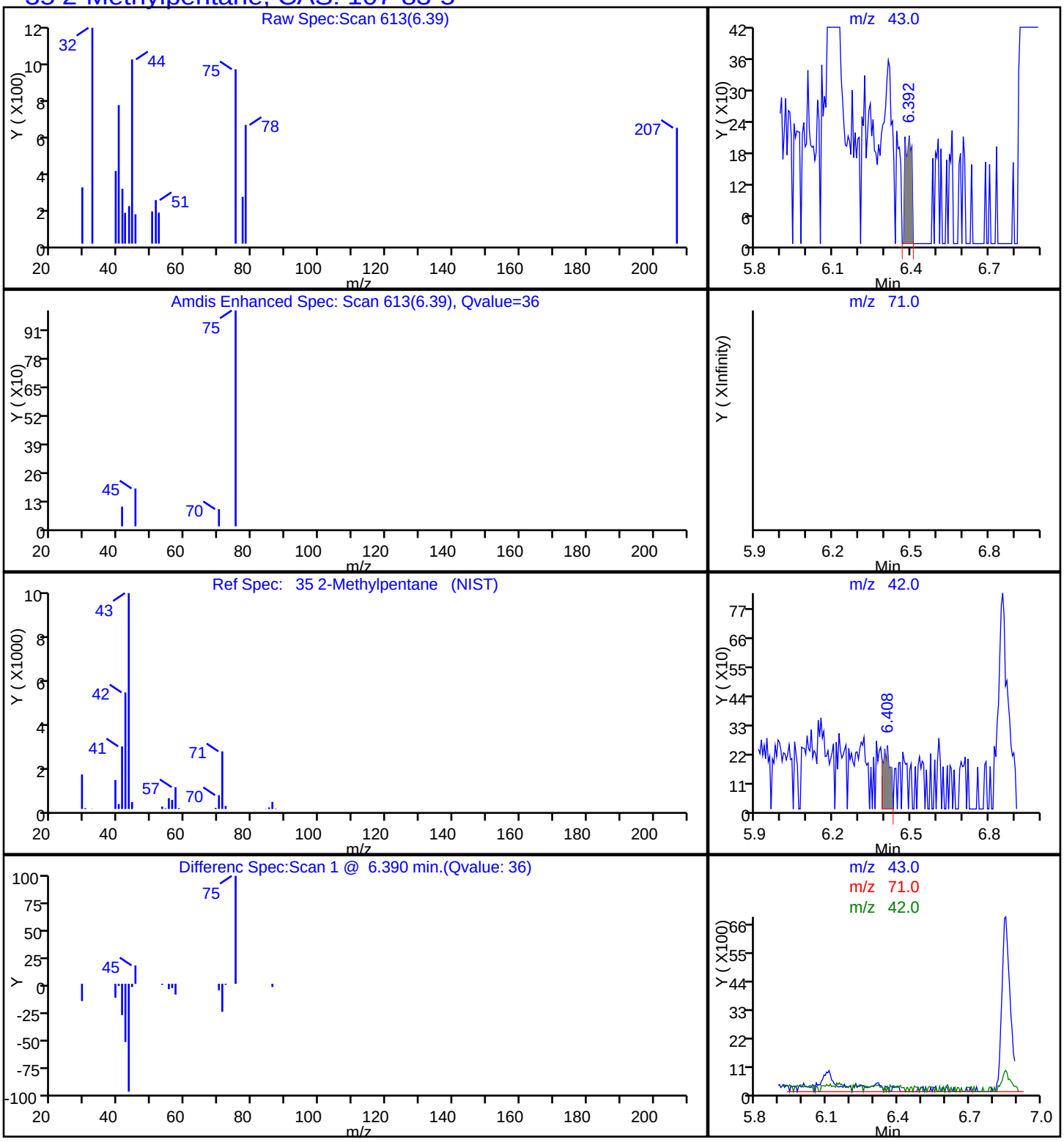
102 1,2,3,5-Tetramethylbenzene, CAS: 527-53-7



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171026-6464.b\664BK16.D		
Injection Date:	28-Oct-2017 05:33:30	Instrument ID:	MR
Lims ID:	140-9664-A-16	Lab Sample ID:	140-9664-16
Client ID:	09591		
Operator ID:		ALS Bottle#:	4 Worklist Smp#: 26
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

35 2-Methylpentane, CAS: 107-83-5



Shipping and Receiving Documents

180325

BALTIMORE

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information
Company: Tetra Tech
Address: 51 Franklin St
City/State/Zip Annapolis / MD / 21401
Phone: 410-990-4607
FAX:
Project Name: LMC MRC
Site/location: MRAS / BLDG-A
PO # 117-0512124

Project Manager: Peter Rich
Phone: 410-990-4607
Site Contact:
TAL Contact:

Analysis Turnaround Time
Standard (Specify)
Rush (Specify)

Sampled By: JM Willis

1 of 1 COCs

140-10079 Chain of Custody

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
BLDG-A INFLUENT	12-4-17	1332	1334	28.5	0	10930	10603	✓											
BLDG-A MIDGAS	↓	1336	1338	30	0	09569	11277	✓											
BLDG-A EFFLUENT	↓	1342	1345	29	1	10614	09591	✓											

Sampled by :

Temperature (Fahrenheit)

	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)

	Interior	Ambient	
Start			
Stop			

Received @ ambient, 1 cooler
FedEx SO, trk#7709 0029 4319
Custody seal intact
KW 12/5/17

Special Instructions/QC Requirements & Comments: Flow control #10930 loose

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by: JM Willis	Date/Time: 12-4-17 / 1525	Received by:
Relinquished by:	Date/Time: 12-4-2017 / 1630	Received by: 12/5/17 1090

3 cans
3 KR

12/15/2017

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Log In Number: 10079

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	✓			☐ **Containers, Broken**
2. Were ambient air containers received intact?			✓	☑ Checked in lab
3. The coolers/containers custody seal if present, is it intact?	✓			☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			✓	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	✓			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	✓			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	✓			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	✓			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?	✓			☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	✓			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	✓			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	✓			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	✓			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			✓	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:_____			✓	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			✓	☐ If no, lab will adjust
20. For rad samples was sample activity info. Provided?			✓	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: _____ PM Instructions: _____

Sample Receiving Associate: _____ Date: 12/5/17

QA026R30.doc, 080916

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 12/6/2017

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
BKK	140-10079-A-1	10603	9664	B	1	0.7	0927	
BKK	140-10079-A-2	11277	9664	B	1	0.8	0928	
BKK	140-10079-A-3	09591	9664	B	1	0.0	0929	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

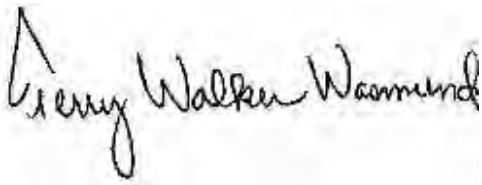
ANALYTICAL REPORT

Job Number: 140-10405-1

Job Description: LMC Middle River - Bldgs. A and C

For:
Tetra Tech GEO
51 Franklin Street
Suite 400
Annapolis, MD 21401

Attention: Peter Rich



Approved for release.
Terry Walker Wasmund
Project Manager II
1/16/2018 11:32 AM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
01/16/2018

cc: Belssi Chang
Amy Thomson
Michael Wilks

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Definitions/Glossary

Client: Tetra Tech GEO
Project/Site: LMC Middle River - Bldgs. A and C

TestAmerica Job ID: 140-10405-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-10405-1

Receipt
The samples were received on 1/10/2018 at 9:30 AM. The samples arrived in good condition and properly preserved.

Air - GC/MS VOA - Method TO-15 LL
EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

The continuing calibration verification (CCV) associated with batch 140-17352 exhibited % difference of > 30% for 1,2,4-trichlorobenzene and/or hexachlorobutadiene; however, the results were within the LCS acceptance limits. The EPA method requires that all target analytes in the continuing calibration verification standard be within 30% difference from the initial calibration. According to the laboratory standard operating procedure, the continuing calibration is acceptable if it meets the laboratory control sample acceptance criteria.

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

Comments
No additional comments.

Detection Summary

Client: Tetra Tech GEO
Project/Site: LMC Middle River - Bldgs. A and C

TestAmerica Job ID: 140-10405-1

Client Sample ID: C-INFLUENT — Lab Sample ID: 140-10405-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2.0		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.096	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	3.1		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.68		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.44		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.17	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.38	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.1		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	6.2		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.52		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.21	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Vinyl chloride	0.21		0.20	0.15	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.1		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	6.4		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.60	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	11		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	2.7		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.74	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	2.5	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	4.2		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	33		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	2.6		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.0	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Vinyl chloride	0.54		0.51	0.37	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	4.8		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: C-MID GAC — Lab Sample ID: 140-10405-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.3		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	2.7		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.55		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.13	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.68	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	4.2		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	9.6		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.7		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.71	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.0	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: C-EFFLUENT — Lab Sample ID: 140-10405-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.7		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	2.8		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.54		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.18	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: C-EFFLUENT (Continued)

Lab Sample ID: 140-10405-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	0.66	J	1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.78		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.70		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.31	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.3		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	5.4		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	9.8		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.7		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.76	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.3	J	3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	2.9		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	3.5		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.5	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	5.6		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: A-INFLUENT

Lab Sample ID: 140-10405-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	5.1		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.080	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.49		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.25	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	15		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.41		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	2.3		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	20		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.14	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.080	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.67		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.29	J	0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	71		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	150	E	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.95		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene - DL	180		1.0	0.35	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	16		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.50	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.7		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.2	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	58		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.0		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	9.4		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	79		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.59	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.55	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	2.5		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	1.1	J	1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	390		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	800	E	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: A-INFLUENT (Continued) — Lab Sample ID: 140-10405-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total	4.1		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene - DL	940		5.4	1.9	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: A-MID GAC — Lab Sample ID: 140-10405-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	16		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.46		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.39	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	16		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.41		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	3.2		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	21		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.15	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.65	J	1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.31	J	0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	59		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.78	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	51		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.6		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.9	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	61		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.0		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	13		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	84		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.64	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.3	J	3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	1.2	J	1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	320		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.4	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: A-EFFLUENT — Lab Sample ID: 140-10405-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.66		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.16	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.50		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.40		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	6.3		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.49		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	3.8		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	20		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.88	J	1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.14	J	0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	54		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.4		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.55	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2.1		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: A-EFFLUENT (Continued)

Lab Sample ID: 140-10405-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	1.0	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.8		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.9		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	25		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	15		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	79		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.0	J	3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.54	J	1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	300		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	7.6		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.4	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: C-INFLUENT
Lab Sample ID: 140-10405-1

Date Collected: 01/09/18 11:56
Matrix: Air
Date Received: 01/10/18 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**2.0**		0.40	0.12	ppb v/v			01/11/18 18:31	1
Carbon tetrachloride	**0.096**	**J**	0.40	0.075	ppb v/v			01/11/18 18:31	1
Chlorodifluoromethane	**3.1**		0.40	0.075	ppb v/v			01/11/18 18:31	1
Chloroform	ND		0.40	0.075	ppb v/v			01/11/18 18:31	1
cis-1,2-Dichloroethene	**0.68**		0.40	0.12	ppb v/v			01/11/18 18:31	1
Dichlorodifluoromethane	**0.44**		0.40	0.14	ppb v/v			01/11/18 18:31	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			01/11/18 18:31	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			01/11/18 18:31	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			01/11/18 18:31	1
Ethylbenzene	**0.17**	**J**	0.40	0.14	ppb v/v			01/11/18 18:31	1
Methylene Chloride	ND		1.0	0.65	ppb v/v			01/11/18 18:31	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			01/11/18 18:31	1
Naphthalene	ND		0.20	0.20	ppb v/v			01/11/18 18:31	1
Tetrachloroethene	**0.38**	**J**	0.40	0.080	ppb v/v			01/11/18 18:31	1
Toluene	**1.1**		0.60	0.60	ppb v/v			01/11/18 18:31	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			01/11/18 18:31	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			01/11/18 18:31	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			01/11/18 18:31	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			01/11/18 18:31	1
Trichloroethene	**6.2**		0.20	0.070	ppb v/v			01/11/18 18:31	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			01/11/18 18:31	1
1,2,4-Trimethylbenzene	**0.52**		0.40	0.13	ppb v/v			01/11/18 18:31	1
1,3,5-Trimethylbenzene	**0.21**	**J**	0.40	0.13	ppb v/v			01/11/18 18:31	1
Vinyl chloride	**0.21**		0.20	0.15	ppb v/v			01/11/18 18:31	1
Xylenes, Total	**1.1**		0.80	0.12	ppb v/v			01/11/18 18:31	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**6.4**		1.3	0.37	ug/m3			01/11/18 18:31	1
Carbon tetrachloride	**0.60**	**J**	2.5	0.47	ug/m3			01/11/18 18:31	1
Chlorodifluoromethane	**11**		1.4	0.27	ug/m3			01/11/18 18:31	1
Chloroform	ND		2.0	0.37	ug/m3			01/11/18 18:31	1
cis-1,2-Dichloroethene	**2.7**		1.6	0.48	ug/m3			01/11/18 18:31	1
Dichlorodifluoromethane	**2.2**		2.0	0.67	ug/m3			01/11/18 18:31	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			01/11/18 18:31	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			01/11/18 18:31	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			01/11/18 18:31	1
Ethylbenzene	**0.74**	**J**	1.7	0.59	ug/m3			01/11/18 18:31	1
Methylene Chloride	ND		3.5	2.3	ug/m3			01/11/18 18:31	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			01/11/18 18:31	1
Naphthalene	ND		1.0	1.0	ug/m3			01/11/18 18:31	1
Tetrachloroethene	**2.5**	**J**	2.7	0.54	ug/m3			01/11/18 18:31	1
Toluene	**4.2**		2.3	2.3	ug/m3			01/11/18 18:31	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			01/11/18 18:31	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			01/11/18 18:31	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			01/11/18 18:31	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			01/11/18 18:31	1
Trichloroethene	**33**		1.1	0.38	ug/m3			01/11/18 18:31	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			01/11/18 18:31	1
1,2,4-Trimethylbenzene	**2.6**		2.0	0.61	ug/m3			01/11/18 18:31	1

Client Sample ID: C-INFLUENT
Lab Sample ID: 140-10405-1
Date Collected: 01/09/18 11:56
Matrix: Air
Date Received: 01/10/18 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1.0	J	2.0	0.64	ug/m3			01/11/18 18:31	1
Vinyl chloride	0.54		0.51	0.37	ug/m3			01/11/18 18:31	1
Xylenes, Total	4.8		3.5	0.52	ug/m3			01/11/18 18:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*60 - 140*		*01/11/18 18:31*	*1*

Client Sample ID: C-MID GAC
Lab Sample ID: 140-10405-2

Date Collected: 01/09/18 12:05
Matrix: Air
Date Received: 01/10/18 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1.3**		0.40	0.12	ppb v/v			01/11/18 19:18	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			01/11/18 19:18	1
Chlorodifluoromethane	**2.7**		0.40	0.075	ppb v/v			01/11/18 19:18	1
Chloroform	ND		0.40	0.075	ppb v/v			01/11/18 19:18	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			01/11/18 19:18	1
Dichlorodifluoromethane	**0.55**		0.40	0.14	ppb v/v			01/11/18 19:18	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			01/11/18 19:18	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			01/11/18 19:18	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			01/11/18 19:18	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			01/11/18 19:18	1
Methylene Chloride	ND		1.0	0.65	ppb v/v			01/11/18 19:18	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			01/11/18 19:18	1
Naphthalene	ND		0.20	0.20	ppb v/v			01/11/18 19:18	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			01/11/18 19:18	1
Toluene	ND		0.60	0.60	ppb v/v			01/11/18 19:18	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			01/11/18 19:18	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			01/11/18 19:18	1
1,1,1-Trichloroethane	**0.13**	**J**	0.40	0.060	ppb v/v			01/11/18 19:18	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			01/11/18 19:18	1
Trichloroethene	ND		0.20	0.070	ppb v/v			01/11/18 19:18	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			01/11/18 19:18	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			01/11/18 19:18	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			01/11/18 19:18	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			01/11/18 19:18	1
Xylenes, Total	**0.68**	**J**	0.80	0.12	ppb v/v			01/11/18 19:18	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**4.2**		1.3	0.37	ug/m3			01/11/18 19:18	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			01/11/18 19:18	1
Chlorodifluoromethane	**9.6**		1.4	0.27	ug/m3			01/11/18 19:18	1
Chloroform	ND		2.0	0.37	ug/m3			01/11/18 19:18	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			01/11/18 19:18	1
Dichlorodifluoromethane	**2.7**		2.0	0.67	ug/m3			01/11/18 19:18	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			01/11/18 19:18	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			01/11/18 19:18	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			01/11/18 19:18	1
Ethylbenzene	ND		1.7	0.59	ug/m3			01/11/18 19:18	1
Methylene Chloride	ND		3.5	2.3	ug/m3			01/11/18 19:18	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			01/11/18 19:18	1
Naphthalene	ND		1.0	1.0	ug/m3			01/11/18 19:18	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			01/11/18 19:18	1
Toluene	ND		2.3	2.3	ug/m3			01/11/18 19:18	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			01/11/18 19:18	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			01/11/18 19:18	1
1,1,1-Trichloroethane	**0.71**	**J**	2.2	0.33	ug/m3			01/11/18 19:18	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			01/11/18 19:18	1
Trichloroethene	ND		1.1	0.38	ug/m3			01/11/18 19:18	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			01/11/18 19:18	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			01/11/18 19:18	1

Client Sample ID: C-MID GAC
Lab Sample ID: 140-10405-2
Date Collected: 01/09/18 12:05
Matrix: Air
Date Received: 01/10/18 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			01/11/18 19:18	1
Vinyl chloride	ND		0.51	0.37	ug/m3			01/11/18 19:18	1
Xylenes, Total	**3.0**	**J**	3.5	0.52	ug/m3			01/11/18 19:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*60 - 140*		*01/11/18 19:18*	*1*

Client Sample ID: C-EFFLUENT
Lab Sample ID: 140-10405-3

Date Collected: 01/09/18 12:11
Matrix: Air
Date Received: 01/10/18 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1.7**		0.40	0.12	ppb v/v			01/11/18 20:05	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			01/11/18 20:05	1
Chlorodifluoromethane	**2.8**		0.40	0.075	ppb v/v			01/11/18 20:05	1
Chloroform	ND		0.40	0.075	ppb v/v			01/11/18 20:05	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			01/11/18 20:05	1
Dichlorodifluoromethane	**0.54**		0.40	0.14	ppb v/v			01/11/18 20:05	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			01/11/18 20:05	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			01/11/18 20:05	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			01/11/18 20:05	1
Ethylbenzene	**0.18**	**J**	0.40	0.14	ppb v/v			01/11/18 20:05	1
Methylene Chloride	**0.66**	**J**	1.0	0.65	ppb v/v			01/11/18 20:05	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			01/11/18 20:05	1
Naphthalene	ND		0.20	0.20	ppb v/v			01/11/18 20:05	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			01/11/18 20:05	1
Toluene	**0.78**		0.60	0.60	ppb v/v			01/11/18 20:05	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			01/11/18 20:05	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			01/11/18 20:05	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			01/11/18 20:05	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			01/11/18 20:05	1
Trichloroethene	ND		0.20	0.070	ppb v/v			01/11/18 20:05	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			01/11/18 20:05	1
1,2,4-Trimethylbenzene	**0.70**		0.40	0.13	ppb v/v			01/11/18 20:05	1
1,3,5-Trimethylbenzene	**0.31**	**J**	0.40	0.13	ppb v/v			01/11/18 20:05	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			01/11/18 20:05	1
Xylenes, Total	**1.3**		0.80	0.12	ppb v/v			01/11/18 20:05	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**5.4**		1.3	0.37	ug/m3			01/11/18 20:05	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			01/11/18 20:05	1
Chlorodifluoromethane	**9.8**		1.4	0.27	ug/m3			01/11/18 20:05	1
Chloroform	ND		2.0	0.37	ug/m3			01/11/18 20:05	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			01/11/18 20:05	1
Dichlorodifluoromethane	**2.7**		2.0	0.67	ug/m3			01/11/18 20:05	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			01/11/18 20:05	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			01/11/18 20:05	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			01/11/18 20:05	1
Ethylbenzene	**0.76**	**J**	1.7	0.59	ug/m3			01/11/18 20:05	1
Methylene Chloride	**2.3**	**J**	3.5	2.3	ug/m3			01/11/18 20:05	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			01/11/18 20:05	1
Naphthalene	ND		1.0	1.0	ug/m3			01/11/18 20:05	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			01/11/18 20:05	1
Toluene	**2.9**		2.3	2.3	ug/m3			01/11/18 20:05	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			01/11/18 20:05	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			01/11/18 20:05	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			01/11/18 20:05	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			01/11/18 20:05	1
Trichloroethene	ND		1.1	0.38	ug/m3			01/11/18 20:05	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			01/11/18 20:05	1
1,2,4-Trimethylbenzene	**3.5**		2.0	0.61	ug/m3			01/11/18 20:05	1

Client Sample ID: C-EFFLUENT
Lab Sample ID: 140-10405-3
Date Collected: 01/09/18 12:11
Matrix: Air
Date Received: 01/10/18 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	**1.5**	**J**	2.0	0.64	ug/m3			01/11/18 20:05	1
Vinyl chloride	ND		0.51	0.37	ug/m3			01/11/18 20:05	1
Xylenes, Total	**5.6**		3.5	0.52	ug/m3			01/11/18 20:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*60 - 140*		*01/11/18 20:05*	*1*

Client Sample ID: A-INFLUENT

Lab Sample ID: 140-10405-4

Date Collected: 01/09/18 12:54
Matrix: Air
Date Received: 01/10/18 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**5.1**		0.40	0.12	ppb v/v			01/12/18 01:44	1
Carbon tetrachloride	**0.080**	**J**	0.40	0.075	ppb v/v			01/12/18 01:44	1
Chlorodifluoromethane	**0.49**		0.40	0.075	ppb v/v			01/12/18 01:44	1
Chloroform	**0.25**	**J**	0.40	0.075	ppb v/v			01/12/18 01:44	1
cis-1,2-Dichloroethene	**15**		0.40	0.12	ppb v/v			01/12/18 01:44	1
Dichlorodifluoromethane	**0.41**		0.40	0.14	ppb v/v			01/12/18 01:44	1
1,1-Dichloroethane	**2.3**		0.40	0.050	ppb v/v			01/12/18 01:44	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			01/12/18 01:44	1
1,1-Dichloroethene	**20**		0.40	0.070	ppb v/v			01/12/18 01:44	1
Ethylbenzene	**0.14**	**J**	0.40	0.14	ppb v/v			01/12/18 01:44	1
Methylene Chloride	ND		1.0	0.65	ppb v/v			01/12/18 01:44	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			01/12/18 01:44	1
Naphthalene	ND		0.20	0.20	ppb v/v			01/12/18 01:44	1
Tetrachloroethene	**0.080**	**J**	0.40	0.080	ppb v/v			01/12/18 01:44	1
Toluene	**0.67**		0.60	0.60	ppb v/v			01/12/18 01:44	1
trans-1,2-Dichloroethene	**0.29**	**J**	0.40	0.10	ppb v/v			01/12/18 01:44	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			01/12/18 01:44	1
1,1,1-Trichloroethane	**71**		0.40	0.060	ppb v/v			01/12/18 01:44	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			01/12/18 01:44	1
Trichloroethene	**150**	**E**	0.20	0.070	ppb v/v			01/12/18 01:44	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			01/12/18 01:44	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			01/12/18 01:44	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			01/12/18 01:44	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			01/12/18 01:44	1
Xylenes, Total	**0.95**		0.80	0.12	ppb v/v			01/12/18 01:44	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**16**		1.3	0.37	ug/m3			01/12/18 01:44	1
Carbon tetrachloride	**0.50**	**J**	2.5	0.47	ug/m3			01/12/18 01:44	1
Chlorodifluoromethane	**1.7**		1.4	0.27	ug/m3			01/12/18 01:44	1
Chloroform	**1.2**	**J**	2.0	0.37	ug/m3			01/12/18 01:44	1
cis-1,2-Dichloroethene	**58**		1.6	0.48	ug/m3			01/12/18 01:44	1
Dichlorodifluoromethane	**2.0**		2.0	0.67	ug/m3			01/12/18 01:44	1
1,1-Dichloroethane	**9.4**		1.6	0.20	ug/m3			01/12/18 01:44	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			01/12/18 01:44	1
1,1-Dichloroethene	**79**		1.6	0.28	ug/m3			01/12/18 01:44	1
Ethylbenzene	**0.59**	**J**	1.7	0.59	ug/m3			01/12/18 01:44	1
Methylene Chloride	ND		3.5	2.3	ug/m3			01/12/18 01:44	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			01/12/18 01:44	1
Naphthalene	ND		1.0	1.0	ug/m3			01/12/18 01:44	1
Tetrachloroethene	**0.55**	**J**	2.7	0.54	ug/m3			01/12/18 01:44	1
Toluene	**2.5**		2.3	2.3	ug/m3			01/12/18 01:44	1
trans-1,2-Dichloroethene	**1.1**	**J**	1.6	0.40	ug/m3			01/12/18 01:44	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			01/12/18 01:44	1
1,1,1-Trichloroethane	**390**		2.2	0.33	ug/m3			01/12/18 01:44	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			01/12/18 01:44	1
Trichloroethene	**800**	**E**	1.1	0.38	ug/m3			01/12/18 01:44	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			01/12/18 01:44	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			01/12/18 01:44	1

Client Sample ID: A-INFLUENT
Lab Sample ID: 140-10405-4

Date Collected: 01/09/18 12:54
Matrix: Air
Date Received: 01/10/18 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			01/12/18 01:44	1
Vinyl chloride	ND		0.51	0.37	ug/m3			01/12/18 01:44	1
Xylenes, Total	**4.1**		3.5	0.52	ug/m3			01/12/18 01:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*60 - 140*		*01/12/18 01:44*	*1*

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	**180**		1.0	0.35	ppb v/v			01/11/18 16:09	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	**940**		5.4	1.9	ug/m3			01/11/18 16:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*60 - 140*		*01/11/18 16:09*	*1*

Client Sample ID: A-MID GAC
Lab Sample ID: 140-10405-5

Date Collected: 01/09/18 12:38
Matrix: Air
Date Received: 01/10/18 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**16**		0.40	0.12	ppb v/v			01/11/18 16:56	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			01/11/18 16:56	1
Chlorodifluoromethane	**0.46**		0.40	0.075	ppb v/v			01/11/18 16:56	1
Chloroform	**0.39**	**J**	0.40	0.075	ppb v/v			01/11/18 16:56	1
cis-1,2-Dichloroethene	**16**		0.40	0.12	ppb v/v			01/11/18 16:56	1
Dichlorodifluoromethane	**0.41**		0.40	0.14	ppb v/v			01/11/18 16:56	1
1,1-Dichloroethane	**3.2**		0.40	0.050	ppb v/v			01/11/18 16:56	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			01/11/18 16:56	1
1,1-Dichloroethene	**21**		0.40	0.070	ppb v/v			01/11/18 16:56	1
Ethylbenzene	**0.15**	**J**	0.40	0.14	ppb v/v			01/11/18 16:56	1
Methylene Chloride	**0.65**	**J**	1.0	0.65	ppb v/v			01/11/18 16:56	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			01/11/18 16:56	1
Naphthalene	ND		0.20	0.20	ppb v/v			01/11/18 16:56	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			01/11/18 16:56	1
Toluene	ND		0.60	0.60	ppb v/v			01/11/18 16:56	1
trans-1,2-Dichloroethene	**0.31**	**J**	0.40	0.10	ppb v/v			01/11/18 16:56	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			01/11/18 16:56	1
1,1,1-Trichloroethane	**59**		0.40	0.060	ppb v/v			01/11/18 16:56	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			01/11/18 16:56	1
Trichloroethene	ND		0.20	0.070	ppb v/v			01/11/18 16:56	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			01/11/18 16:56	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			01/11/18 16:56	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			01/11/18 16:56	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			01/11/18 16:56	1
Xylenes, Total	**0.78**	**J**	0.80	0.12	ppb v/v			01/11/18 16:56	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**51**		1.3	0.37	ug/m3			01/11/18 16:56	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			01/11/18 16:56	1
Chlorodifluoromethane	**1.6**		1.4	0.27	ug/m3			01/11/18 16:56	1
Chloroform	**1.9**	**J**	2.0	0.37	ug/m3			01/11/18 16:56	1
cis-1,2-Dichloroethene	**61**		1.6	0.48	ug/m3			01/11/18 16:56	1
Dichlorodifluoromethane	**2.0**		2.0	0.67	ug/m3			01/11/18 16:56	1
1,1-Dichloroethane	**13**		1.6	0.20	ug/m3			01/11/18 16:56	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			01/11/18 16:56	1
1,1-Dichloroethene	**84**		1.6	0.28	ug/m3			01/11/18 16:56	1
Ethylbenzene	**0.64**	**J**	1.7	0.59	ug/m3			01/11/18 16:56	1
Methylene Chloride	**2.3**	**J**	3.5	2.3	ug/m3			01/11/18 16:56	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			01/11/18 16:56	1
Naphthalene	ND		1.0	1.0	ug/m3			01/11/18 16:56	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			01/11/18 16:56	1
Toluene	ND		2.3	2.3	ug/m3			01/11/18 16:56	1
trans-1,2-Dichloroethene	**1.2**	**J**	1.6	0.40	ug/m3			01/11/18 16:56	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			01/11/18 16:56	1
1,1,1-Trichloroethane	**320**		2.2	0.33	ug/m3			01/11/18 16:56	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			01/11/18 16:56	1
Trichloroethene	ND		1.1	0.38	ug/m3			01/11/18 16:56	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			01/11/18 16:56	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			01/11/18 16:56	1

Client Sample ID: A-MID GAC
Lab Sample ID: 140-10405-5

Date Collected: 01/09/18 12:38
Matrix: Air
Date Received: 01/10/18 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			01/11/18 16:56	1
Vinyl chloride	ND		0.51	0.37	ug/m3			01/11/18 16:56	1
Xylenes, Total	**3.4**	**J**	3.5	0.52	ug/m3			01/11/18 16:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*60 - 140*		*01/11/18 16:56*	*1*

Client Sample ID: A-EFFLUENT
Lab Sample ID: 140-10405-6

Date Collected: 01/09/18 12:47
Matrix: Air
Date Received: 01/10/18 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.66**		0.40	0.12	ppb v/v			01/11/18 17:44	1
Carbon tetrachloride	**0.16**	**J**	0.40	0.075	ppb v/v			01/11/18 17:44	1
Chlorodifluoromethane	**0.50**		0.40	0.075	ppb v/v			01/11/18 17:44	1
Chloroform	**0.40**		0.40	0.075	ppb v/v			01/11/18 17:44	1
cis-1,2-Dichloroethene	**6.3**		0.40	0.12	ppb v/v			01/11/18 17:44	1
Dichlorodifluoromethane	**0.49**		0.40	0.14	ppb v/v			01/11/18 17:44	1
1,1-Dichloroethane	**3.8**		0.40	0.050	ppb v/v			01/11/18 17:44	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			01/11/18 17:44	1
1,1-Dichloroethene	**20**		0.40	0.070	ppb v/v			01/11/18 17:44	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			01/11/18 17:44	1
Methylene Chloride	**0.88**	**J**	1.0	0.65	ppb v/v			01/11/18 17:44	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			01/11/18 17:44	1
Naphthalene	ND		0.20	0.20	ppb v/v			01/11/18 17:44	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			01/11/18 17:44	1
Toluene	ND		0.60	0.60	ppb v/v			01/11/18 17:44	1
trans-1,2-Dichloroethene	**0.14**	**J**	0.40	0.10	ppb v/v			01/11/18 17:44	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			01/11/18 17:44	1
1,1,1-Trichloroethane	**54**		0.40	0.060	ppb v/v			01/11/18 17:44	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			01/11/18 17:44	1
Trichloroethene	**1.4**		0.20	0.070	ppb v/v			01/11/18 17:44	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			01/11/18 17:44	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			01/11/18 17:44	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			01/11/18 17:44	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			01/11/18 17:44	1
Xylenes, Total	**0.55**	**J**	0.80	0.12	ppb v/v			01/11/18 17:44	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**2.1**		1.3	0.37	ug/m3			01/11/18 17:44	1
Carbon tetrachloride	**1.0**	**J**	2.5	0.47	ug/m3			01/11/18 17:44	1
Chlorodifluoromethane	**1.8**		1.4	0.27	ug/m3			01/11/18 17:44	1
Chloroform	**1.9**		2.0	0.37	ug/m3			01/11/18 17:44	1
cis-1,2-Dichloroethene	**25**		1.6	0.48	ug/m3			01/11/18 17:44	1
Dichlorodifluoromethane	**2.4**		2.0	0.67	ug/m3			01/11/18 17:44	1
1,1-Dichloroethane	**15**		1.6	0.20	ug/m3			01/11/18 17:44	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			01/11/18 17:44	1
1,1-Dichloroethene	**79**		1.6	0.28	ug/m3			01/11/18 17:44	1
Ethylbenzene	ND		1.7	0.59	ug/m3			01/11/18 17:44	1
Methylene Chloride	**3.0**	**J**	3.5	2.3	ug/m3			01/11/18 17:44	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			01/11/18 17:44	1
Naphthalene	ND		1.0	1.0	ug/m3			01/11/18 17:44	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			01/11/18 17:44	1
Toluene	ND		2.3	2.3	ug/m3			01/11/18 17:44	1
trans-1,2-Dichloroethene	**0.54**	**J**	1.6	0.40	ug/m3			01/11/18 17:44	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			01/11/18 17:44	1
1,1,1-Trichloroethane	**300**		2.2	0.33	ug/m3			01/11/18 17:44	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			01/11/18 17:44	1
Trichloroethene	**7.6**		1.1	0.38	ug/m3			01/11/18 17:44	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			01/11/18 17:44	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			01/11/18 17:44	1

Client Sample ID: A-EFFLUENT
Lab Sample ID: 140-10405-6

Date Collected: 01/09/18 12:47
Matrix: Air
Date Received: 01/10/18 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			01/11/18 17:44	1
Vinyl chloride	ND		0.51	0.37	ug/m3			01/11/18 17:44	1
Xylenes, Total	**2.4**	**J**	3.5	0.52	ug/m3			01/11/18 17:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*60 - 140*		*01/11/18 17:44*	*1*

Default Detection Limits

Client: Tetra Tech GEO
Project/Site: LMC Middle River - Bldgs. A and C

TestAmerica Job ID: 140-10405-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.20	0.13	ppb v/v	TO 15 LL
Methylene Chloride	0.69	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech GEO
Project/Site: LMC Middle River - Bldgs. A and C

TestAmerica Job ID: 140-10405-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		BFB
Lab Sample ID	Client Sample ID	(60-140)
140-10405-1	C-INFLUENT	112
140-10405-2	C-MID GAC	110
140-10405-3	C-EFFLUENT	111
140-10405-4	A-INFLUENT	110
140-10405-4 - DL	A-INFLUENT	105
140-10405-5	A-MID GAC	106
140-10405-6	A-EFFLUENT	111
LCS 140-17352/1002	Lab Control Sample	108
MB 140-17352/4	Method Blank	109

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-17352/4
Matrix: Air
Analysis Batch: 17352

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			01/11/18 12:37	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			01/11/18 12:37	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			01/11/18 12:37	1
Chloroform	ND		0.080	0.015	ppb v/v			01/11/18 12:37	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			01/11/18 12:37	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			01/11/18 12:37	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			01/11/18 12:37	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			01/11/18 12:37	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			01/11/18 12:37	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			01/11/18 12:37	1
Methylene Chloride	ND		0.20	0.13	ppb v/v			01/11/18 12:37	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			01/11/18 12:37	1
Naphthalene	ND		0.040	0.040	ppb v/v			01/11/18 12:37	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			01/11/18 12:37	1
Toluene	ND		0.12	0.12	ppb v/v			01/11/18 12:37	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			01/11/18 12:37	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			01/11/18 12:37	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			01/11/18 12:37	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			01/11/18 12:37	1
Trichloroethene	ND		0.040	0.014	ppb v/v			01/11/18 12:37	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			01/11/18 12:37	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			01/11/18 12:37	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			01/11/18 12:37	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			01/11/18 12:37	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			01/11/18 12:37	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.26	0.073	ug/m3			01/11/18 12:37	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			01/11/18 12:37	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			01/11/18 12:37	1
Chloroform	ND		0.39	0.073	ug/m3			01/11/18 12:37	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			01/11/18 12:37	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			01/11/18 12:37	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			01/11/18 12:37	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			01/11/18 12:37	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			01/11/18 12:37	1
Ethylbenzene	ND		0.35	0.12	ug/m3			01/11/18 12:37	1
Methylene Chloride	ND		0.69	0.45	ug/m3			01/11/18 12:37	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			01/11/18 12:37	1
Naphthalene	ND		0.21	0.21	ug/m3			01/11/18 12:37	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			01/11/18 12:37	1
Toluene	ND		0.45	0.45	ug/m3			01/11/18 12:37	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			01/11/18 12:37	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			01/11/18 12:37	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			01/11/18 12:37	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			01/11/18 12:37	1
Trichloroethene	ND		0.21	0.075	ug/m3			01/11/18 12:37	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			01/11/18 12:37	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-17352/4
Matrix: Air
Analysis Batch: 17352

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			01/11/18 12:37	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			01/11/18 12:37	1
Vinyl chloride	ND		0.10	0.074	ug/m3			01/11/18 12:37	1
Xylenes, Total	ND		0.69	0.10	ug/m3			01/11/18 12:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*60 - 140*		*01/11/18 12:37*	*1*

Lab Sample ID: LCS 140-17352/1002
Matrix: Air
Analysis Batch: 17352

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2.00	1.71		ppb v/v		86	70 - 130
Carbon tetrachloride	2.00	2.38		ppb v/v		119	70 - 130
Chlorodifluoromethane	2.00	2.28		ppb v/v		114	60 - 140
Chloroform	2.00	1.88		ppb v/v		94	70 - 130
cis-1,2-Dichloroethene	2.00	1.81		ppb v/v		91	70 - 130
Dichlorodifluoromethane	2.00	2.51		ppb v/v		126	60 - 140
1,1-Dichloroethane	2.00	1.62		ppb v/v		81	70 - 130
1,2-Dichloroethane	2.00	2.02		ppb v/v		101	70 - 130
1,1-Dichloroethene	2.00	1.91		ppb v/v		95	70 - 130
Ethylbenzene	2.00	1.97		ppb v/v		98	70 - 130
Methylene Chloride	2.00	1.64		ppb v/v		82	70 - 130
Methyl tert-butyl ether	2.00	1.84		ppb v/v		92	60 - 140
Naphthalene	2.00	2.50		ppb v/v		125	60 - 140
Tetrachloroethene	2.00	2.18		ppb v/v		109	70 - 130
Toluene	2.00	1.92		ppb v/v		96	70 - 130
trans-1,2-Dichloroethene	2.00	1.83		ppb v/v		92	70 - 130
1,2,4-Trichlorobenzene	2.00	2.73		ppb v/v		136	60 - 140
1,1,1-Trichloroethane	2.00	2.08		ppb v/v		104	70 - 130
1,1,2-Trichloroethane	2.00	1.82		ppb v/v		91	70 - 130
Trichloroethene	2.00	2.11		ppb v/v		106	70 - 130
1,2,3-Trimethylbenzene	2.00	2.50		ppb v/v		125	70 - 130
1,2,4-Trimethylbenzene	2.00	2.40		ppb v/v		120	70 - 130
1,3,5-Trimethylbenzene	2.00	2.37		ppb v/v		118	70 - 130
Vinyl chloride	2.00	1.80		ppb v/v		90	70 - 130
Xylenes, Total	6.00	6.32		ppb v/v		105	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	5.47		ug/m3		86	70 - 130
Carbon tetrachloride	13	15.0		ug/m3		119	70 - 130
Chlorodifluoromethane	7.1	8.06		ug/m3		114	60 - 140
Chloroform	9.8	9.19		ug/m3		94	70 - 130
cis-1,2-Dichloroethene	7.9	7.19		ug/m3		91	70 - 130
Dichlorodifluoromethane	9.9	12.4		ug/m3		126	60 - 140
1,1-Dichloroethane	8.1	6.56		ug/m3		81	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-17352/1002
Matrix: Air
Analysis Batch: 17352

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2-Dichloroethane			8.1	8.16		ug/m3		101	70 - 130		
1,1-Dichloroethene			7.9	7.55		ug/m3		95	70 - 130		
Ethylbenzene			8.7	8.54		ug/m3		98	70 - 130		
Methylene Chloride			6.9	5.68		ug/m3		82	70 - 130		
Methyl tert-butyl ether			7.2	6.65		ug/m3		92	60 - 140		
Naphthalene			10	13.1		ug/m3		125	60 - 140		
Tetrachloroethene			14	14.8		ug/m3		109	70 - 130		
Toluene			7.5	7.25		ug/m3		96	70 - 130		
trans-1,2-Dichloroethene			7.9	7.27		ug/m3		92	70 - 130		
1,2,4-Trichlorobenzene			15	20.3		ug/m3		136	60 - 140		
1,1,1-Trichloroethane			11	11.3		ug/m3		104	70 - 130		
1,1,2-Trichloroethane			11	9.93		ug/m3		91	70 - 130		
Trichloroethene			11	11.4		ug/m3		106	70 - 130		
1,2,3-Trimethylbenzene			9.8	12.3		ug/m3		125	70 - 130		
1,2,4-Trimethylbenzene			9.8	11.8		ug/m3		120	70 - 130		
1,3,5-Trimethylbenzene			9.8	11.6		ug/m3		118	70 - 130		
Vinyl chloride			5.1	4.61		ug/m3		90	70 - 130		
Xylenes, Total			26	27.4		ug/m3		105	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*60 - 140*

Air - GC/MS VOA

Analysis Batch: 17352

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-10405-1	C-INFLUENT	Total/NA	Air	TO 15 LL	
140-10405-2	C-MID GAC	Total/NA	Air	TO 15 LL	
140-10405-3	C-EFFLUENT	Total/NA	Air	TO 15 LL	
140-10405-4 - DL	A-INFLUENT	Total/NA	Air	TO 15 LL	
140-10405-4	A-INFLUENT	Total/NA	Air	TO 15 LL	
140-10405-5	A-MID GAC	Total/NA	Air	TO 15 LL	
140-10405-6	A-EFFLUENT	Total/NA	Air	TO 15 LL	
MB 140-17352/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-17352/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Client Sample ID: C-INFLUENT
Date Collected: 01/09/18 11:56
Date Received: 01/10/18 09:30

Lab Sample ID: 140-10405-1
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	17352	01/11/18 18:31	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: C-MID GAC
Date Collected: 01/09/18 12:05
Date Received: 01/10/18 09:30

Lab Sample ID: 140-10405-2
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	17352	01/11/18 19:18	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: C-EFFLUENT
Date Collected: 01/09/18 12:11
Date Received: 01/10/18 09:30

Lab Sample ID: 140-10405-3
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	17352	01/11/18 20:05	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: A-INFLUENT
Date Collected: 01/09/18 12:54
Date Received: 01/10/18 09:30

Lab Sample ID: 140-10405-4
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL	DL	1	20 mL	500 mL	17352	01/11/18 16:09	HMT	TAL KNX
	Instrument ID: MR									
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	17352	01/12/18 01:44	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: A-MID GAC
Date Collected: 01/09/18 12:38
Date Received: 01/10/18 09:30

Lab Sample ID: 140-10405-5
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	17352	01/11/18 16:56	HMT	TAL KNX
	Instrument ID: MR									

Lab Chronicle

Client: Tetra Tech GEO
Project/Site: LMC Middle River - Bldgs. A and C

TestAmerica Job ID: 140-10405-1

Client Sample ID: A-EFFLUENT

Lab Sample ID: 140-10405-6

Date Collected: 01/09/18 12:47

Matrix: Air

Date Received: 01/10/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	17352	01/11/18 17:44	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: Method Blank

Lab Sample ID: MB 140-17352/4

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	17352	01/11/18 12:37	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-17352/1002

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	17352	01/11/18 10:53	HMT	TAL KNX
	Instrument ID: MR									

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech GEO
Project/Site: LMC Middle River - Bldgs. A and C

TestAmerica Job ID: 140-10405-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech GEO
Project/Site: LMC Middle River - Bldgs. A and C

TestAmerica Job ID: 140-10405-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-10405-1	C-INFLUENT	Air	01/09/18 11:56	01/10/18 09:30
140-10405-2	C-MID GAC	Air	01/09/18 12:05	01/10/18 09:30
140-10405-3	C-EFFLUENT	Air	01/09/18 12:11	01/10/18 09:30
140-10405-4	A-INFLUENT	Air	01/09/18 12:54	01/10/18 09:30
140-10405-5	A-MID GAC	Air	01/09/18 12:38	01/10/18 09:30
140-10405-6	A-EFFLUENT	Air	01/09/18 12:47	01/10/18 09:30

Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
C-INFLUENT	140-10405-1	112
C-MID GAC	140-10405-2	110
C-EFFLUENT	140-10405-3	111
A-INFLUENT	140-10405-4	110
A-INFLUENT DL	140-10405-4 DL	105
A-MID GAC	140-10405-5	106
A-EFFLUENT	140-10405-6	111
	MB 140-17352/4	109
	LCS 140-17352/1002	108

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1

SDG No.:

Matrix: Air Level: Low Lab File ID: RCCVA11-LCS.d

Lab ID: LCS 140-17352/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.71	86	70-130	
Carbon tetrachloride	2.00	2.38	119	70-130	
Chlorodifluoromethane	2.00	2.28	114	60-140	
Chloroform	2.00	1.88	94	70-130	
cis-1,2-Dichloroethene	2.00	1.81	91	70-130	
Dichlorodifluoromethane	2.00	2.51	126	60-140	
1,1-Dichloroethane	2.00	1.62	81	70-130	
1,2-Dichloroethane	2.00	2.02	101	70-130	
1,1-Dichloroethene	2.00	1.91	95	70-130	
Ethylbenzene	2.00	1.97	98	70-130	
Methylene Chloride	2.00	1.64	82	70-130	
Methyl tert-butyl ether	2.00	1.84	92	60-140	
Naphthalene	2.00	2.50	125	60-140	
Tetrachloroethene	2.00	2.18	109	70-130	
Toluene	2.00	1.92	96	70-130	
trans-1,2-Dichloroethene	2.00	1.83	92	70-130	
1,2,4-Trichlorobenzene	2.00	2.73	136	60-140	
1,1,1-Trichloroethane	2.00	2.08	104	70-130	
1,1,2-Trichloroethane	2.00	1.82	91	70-130	
Trichloroethene	2.00	2.11	106	70-130	
1,2,3-Trimethylbenzene	2.00	2.50	125	70-130	
1,2,4-Trimethylbenzene	2.00	2.40	120	70-130	
1,3,5-Trimethylbenzene	2.00	2.37	118	70-130	
Vinyl chloride	2.00	1.80	90	70-130	
Xylenes, Total	6.00	6.32	105	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1

SDG No.:

Lab File ID: R500BA11.D Lab Sample ID: MB 140-17352/4

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MR Date Analyzed: 01/11/2018 12:37

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-17352/1002	RCCVA11-LCS.d	01/11/2018 10:53
A-INFLUENT DL	140-10405-4 DL	RA11P102.D	01/11/2018 16:09
A-MID GAC	140-10405-5	RA11P103.D	01/11/2018 16:56
A-EFFLUENT	140-10405-6	RA11P104.D	01/11/2018 17:44
C-INFLUENT	140-10405-1	RA11P105.D	01/11/2018 18:31
C-MID GAC	140-10405-2	RA11P106.D	01/11/2018 19:18
C-EFFLUENT	140-10405-3	RA11P107.D	01/11/2018 20:05
A-INFLUENT	140-10405-4	RA11P102R.D	01/12/2018 01:44

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1

SDG No.:

Lab File ID: RBFBJ25.D BFB Injection Date: 10/25/2017

Instrument ID: MR BFB Injection Time: 11:43

Analysis Batch No.: 15542

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.6	
75	30.0 - 60.0 % of mass 95	51.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.5	(0.6) 1
174	50.0 - 120.00 % of mass 95	85.8	
175	5.0 - 9.0 % of mass 174	6.0	(7.1) 1
176	95.0 - 101.0 % of mass 174	83.1	(96.9) 1
177	5.0 - 9.0 % of mass 176	5.5	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-15542/3	RJ25IC01.D	10/25/2017	13:00
	IC 140-15542/4	RJ25IC02.D	10/25/2017	13:46
	IC 140-15542/5	RJ25IC03.D	10/25/2017	14:33
	IC 140-15542/6	RJ25IC04.D	10/25/2017	15:20
	IC 140-15542/7	RJ25IC05.D	10/25/2017	16:08
	IC 140-15542/8	RJ25IC06.D	10/25/2017	16:56
	ICIS 140-15542/9	RJ25IC07.D	10/25/2017	17:43
	IC 140-15542/10	RJ25IC08.D	10/25/2017	18:31
	IC 140-15542/11	RJ25IC09.D	10/25/2017	19:18
	IC 140-15542/12	RJ25IC10.D	10/25/2017	20:06
	ICV 140-15542/14	RJ25ICV.D	10/25/2017	21:40

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1

SDG No.:

Lab File ID: RBFBA11.D BFB Injection Date: 01/11/2018

Instrument ID: MR BFB Injection Time: 10:20

Analysis Batch No.: 17352

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.8	
75	30.0 - 60.0 % of mass 95	53.3	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.7	(0.8) 1
174	50.0 - 120.00 % of mass 95	81.2	
175	5.0 - 9.0 % of mass 174	5.9	(7.2) 1
176	95.0 - 101.0 % of mass 174	78.8	(97.0) 1
177	5.0 - 9.0 % of mass 176	5.1	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-17352/2	RCCVA11.D	01/11/2018	10:53
	LCS 140-17352/1002	RCCVA11-LCS.d	01/11/2018	10:53
	MB 140-17352/4	R500BA11.D	01/11/2018	12:37
A-INFLUENT DL	140-10405-4 DL	RA11P102.D	01/11/2018	16:09
A-MID GAC	140-10405-5	RA11P103.D	01/11/2018	16:56
A-EFFLUENT	140-10405-6	RA11P104.D	01/11/2018	17:44
C-INFLUENT	140-10405-1	RA11P105.D	01/11/2018	18:31
C-MID GAC	140-10405-2	RA11P106.D	01/11/2018	19:18
C-EFFLUENT	140-10405-3	RA11P107.D	01/11/2018	20:05
A-INFLUENT	140-10405-4	RA11P102R.D	01/12/2018	01:44

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1

SDG No.:

Sample No.: ICIS 140-15542/9 Date Analyzed: 10/25/2017 17:43

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RJ25IC07.D Heated Purge: (Y/N) N

Calibration ID: 1314

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		418613	7.79	2428422	9.92	2105490	14.90
UPPER LIMIT		586058	8.12	3399791	10.25	2947686	15.23
LOWER LIMIT		251168	7.46	1457053	9.59	1263294	14.57
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-15542/14		425799	7.79	2437587	9.92	2075967	14.91

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1

SDG No.:

Sample No.: CCVIS 140-17352/2 Date Analyzed: 01/11/2018 10:53

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RCCVA11.D Heated Purge: (Y/N) N

Calibration ID: 1314

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		264991	7.73	1472710	9.87	1255501	14.87
UPPER LIMIT		370987	8.06	2061794	10.20	1757701	15.20
LOWER LIMIT		158995	7.40	883626	9.54	753301	14.54
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-17352/1002		264991	7.73	1472710	9.87	1255501	14.87
MB 140-17352/4		263079	7.72	1491090	9.86	1253345	14.86
140-10405-4 DL	A-INFLUENT DL	259260	7.72	1450833	9.87	1233172	14.86
140-10405-5	A-MID GAC	270945	7.72	1519354	9.87	1283785	14.86
140-10405-6	A-EFFLUENT	270629	7.73	1505498	9.87	1277624	14.86
140-10405-1	C-INFLUENT	275005	7.74	1537675	9.88	1298987	14.87
140-10405-2	C-MID GAC	266589	7.74	1502645	9.87	1282364	14.86
140-10405-3	C-EFFLUENT	274940	7.75	1522511	9.88	1288515	14.87
140-10405-4	A-INFLUENT	277521	7.72	1537836	9.87	1241722	14.87

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10405-1

SDG No.:

Client Sample ID: C-INFLUENT | Lab Sample ID: 140-10405-1

Matrix: Air | Lab File ID: RA11P105.D

Analysis Method: TO 15 LL | Date Collected: 01/09/2018 11:56

Sample wt/vol: 100(mL) | Date Analyzed: 01/11/2018 18:31

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17352 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.0		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.096	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	3.1		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.68		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.44		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.17	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.38	J	0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	6.2		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.52		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.21	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	0.21		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	112		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1

SDG No.:

Client Sample ID: C-INFLUENT Lab Sample ID: 140-10405-1

Matrix: Air Lab File ID: RA11P105.D

Analysis Method: TO 15 LL Date Collected: 01/09/2018 11:56

Sample wt/vol: 100(mL) Date Analyzed: 01/11/2018 18:31

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 17352 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	6.4		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.60	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	11		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	2.7		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.74	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	2.5	J	2.7	0.54
108-88-3	Toluene	92.14	4.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	33		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	2.6		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.0	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	0.54		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.8		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	112		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P105.D				
Lims ID:	140-10405-A-1				
Client ID:	C-INFLUENT				
Sample Type:	Client				
Inject. Date:	11-Jan-2018 18:31:30	ALS Bottle#:	5	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007100-011				
Misc. Info.:	140-10405-a-1				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	12-Jan-2018 10:15:00	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				
First Level Reviewer: tajh		Date:	12-Jan-2018 10:11:00		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.740	7.779	-0.039	70	275005	4.00	
* 2 1,4-Difluorobenzene	114	9.876	9.918	-0.042	94	1537675	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.869	14.903	-0.034	87	1298987	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.578	16.610	-0.032	93	1063737	4.47	
6 Chlorodifluoromethane	67	3.497	3.505	-0.008	95	21253	0.6153	
8 Dichlorodifluoromethane	85	3.545	3.554	-0.009	98	23787	0.0882	
11 Vinyl chloride	62	3.815	3.827	-0.012	32	3290	0.0421	
41 cis-1,2-Dichloroethene	96	7.460	7.492	-0.032	90	15689	0.1361	
48 Benzene	78	9.304	9.341	-0.037	96	123332	0.4000	
51 Carbon tetrachloride	117	9.342	9.378	-0.036	75	5062	0.0192	
56 Trichloroethene	130	10.625	10.667	-0.042	99	185108	1.25	
65 Toluene	91	12.809	12.845	-0.036	93	80472	0.2213	
71 Tetrachloroethene	129	14.012	14.048	-0.036	97	10713	0.0752	
74 Ethylbenzene	91	15.247	15.278	-0.031	98	16221	0.0341	
75 m-Xylene & p-Xylene	91	15.414	15.452	-0.038	99	50904	0.1394	
79 o-Xylene	91	15.953	15.986	-0.033	97	32110	0.0823	
86 1,3,5-Trimethylbenzene	120	17.409	17.436	-0.027	92	9697	0.0424	
90 1,2,4-Trimethylbenzene	105	17.894	17.921	-0.027	98	49844	0.1044	
S 114 Xylenes, Total	100				0		0.2217	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

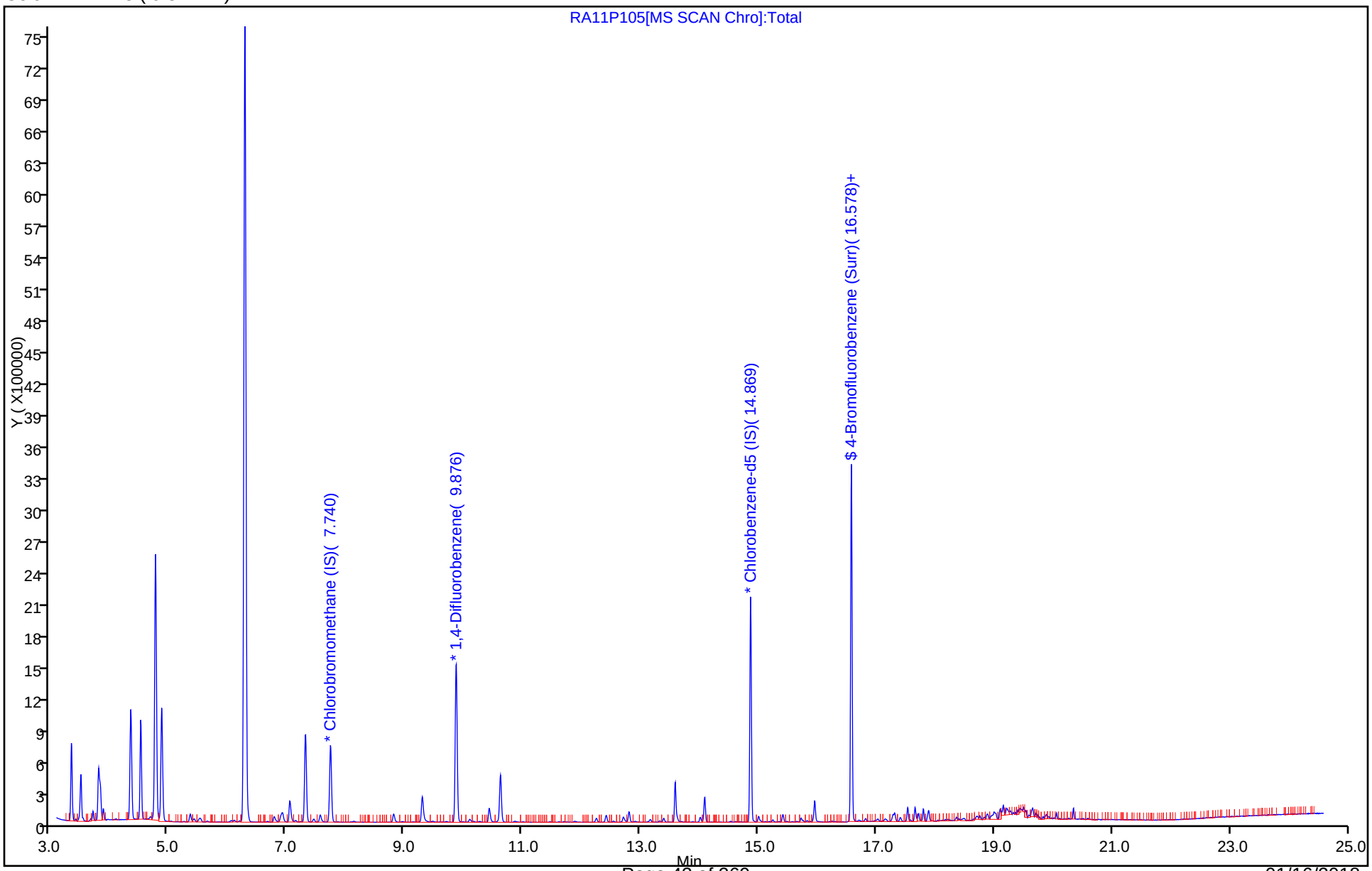
Report Date: 12-Jan-2018 10:15:39 Chrom Revision: 2.2 10-Jan-2018 22:54:36

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P105.D

Injection Date:	11-Jan-2018 18:31:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10405-A-1	Lab Sample ID:	140-10405-1	Worklist Smp#:	11
Client ID:	C-INFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

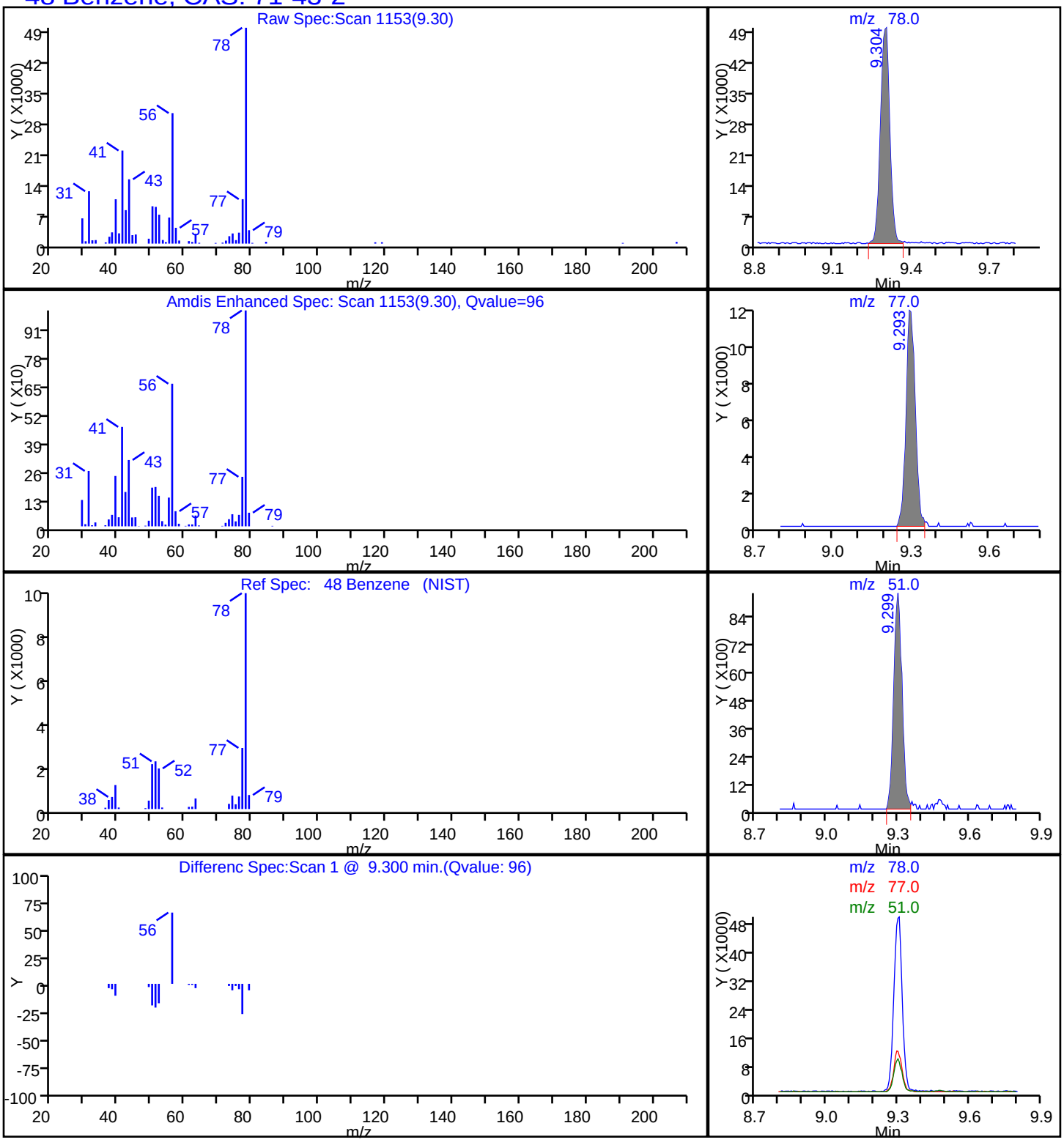
Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P105.D				
Lims ID:	140-10405-A-1				
Client ID:	C-INFLUENT				
Sample Type:	Client				
Inject. Date:	11-Jan-2018 18:31:30	ALS Bottle#:	5	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007100-011				
Misc. Info.:	140-10405-a-1				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	12-Jan-2018 10:15:00	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				
First Level Reviewer: tajh		Date:	12-Jan-2018 10:11:00		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.47	111.72

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P105.D		
Injection Date:	11-Jan-2018 18:31:30	Instrument ID:	MR
Lims ID:	140-10405-A-1	Lab Sample ID:	140-10405-1
Client ID:	C-INFLUENT		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

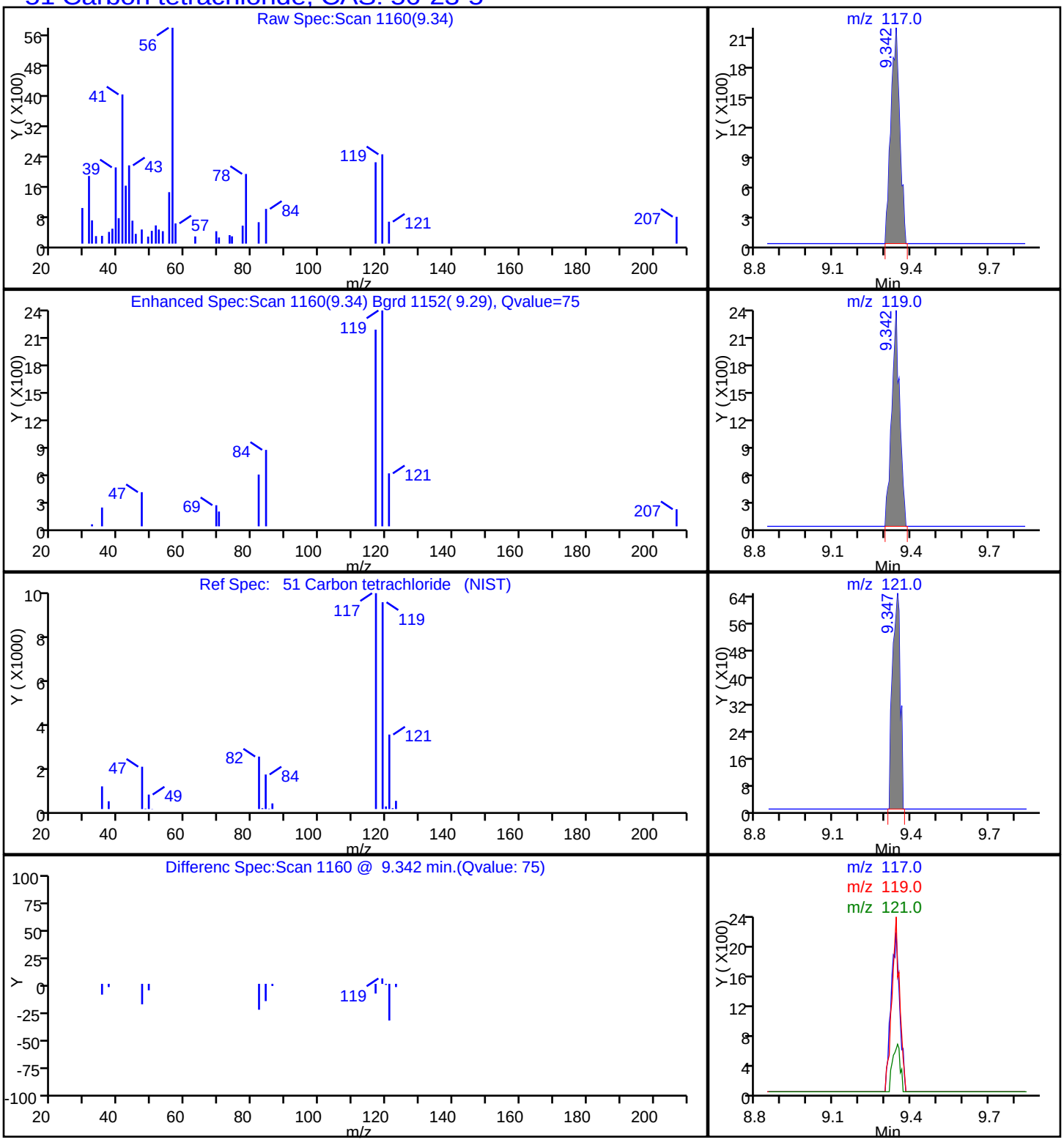
48 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P105.D		
Injection Date:	11-Jan-2018 18:31:30	Instrument ID:	MR
Lims ID:	140-10405-A-1	Lab Sample ID:	140-10405-1
Client ID:	C-INFLUENT		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

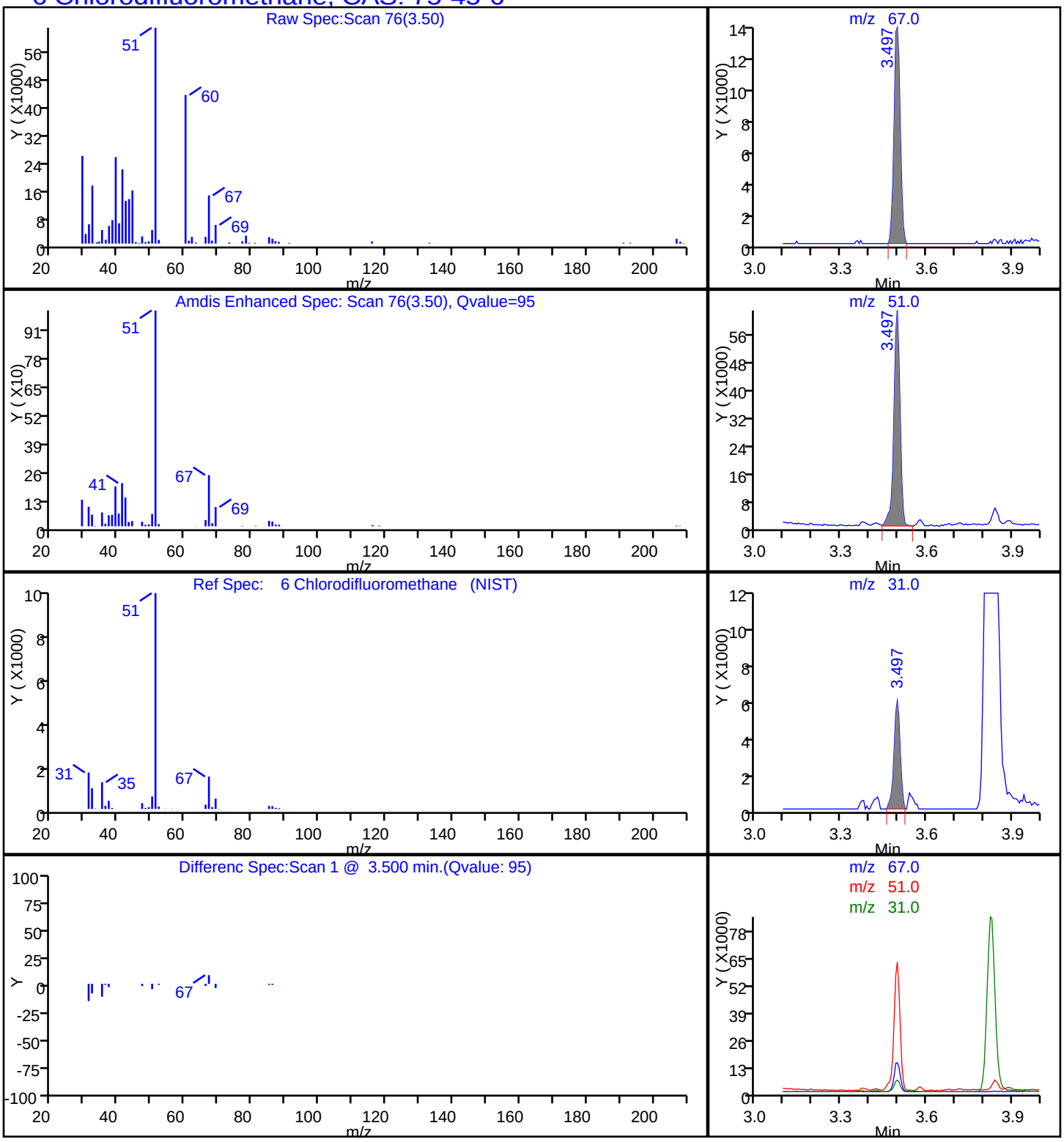
51 Carbon tetrachloride, CAS: 56-23-5



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P105.D		
Injection Date:	11-Jan-2018 18:31:30	Instrument ID:	MR
Lims ID:	140-10405-A-1	Lab Sample ID:	140-10405-1
Client ID:	C-INFLUENT		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



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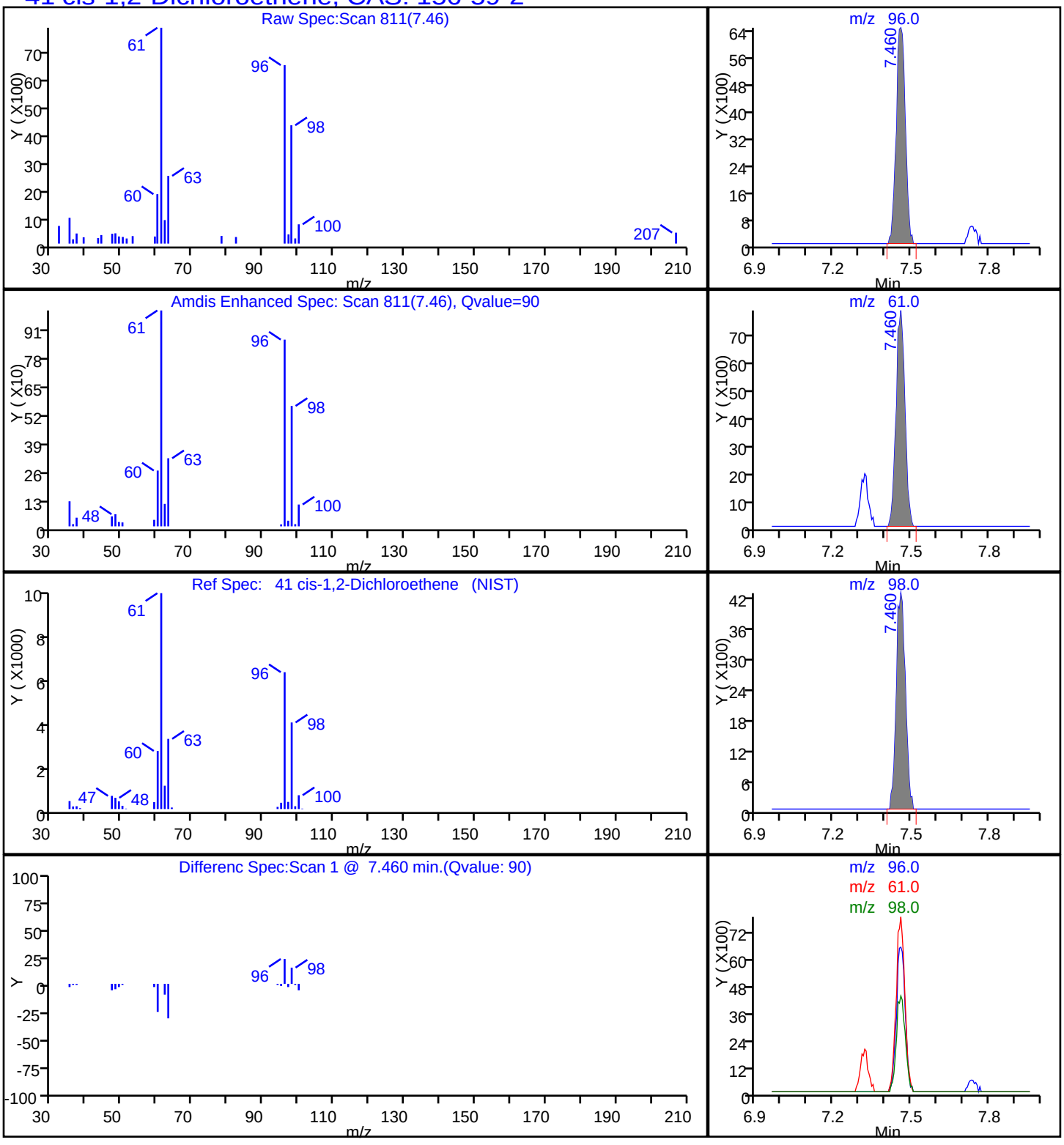
Injection Date: 11-Jan-2018 18:31:30 Instrument ID: MR
Lims ID: 140-10405-A-1 Lab Sample ID: 140-10405-1
Client ID: C-INFLUENT
Operator ID: ALS Bottle#: 5 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2

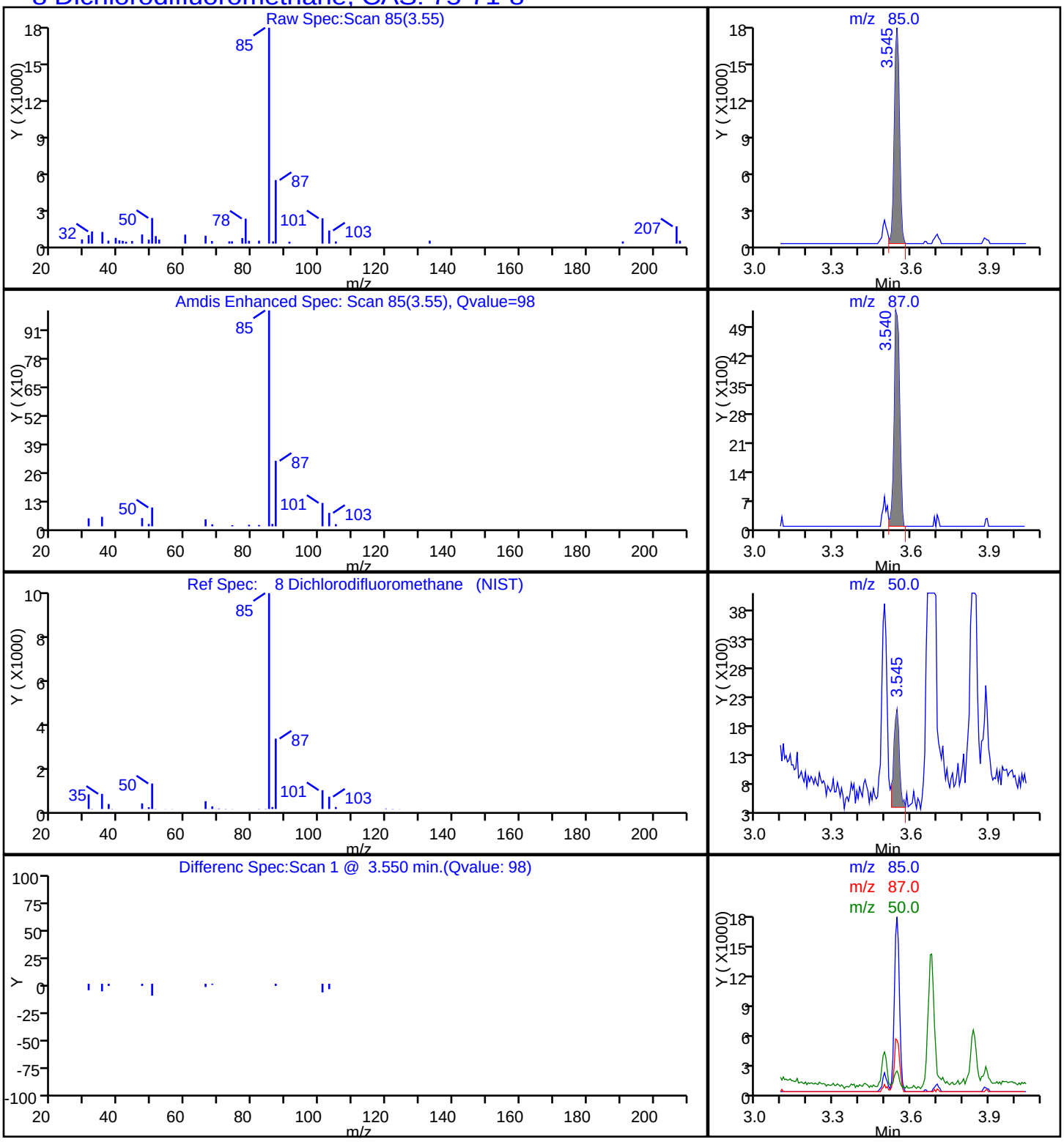


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P105.D

Injection Date:	11-Jan-2018 18:31:30	Instrument ID:	MR		
Lims ID:	140-10405-A-1	Lab Sample ID:	140-10405-1		
Client ID:	C-INFLUENT				
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

8 Dichlorodifluoromethane, CAS: 75-71-8



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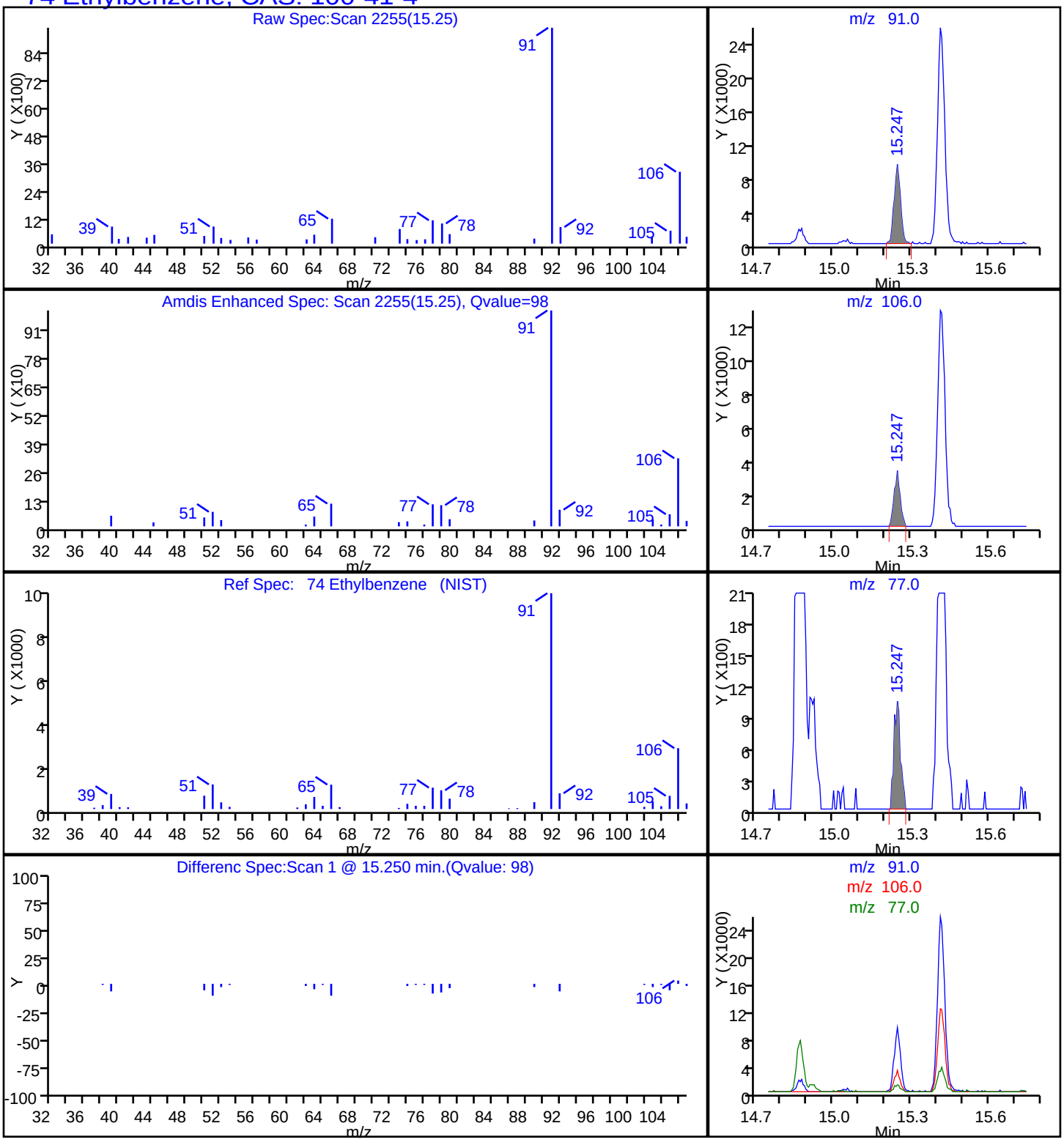
Injection Date:	11-Jan-2018 18:31:30	Instrument ID:	MR
Lims ID:	140-10405-A-1	Lab Sample ID:	140-10405-1
Client ID:	C-INFLUENT		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

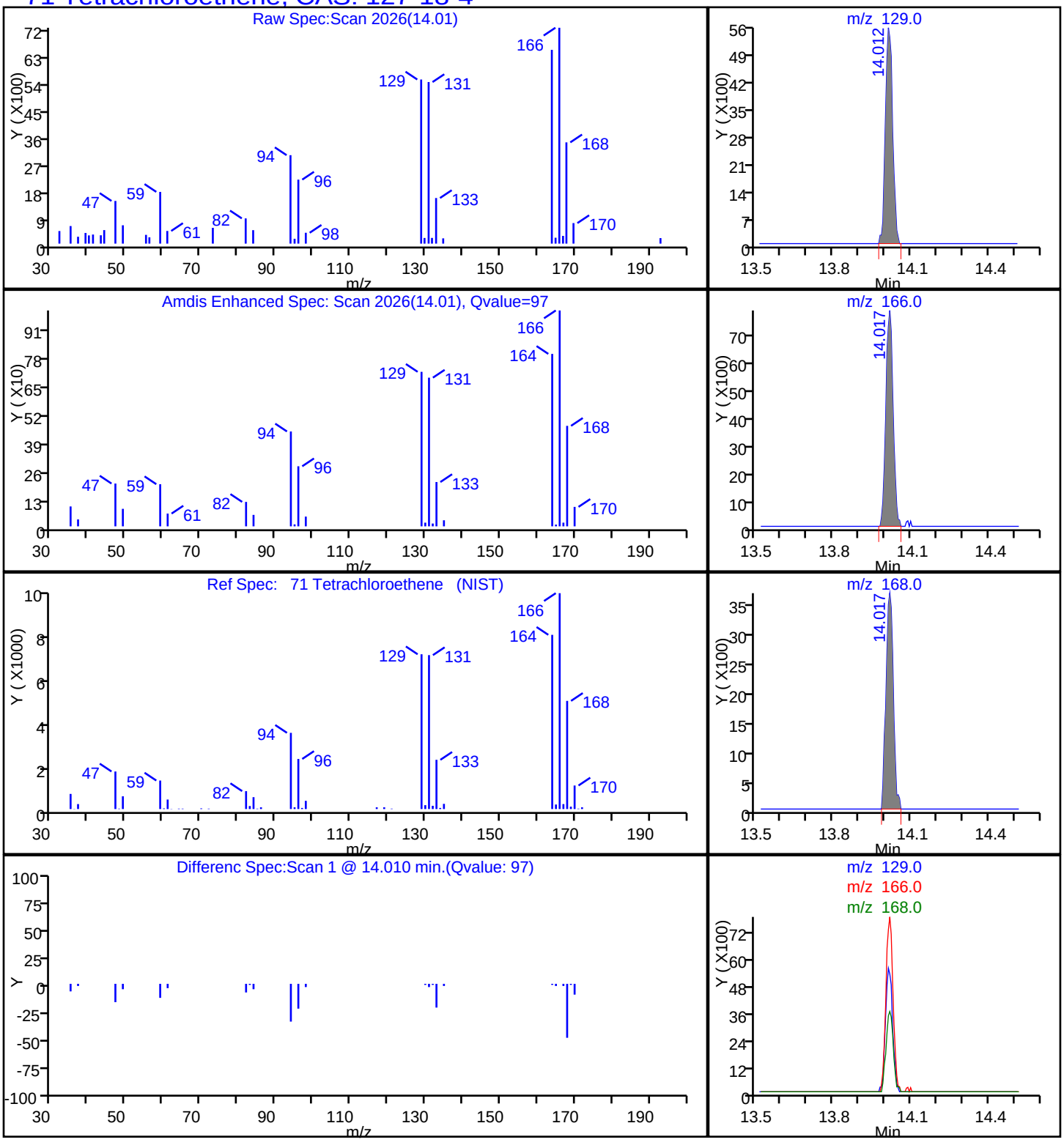
74 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P105.D		
Injection Date:	11-Jan-2018 18:31:30	Instrument ID:	MR
Lims ID:	140-10405-A-1	Lab Sample ID:	140-10405-1
Client ID:	C-INFLUENT		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

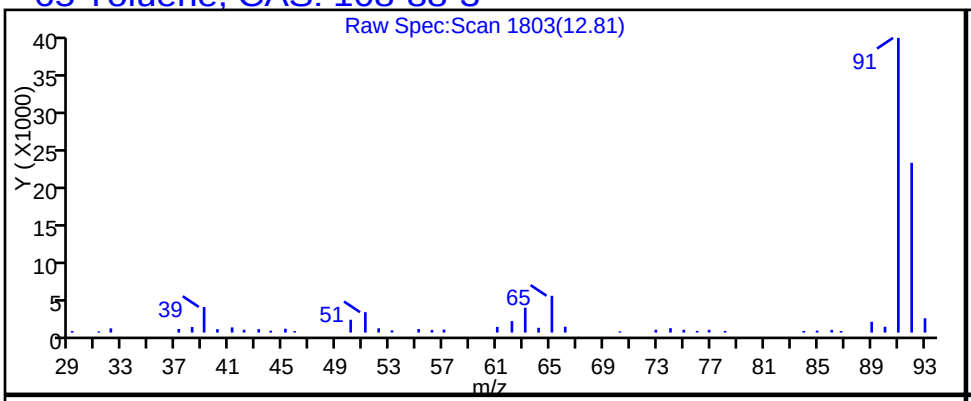
71 Tetrachloroethene, CAS: 127-18-4

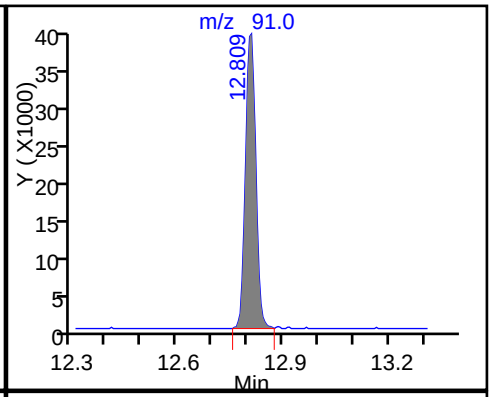


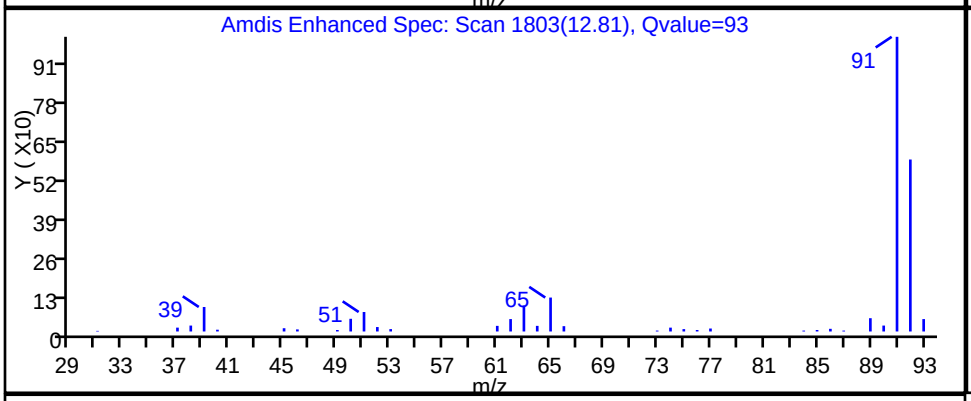
TestAmerica Knoxville

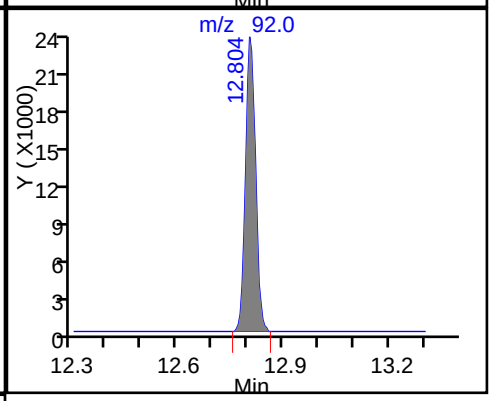
Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P105.D		
Injection Date:	11-Jan-2018 18:31:30	Instrument ID:	MR
Lims ID:	140-10405-A-1	Lab Sample ID:	140-10405-1
Client ID:	C-INFLUENT		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

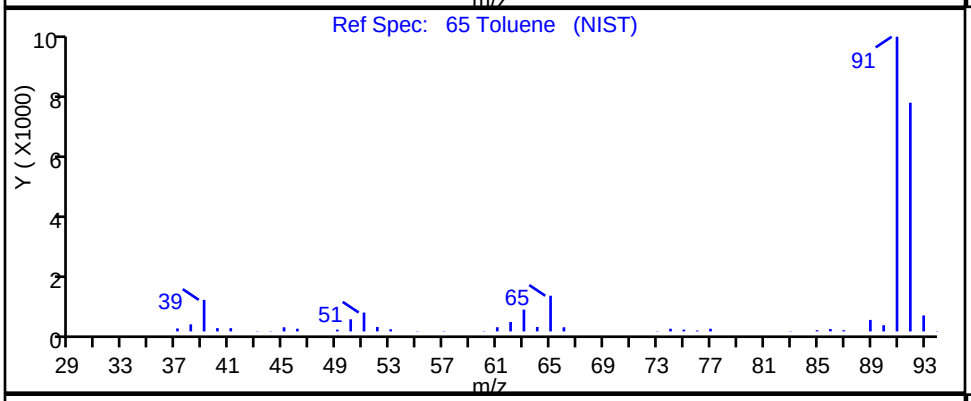
65 Toluene, CAS: 108-88-3

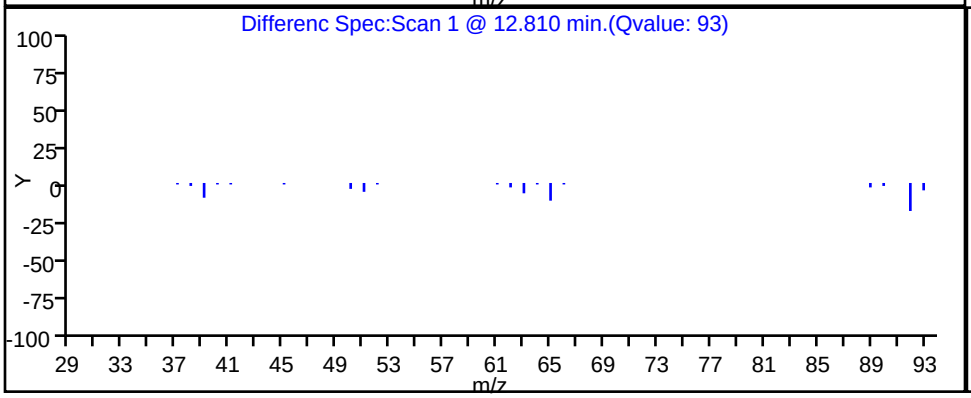


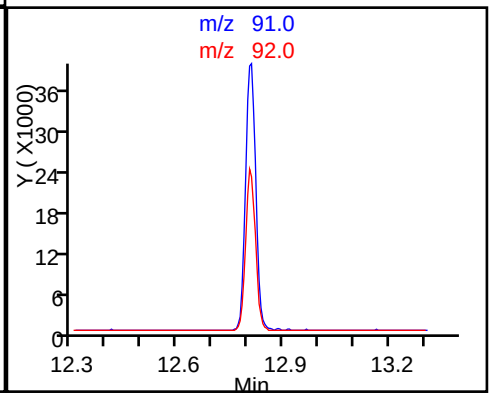










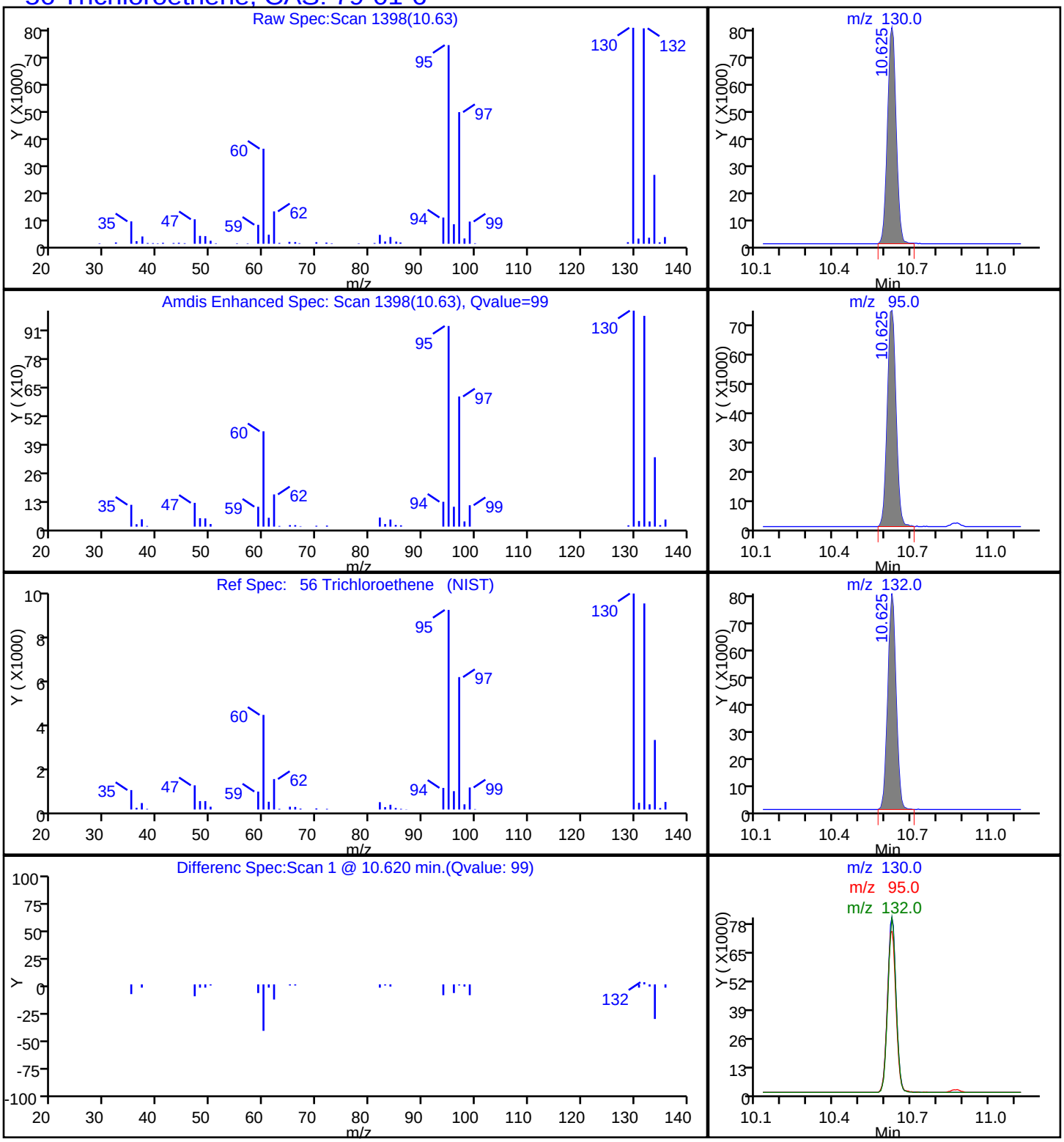


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P105.D

Injection Date:	11-Jan-2018 18:31:30	Instrument ID:	MR
Lims ID:	140-10405-A-1	Lab Sample ID:	140-10405-1
Client ID:	C-INFLUENT		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

56 Trichloroethene, CAS: 79-01-6

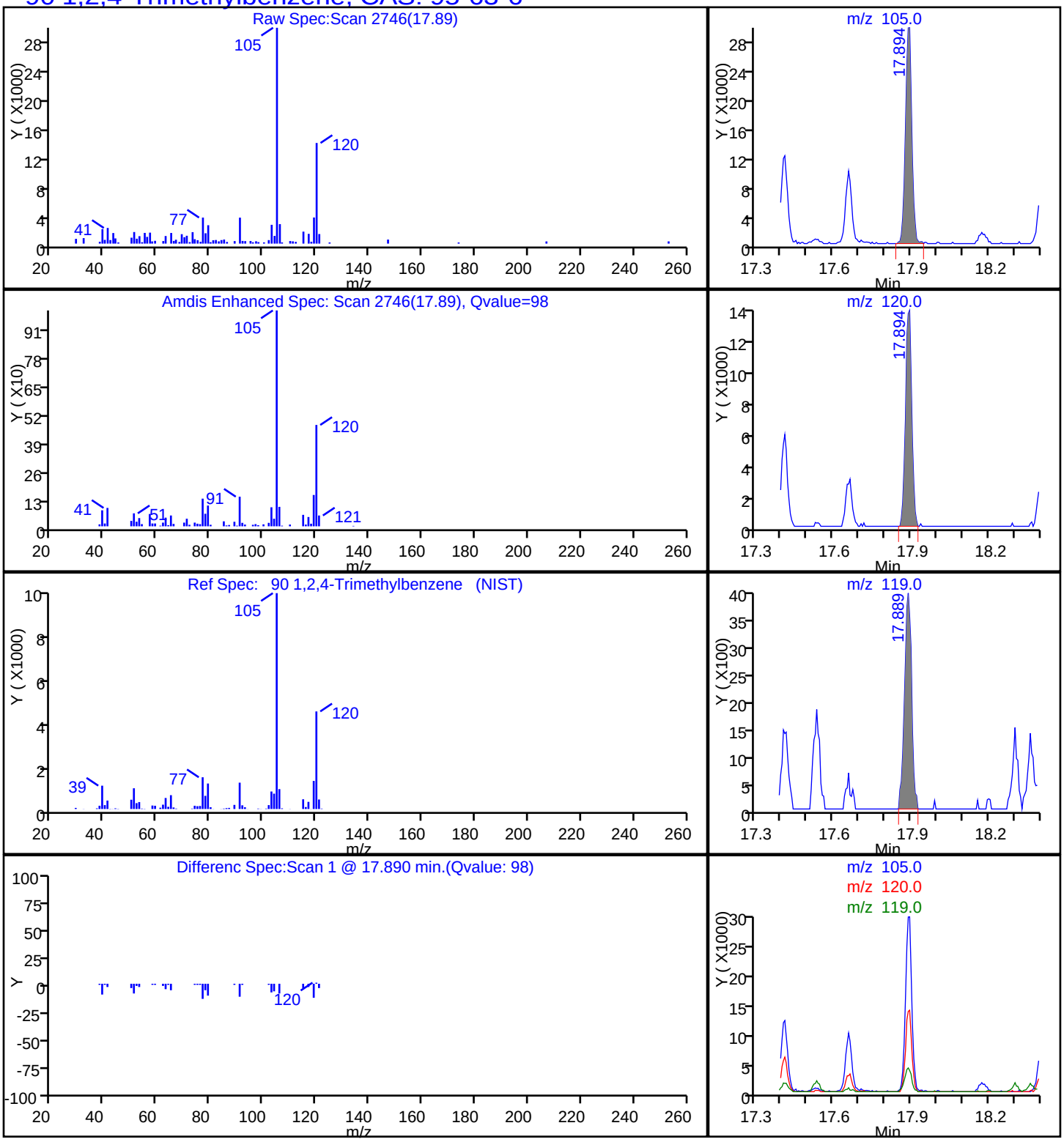


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P105.D

Injection Date:	11-Jan-2018 18:31:30	Instrument ID:	MR		
Lims ID:	140-10405-A-1	Lab Sample ID:	140-10405-1		
Client ID:	C-INFLUENT				
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

90 1,2,4-Trimethylbenzene, CAS: 95-63-6



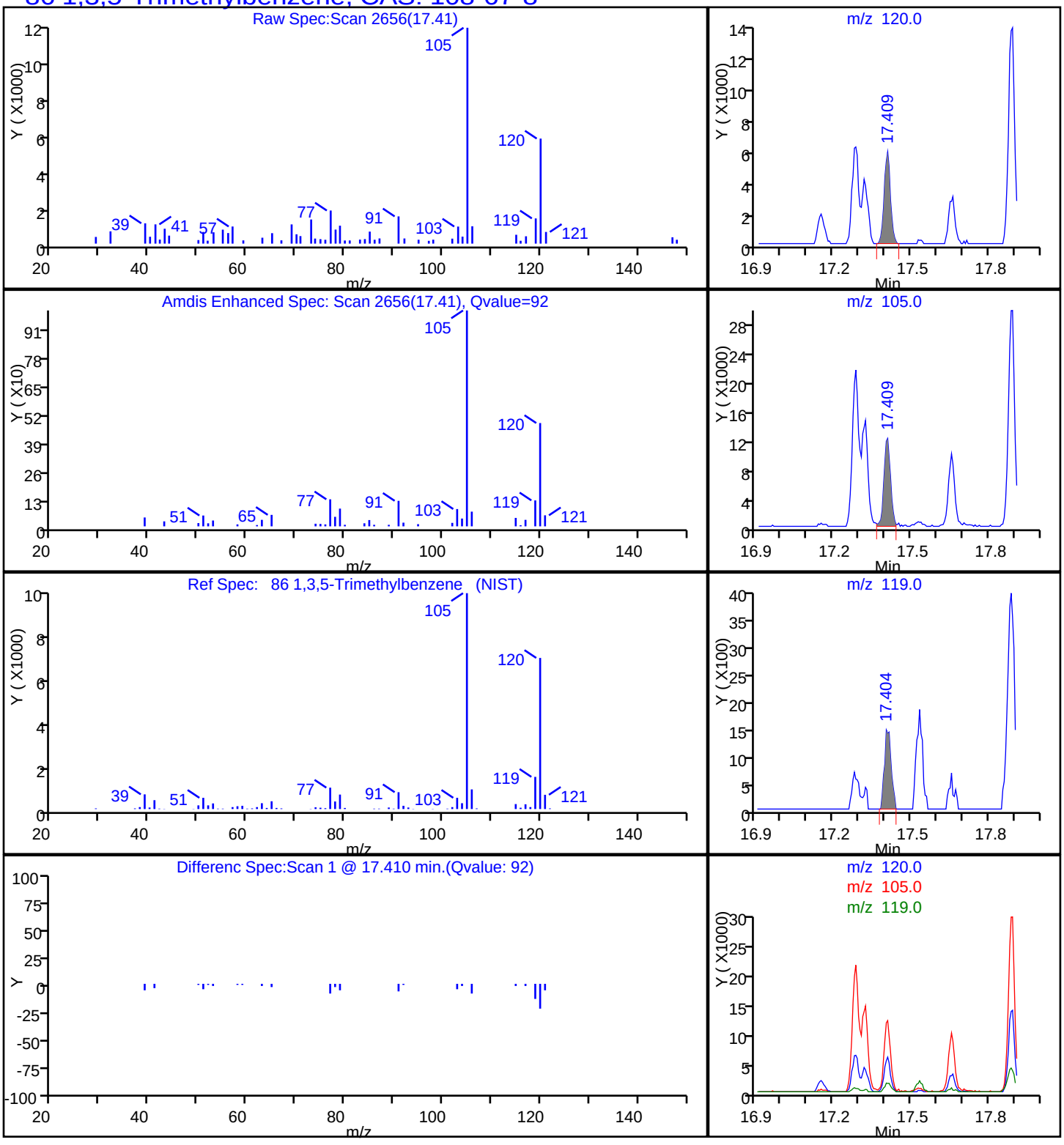
Report Date: 12-Jan-2018 10:15:39 Chrom Revision: 2.2 10-Jan-2018 22:54:36

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P105.D

Injection Date:	11-Jan-2018 18:31:30	Instrument ID:	MR		
Lims ID:	140-10405-A-1	Lab Sample ID:	140-10405-1		
Client ID:	C-INFLUENT				
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

86 1,3,5-Trimethylbenzene, CAS: 108-67-8

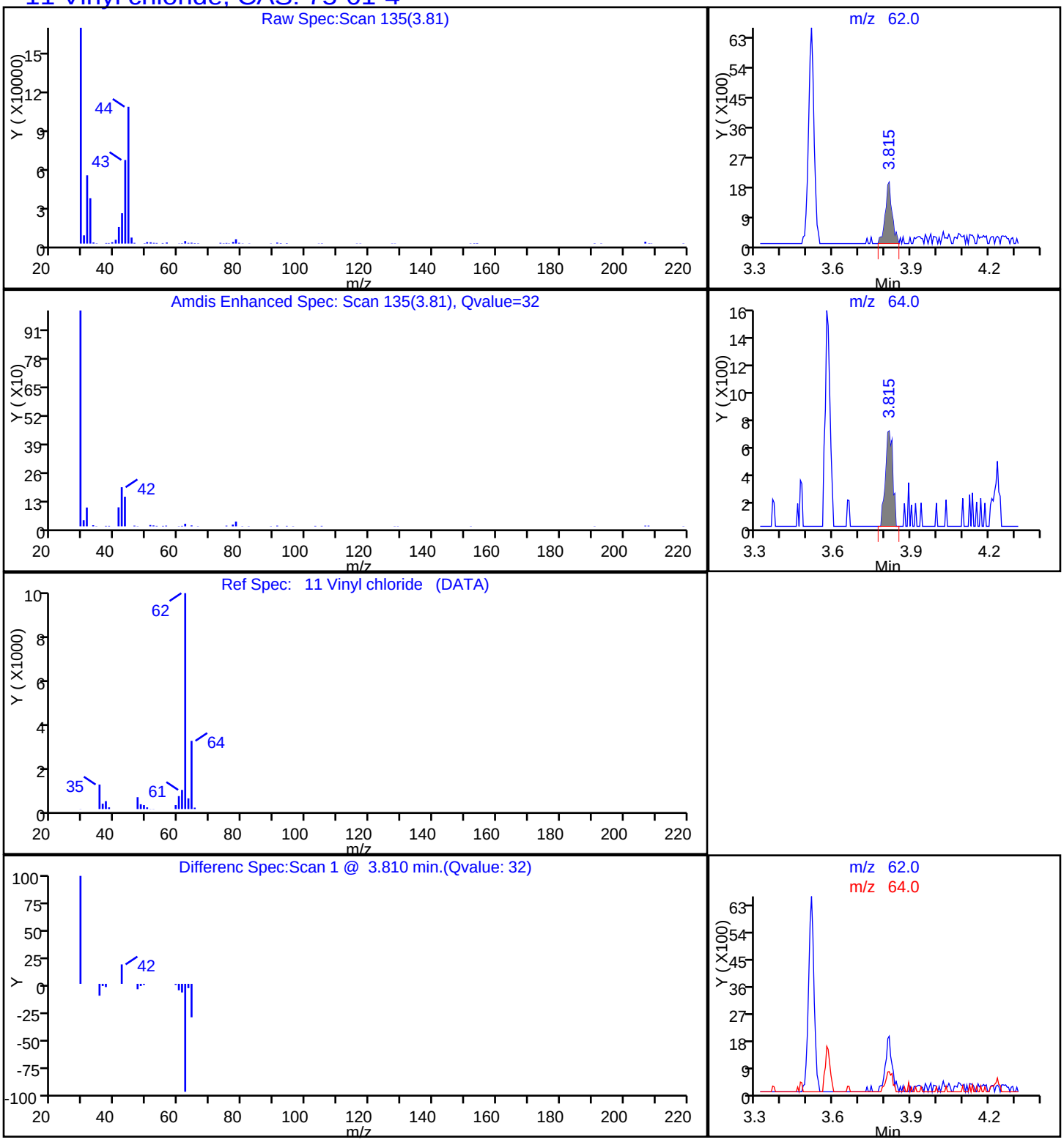


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P105.D

Injection Date:	11-Jan-2018 18:31:30	Instrument ID:	MR
Lims ID:	140-10405-A-1	Lab Sample ID:	140-10405-1
Client ID:	C-INFLUENT		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

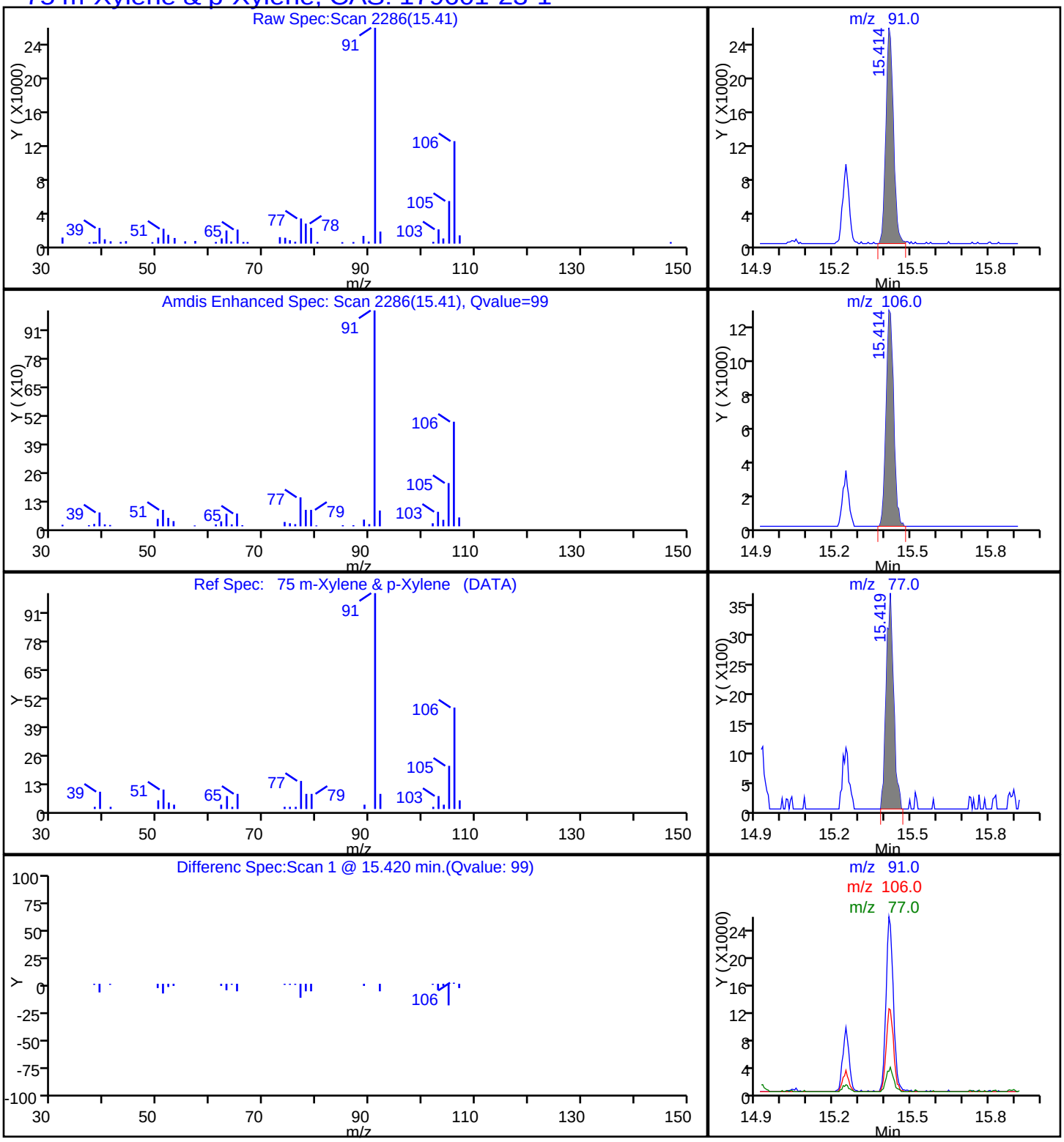
11 Vinyl chloride, CAS: 75-01-4



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P105.D		
Injection Date:	11-Jan-2018 18:31:30	Instrument ID:	MR
Lims ID:	140-10405-A-1	Lab Sample ID:	140-10405-1
Client ID:	C-INFLUENT		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

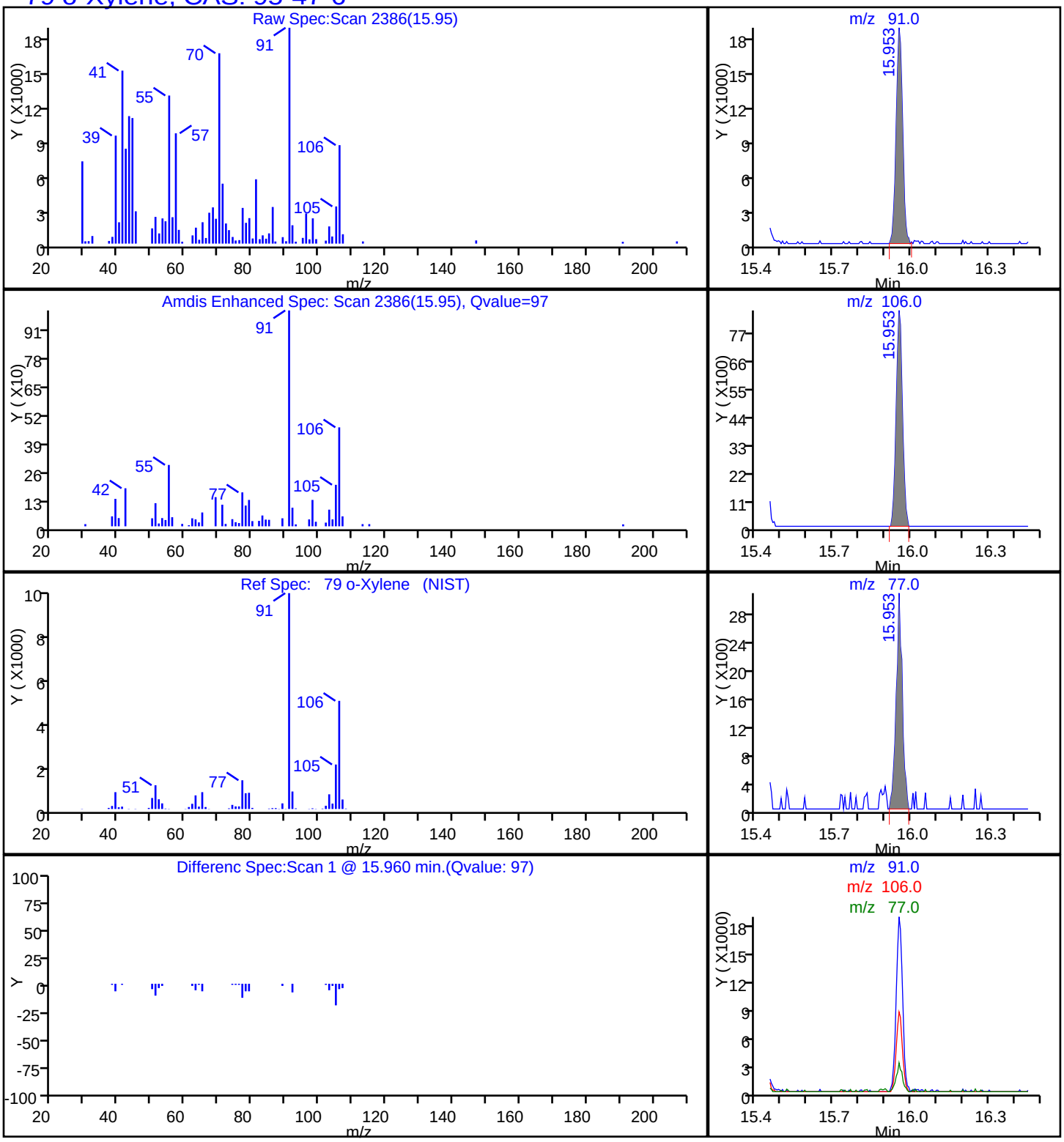
75 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P105.D		
Injection Date:	11-Jan-2018 18:31:30	Instrument ID:	MR
Lims ID:	140-10405-A-1	Lab Sample ID:	140-10405-1
Client ID:	C-INFLUENT		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

79 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1

SDG No.:

Client Sample ID: C-MID GAC Lab Sample ID: 140-10405-2

Matrix: Air Lab File ID: RA11P106.D

Analysis Method: TO 15 LL Date Collected: 01/09/2018 12:05

Sample wt/vol: 100(mL) Date Analyzed: 01/11/2018 19:18

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 17352 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.3		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.7		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.55		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.13	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.68	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	110		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10405-1

SDG No.:

Client Sample ID: C-MID GAC | Lab Sample ID: 140-10405-2

Matrix: Air | Lab File ID: RA11P106.D

Analysis Method: TO 15 LL | Date Collected: 01/09/2018 12:05

Sample wt/vol: 100(mL) | Date Analyzed: 01/11/2018 19:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17352 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	4.2		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	9.6		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.71	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.0	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	110		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P106.D
Lims ID: 140-10405-A-2
Client ID: C-MID GAC
Sample Type: Client
Inject. Date: 11-Jan-2018 19:18:30 ALS Bottle#: 6 Worklist Smp#: 12
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007100-012
Misc. Info.: 140-10405-a-2
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 12-Jan-2018 10:15:00 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 12-Jan-2018 10:11:27

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.735	7.779	-0.044	70	266589	4.00	
* 2 1,4-Difluorobenzene	114	9.865	9.918	-0.053	94	1502645	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.864	14.903	-0.039	87	1282364	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.578	16.610	-0.032	91	1038200	4.42	
6 Chlorodifluoromethane	67	3.497	3.505	-0.008	95	18173	0.5427	
8 Dichlorodifluoromethane	85	3.545	3.554	-0.009	99	28523	0.1092	
11 Vinyl chloride	62	3.809	3.827	-0.018	32	2175	0.0287	
45 1,1,1-Trichloroethane	97	8.722	8.769	-0.047	94	6810	0.0260	
48 Benzene	78	9.293	9.341	-0.048	96	78913	0.2619	
65 Toluene	91	12.809	12.845	-0.036	94	30702	0.0855	
75 m-Xylene & p-Xylene	91	15.419	15.452	-0.033	99	30764	0.0854	
79 o-Xylene	91	15.953	15.986	-0.033	97	19132	0.0497	
S 114 Xylenes, Total	100				0		0.1350	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

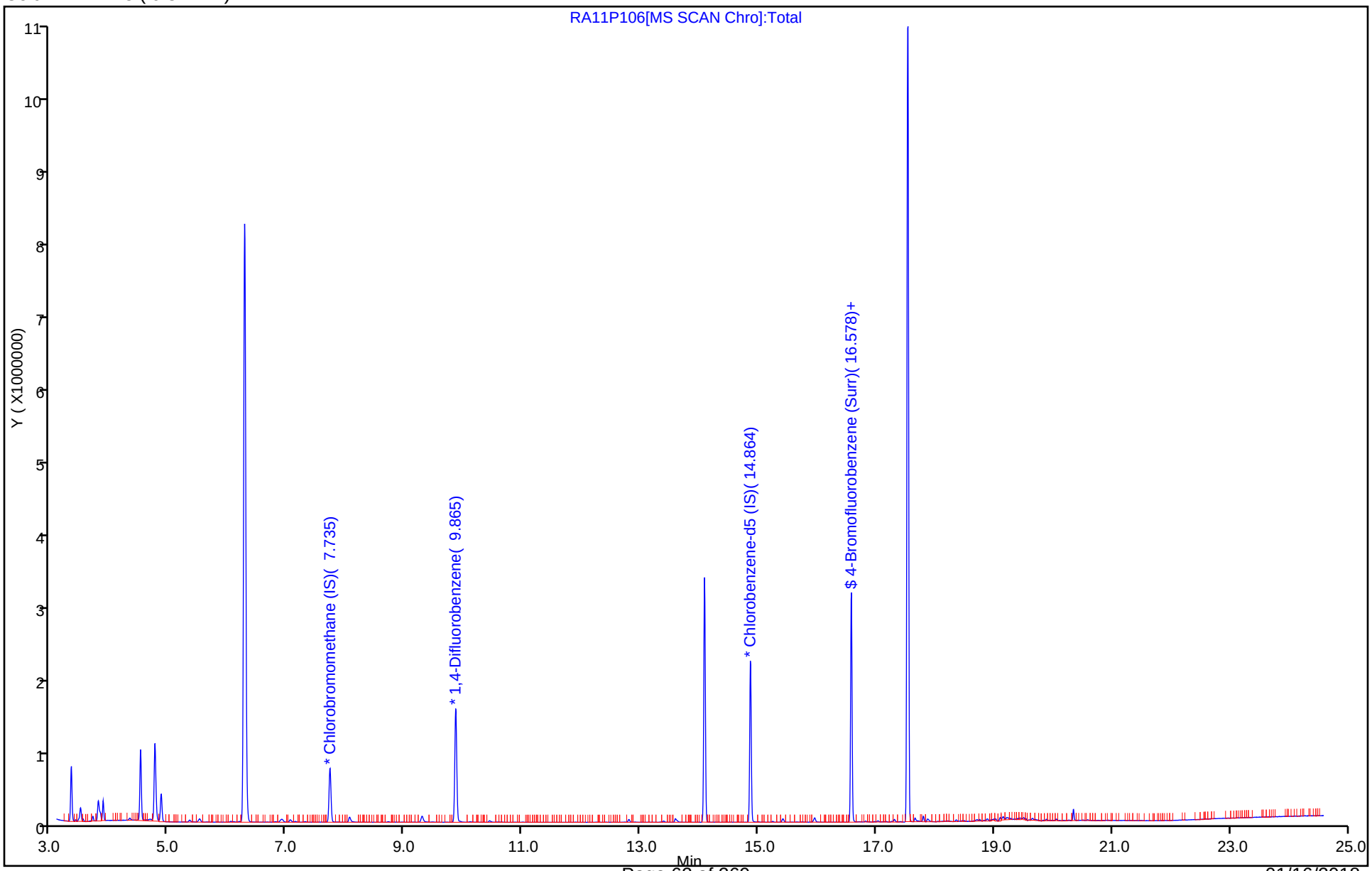
Report Date: 12-Jan-2018 10:15:42 Chrom Revision: 2.2 10-Jan-2018 22:54:36

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P106.D

Injection Date:	11-Jan-2018 19:18:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10405-A-2	Lab Sample ID:	140-10405-2	Worklist Smp#:	12
Client ID:	C-MID GAC				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P106.D				
Lims ID:	140-10405-A-2				
Client ID:	C-MID GAC				
Sample Type:	Client				
Inject. Date:	11-Jan-2018 19:18:30	ALS Bottle#:	6	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007100-012				
Misc. Info.:	140-10405-a-2				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	12-Jan-2018 10:15:00	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				
First Level Reviewer: tajh		Date:	12-Jan-2018 10:11:27		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.42	110.46

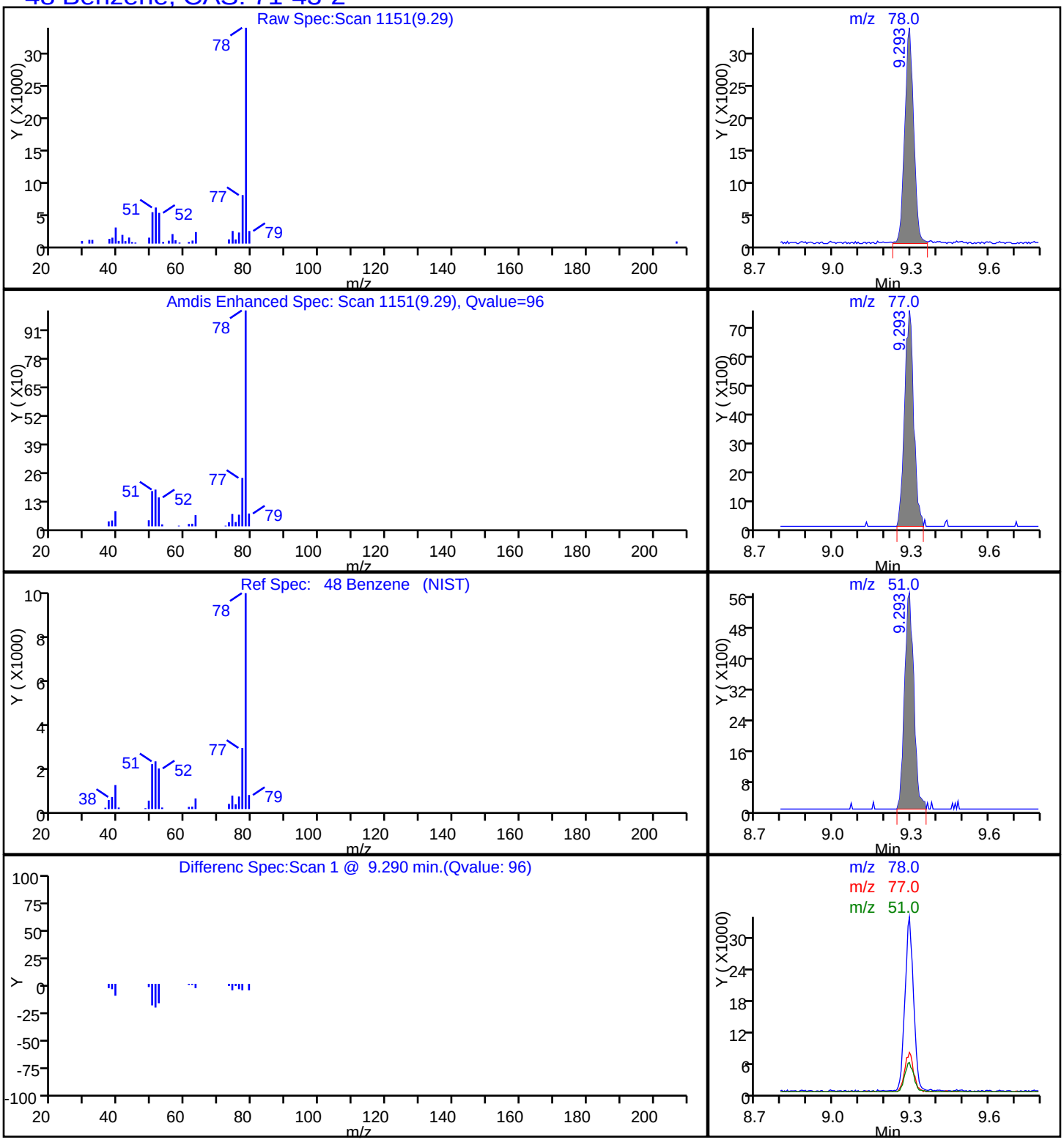
Report Date: 12-Jan-2018 10:15:42 Chrom Revision: 2.2 10-Jan-2018 22:54:36

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P106.D

Injection Date:	11-Jan-2018 19:18:30	Instrument ID:	MR
Lims ID:	140-10405-A-2	Lab Sample ID:	140-10405-2
Client ID:	C-MID GAC		
Operator ID:		ALS Bottle#:	6 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

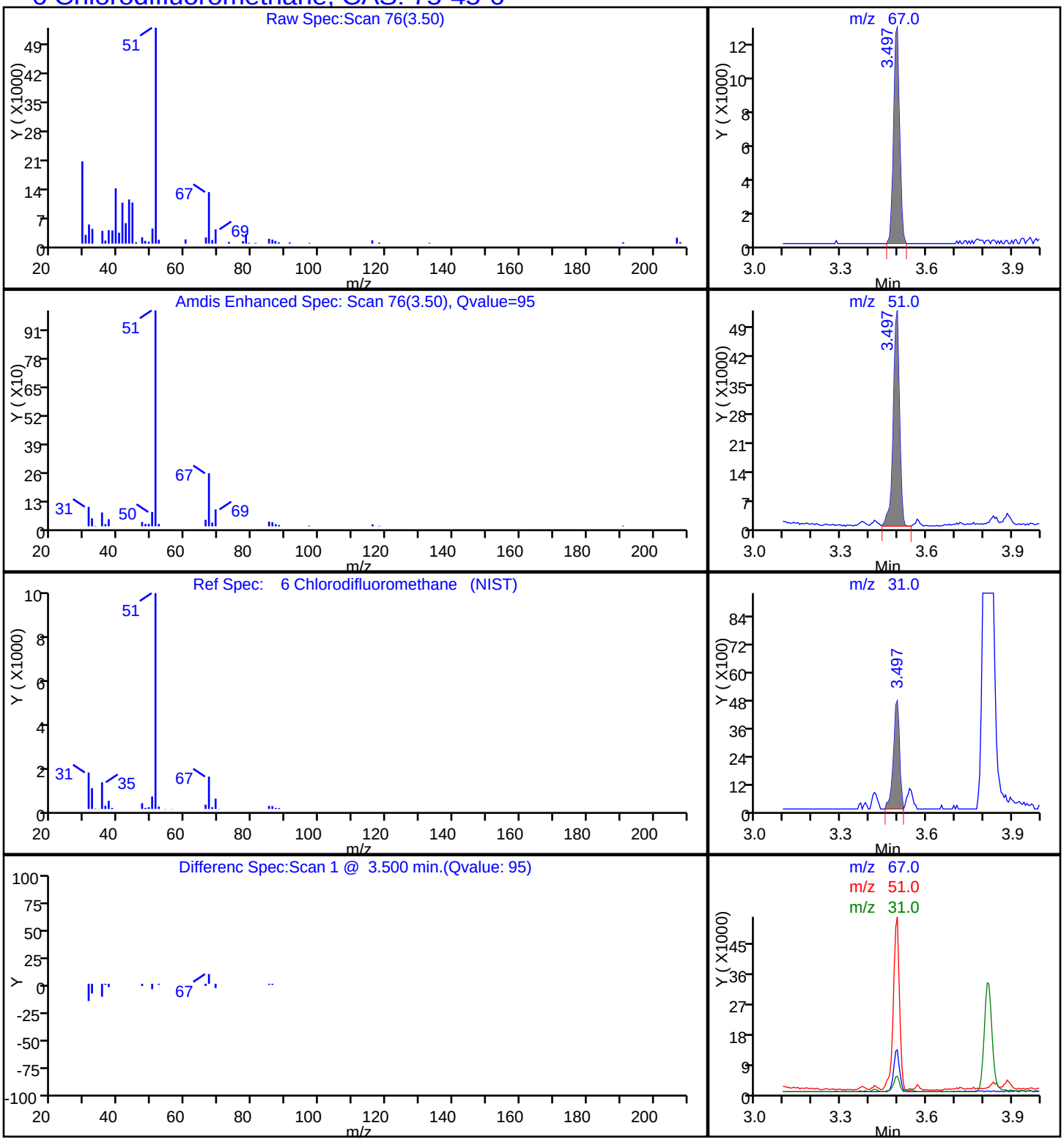
48 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P106.D				
Injection Date:	11-Jan-2018 19:18:30	Instrument ID:	MR		
Lims ID:	140-10405-A-2	Lab Sample ID:	140-10405-2		
Client ID:	C-MID GAC				
Operator ID:		ALS Bottle#:	6	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

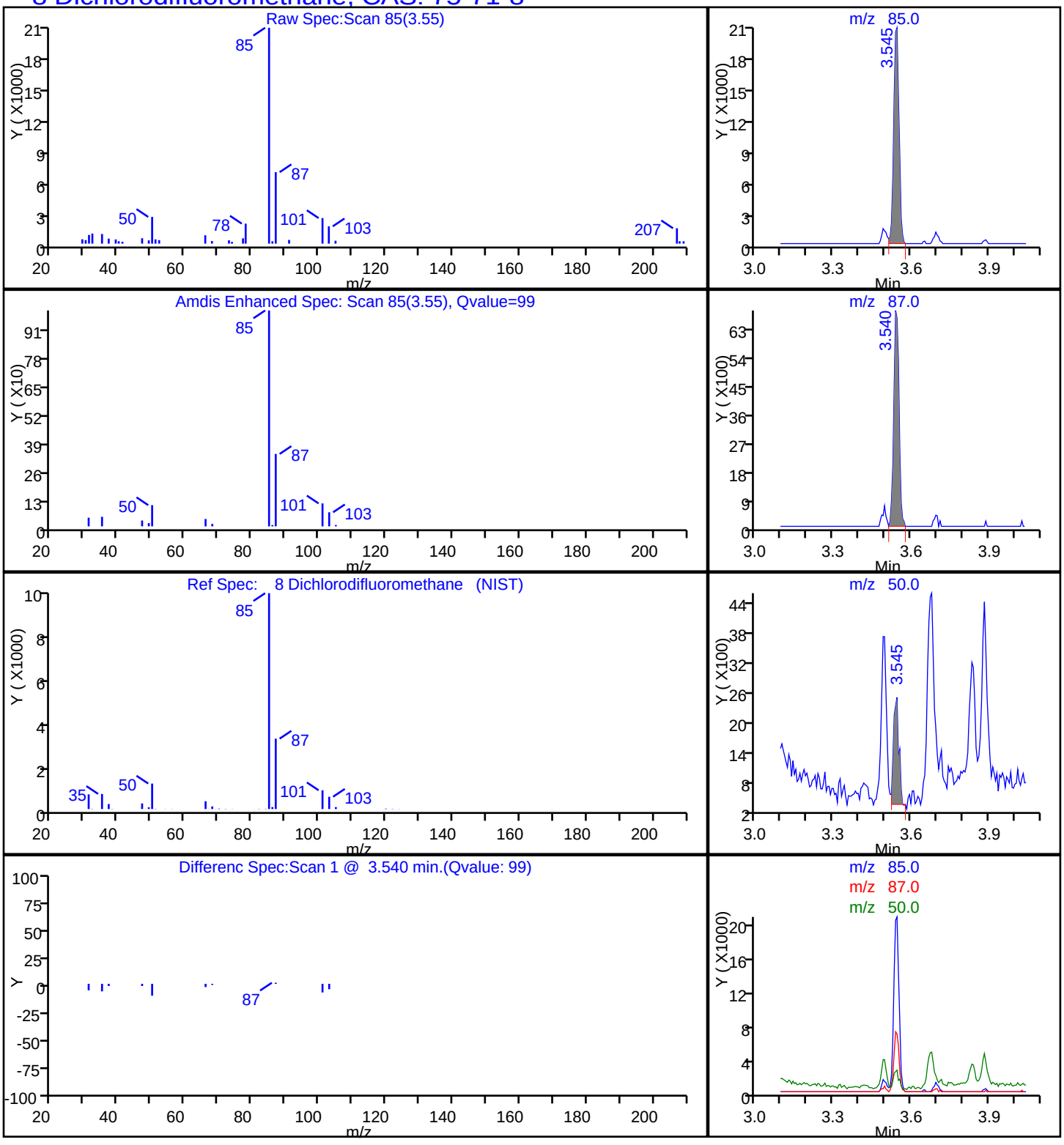
6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P106.D		
Injection Date:	11-Jan-2018 19:18:30	Instrument ID:	MR
Lims ID:	140-10405-A-2	Lab Sample ID:	140-10405-2
Client ID:	C-MID GAC		
Operator ID:		ALS Bottle#:	6 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8

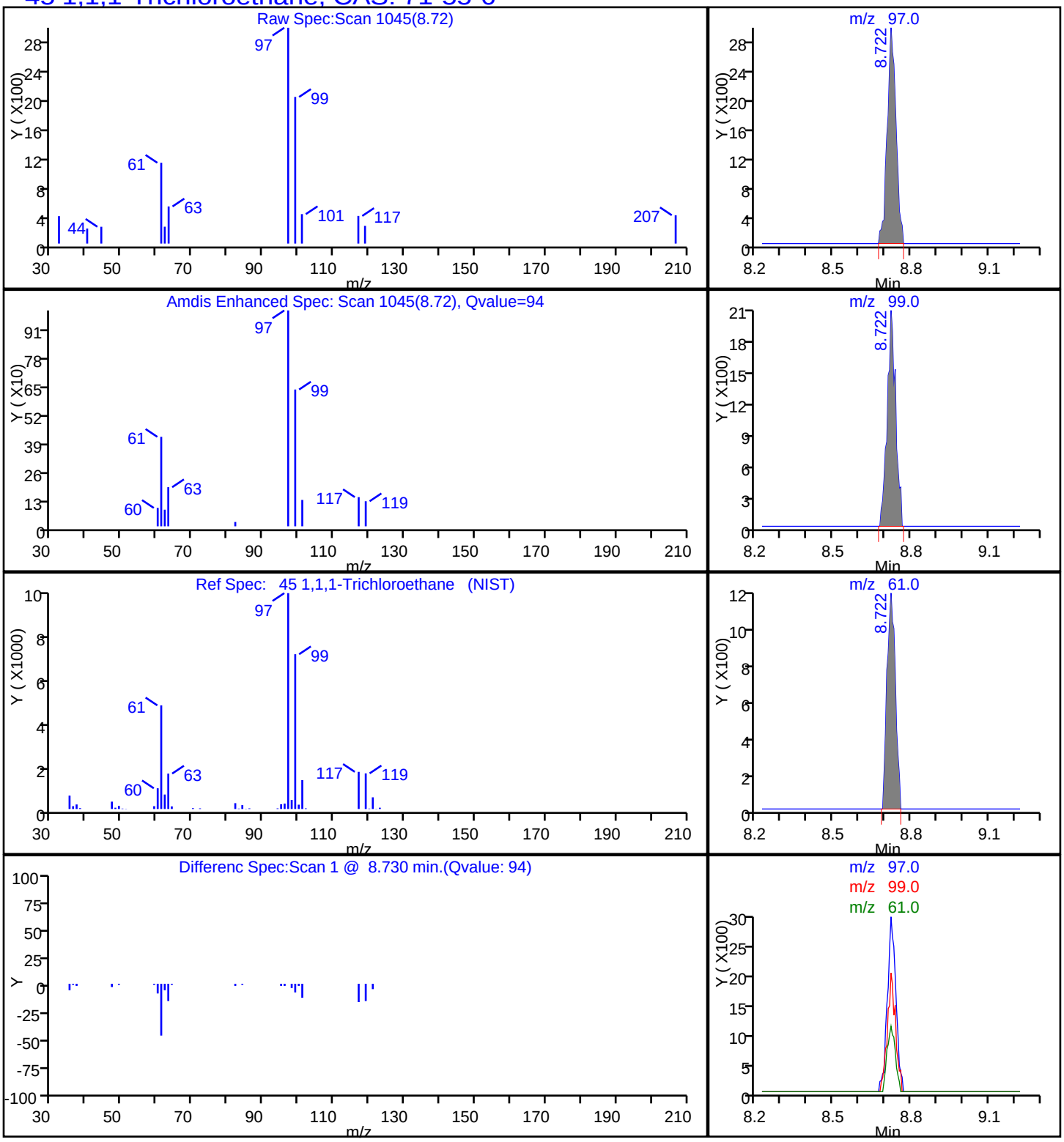


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P106.D

Injection Date:	11-Jan-2018 19:18:30	Instrument ID:	MR		
Lims ID:	140-10405-A-2	Lab Sample ID:	140-10405-2		
Client ID:	C-MID GAC				
Operator ID:		ALS Bottle#:	6	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

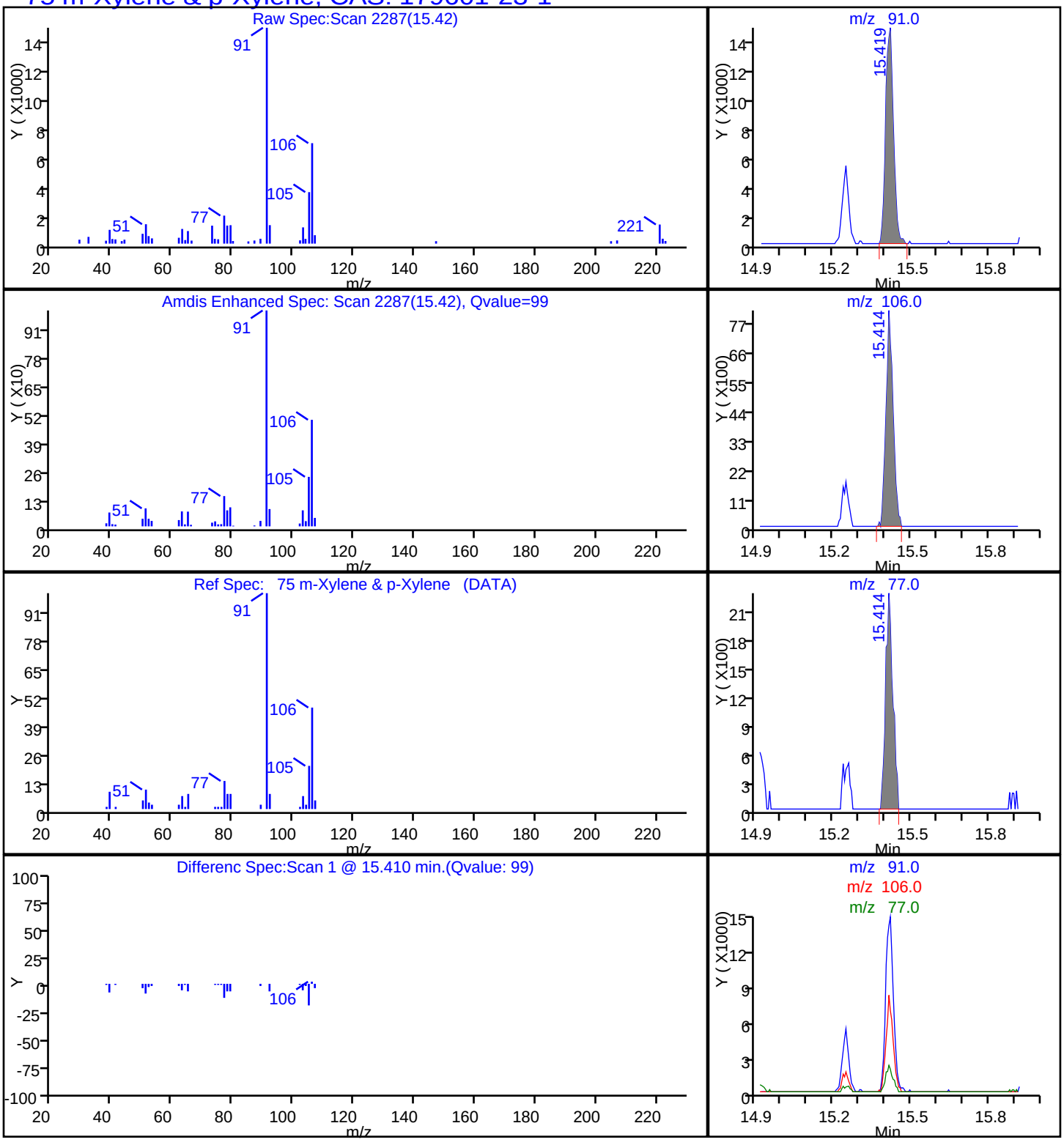
45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P106.D		
Injection Date:	11-Jan-2018 19:18:30	Instrument ID:	MR
Lims ID:	140-10405-A-2	Lab Sample ID:	140-10405-2
Client ID:	C-MID GAC		
Operator ID:		ALS Bottle#:	6 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

75 m-Xylene & p-Xylene, CAS: 179601-23-1

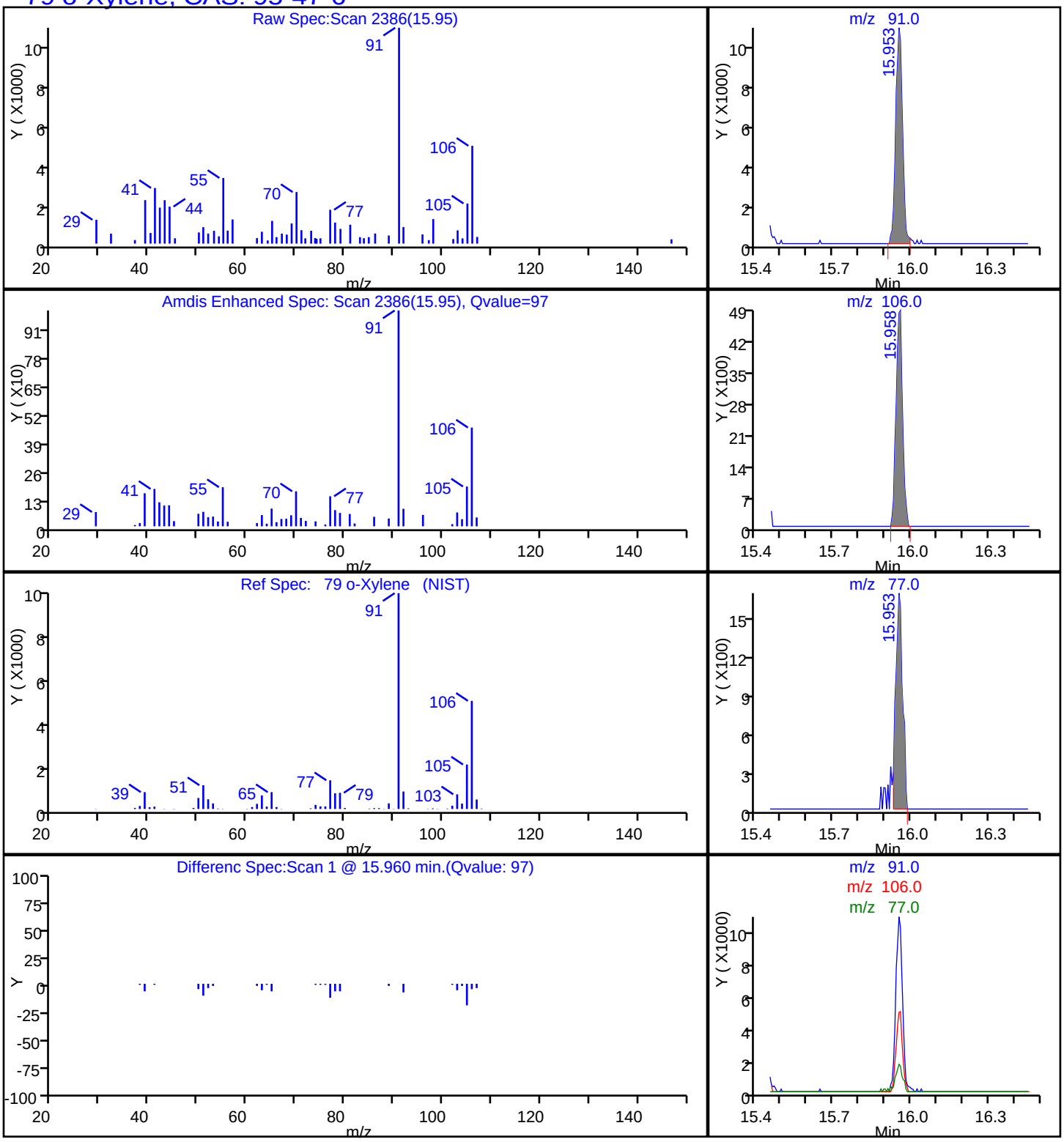


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P106.D

Injection Date:	11-Jan-2018 19:18:30	Instrument ID:	MR
Lims ID:	140-10405-A-2	Lab Sample ID:	140-10405-2
Client ID:	C-MID GAC		
Operator ID:		ALS Bottle#:	6 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

79 o-Xylene, CAS: 95-47-6



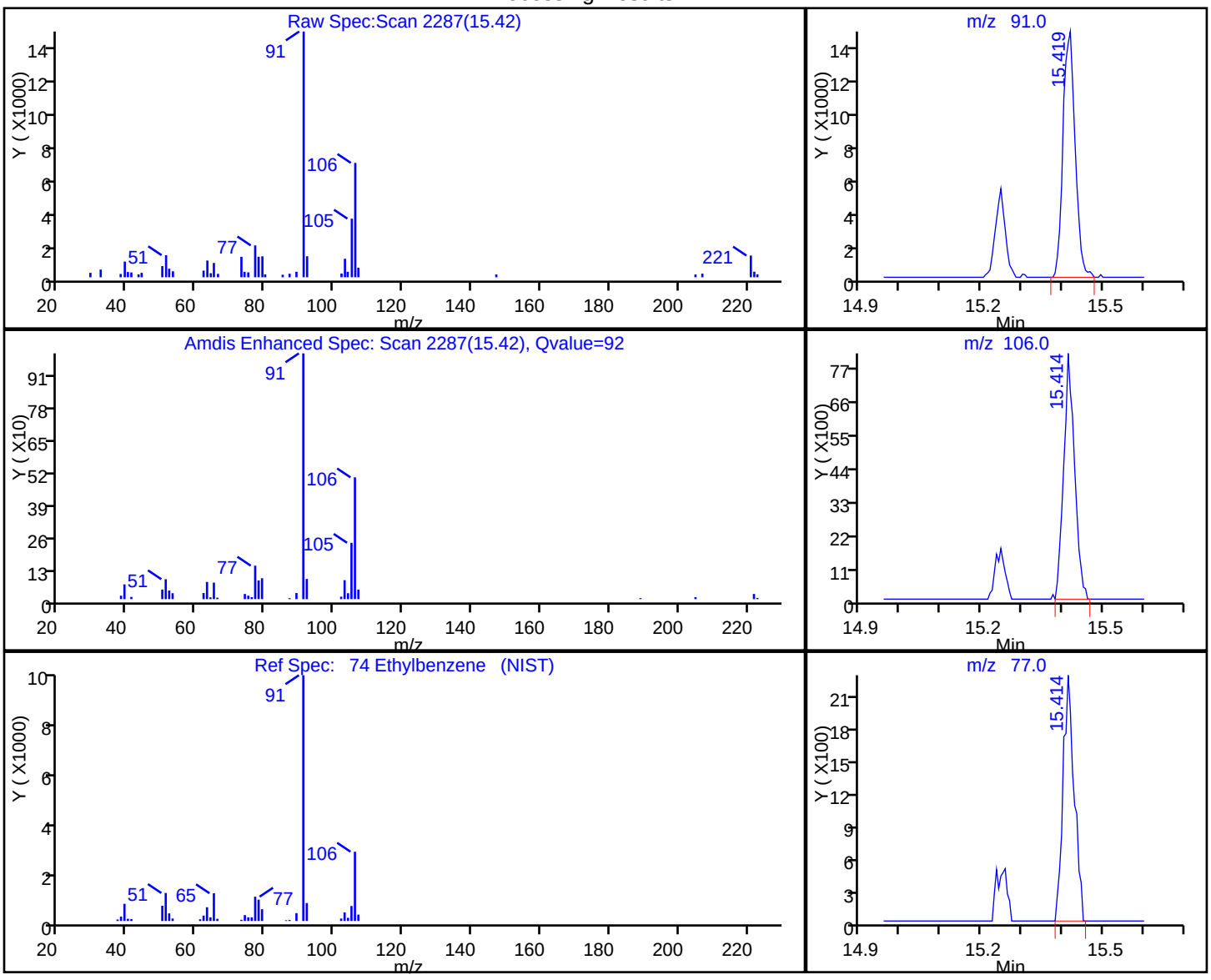
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P106.D		
Injection Date:	11-Jan-2018 19:18:30	Instrument ID:	MR
Lims ID:	140-10405-A-2	Lab Sample ID:	140-10405-2
Client ID:	C-MID GAC		
Operator ID:		ALS Bottle#:	6 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

74 Ethylbenzene, CAS: 100-41-4

Processing Results



RT	Mass	Response	Amount
15.42	91.00	30764	0.065475
15.41	106.00	15230	
15.41	77.00	4242	

Reviewer: tajh, 12-Jan-2018 10:11:27

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

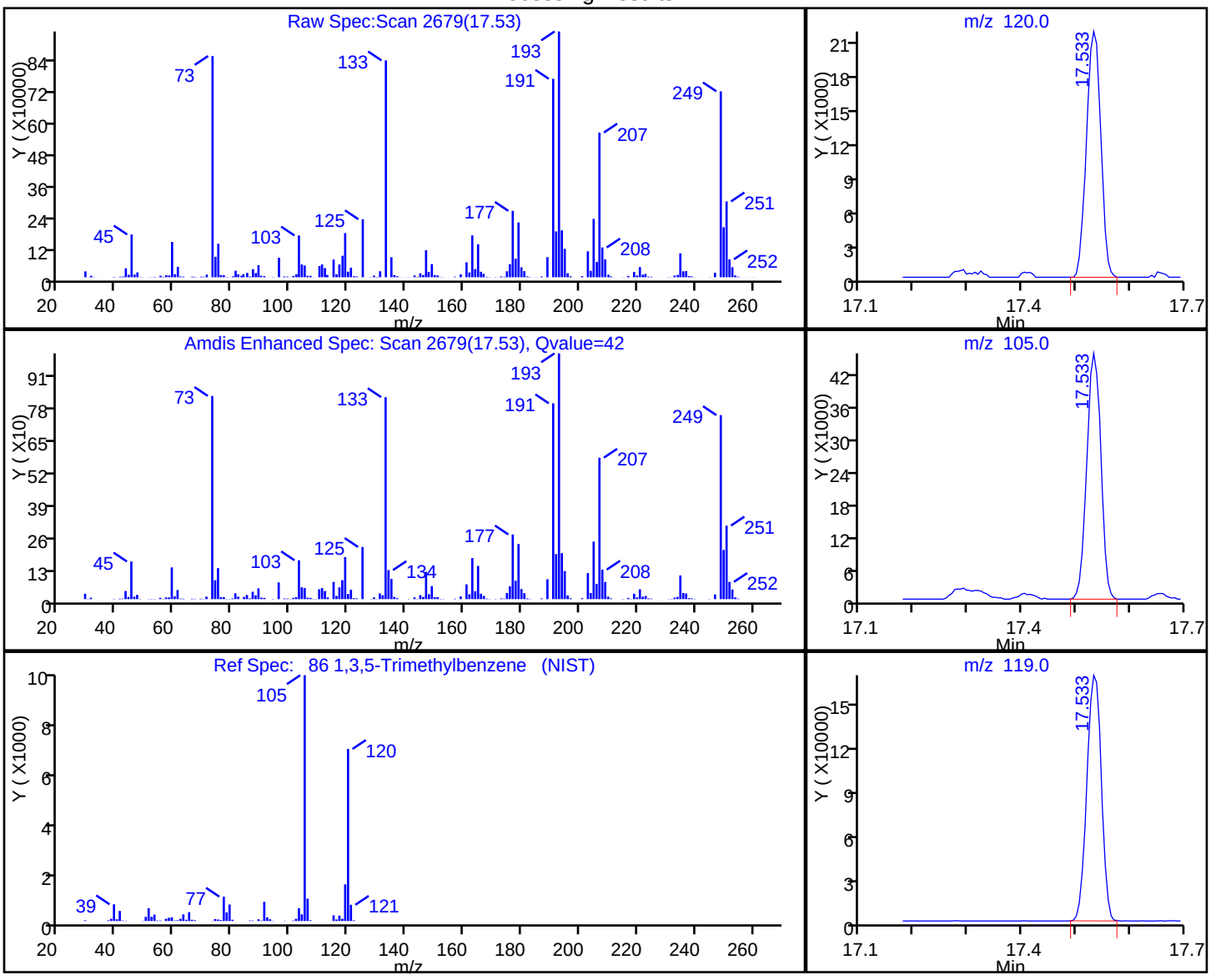
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P106.D				
Injection Date:	11-Jan-2018 19:18:30	Instrument ID:	MR		
Lims ID:	140-10405-A-2	Lab Sample ID:	140-10405-2		
Client ID:	C-MID GAC				
Operator ID:		ALS Bottle#:	6	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

86 1,3,5-Trimethylbenzene, CAS: 108-67-8

Processing Results



RT	Mass	Response	Amount
17.53	120.00	39604	0.175288
17.53	105.00	82499	
17.53	119.00	318301	

Reviewer: tajh, 12-Jan-2018 10:11:27

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10405-1

SDG No.:

Client Sample ID: C-EFFLUENT | Lab Sample ID: 140-10405-3

Matrix: Air | Lab File ID: RA11P107.D

Analysis Method: TO 15 LL | Date Collected: 01/09/2018 12:11

Sample wt/vol: 100(mL) | Date Analyzed: 01/11/2018 20:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17352 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.7		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.8		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.54		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.18	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.66	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.78		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.70		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.31	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	111		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10405-1

SDG No.:

Client Sample ID: C-EFFLUENT | Lab Sample ID: 140-10405-3

Matrix: Air | Lab File ID: RA11P107.D

Analysis Method: TO 15 LL | Date Collected: 01/09/2018 12:11

Sample wt/vol: 100(mL) | Date Analyzed: 01/11/2018 20:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17352 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	5.4		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	9.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.76	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	3.5		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.5	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.6		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	111		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P107.D				
Lims ID:	140-10405-A-3				
Client ID:	C-EFFLUENT				
Sample Type:	Client				
Inject. Date:	11-Jan-2018 20:05:30	ALS Bottle#:	7	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007100-013				
Misc. Info.:	140-10405-a-3				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	12-Jan-2018 10:15:00	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				
First Level Reviewer: tajh		Date:	12-Jan-2018 09:21:40		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.746	7.779	-0.033	69	274940	4.00	
* 2 1,4-Difluorobenzene	114	9.876	9.918	-0.042	94	1522511	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.869	14.903	-0.034	87	1288515	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.579	16.610	-0.031	93	1050988	4.45	
6 Chlorodifluoromethane	67	3.502	3.505	-0.003	94	19182	0.5554	
8 Dichlorodifluoromethane	85	3.545	3.554	-0.009	99	29362	0.1090	
31 Methylene Chloride	84	5.540	5.552	-0.012	85	14797	0.1322	
48 Benzene	78	9.299	9.341	-0.042	90	102775	0.3366	
65 Toluene	91	12.804	12.845	-0.041	92	56059	0.1554	
74 Ethylbenzene	91	15.247	15.278	-0.031	97	16534	0.0350	
75 m-Xylene & p-Xylene	91	15.419	15.452	-0.033	99	60427	0.1669	
79 o-Xylene	91	15.953	15.986	-0.033	98	35392	0.0915	
86 1,3,5-Trimethylbenzene	120	17.409	17.436	-0.027	92	14129	0.0622	
90 1,2,4-Trimethylbenzene	105	17.894	17.921	-0.027	98	66583	0.1406	
S 114 Xylenes, Total	100				0		0.2583	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

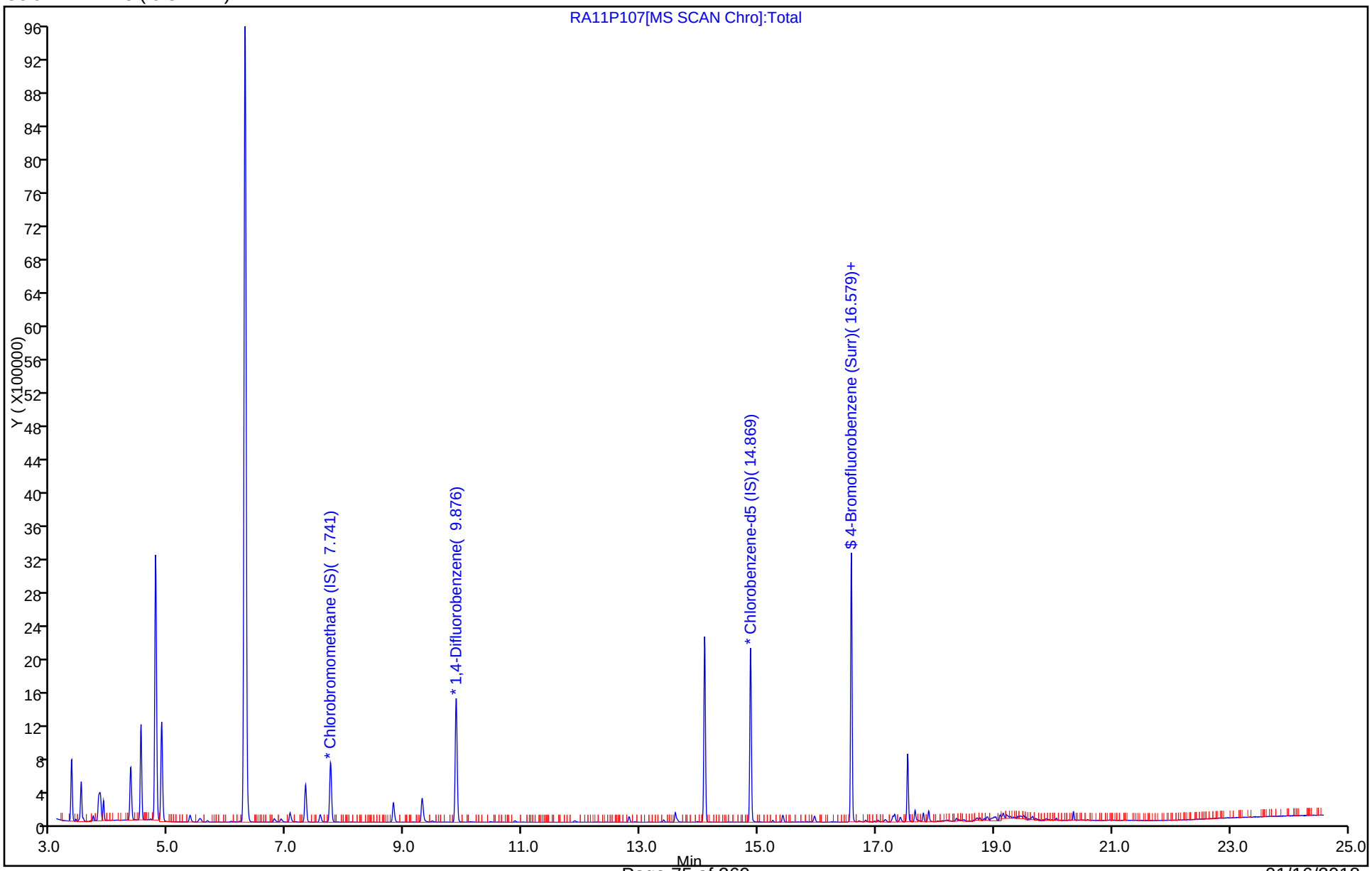
Report Date: 12-Jan-2018 10:15:46 Chrom Revision: 2.2 10-Jan-2018 22:54:36

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P107.D

Injection Date:	11-Jan-2018 20:05:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10405-A-3	Lab Sample ID:	140-10405-3	Worklist Smp#:	13
Client ID:	C-EFFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

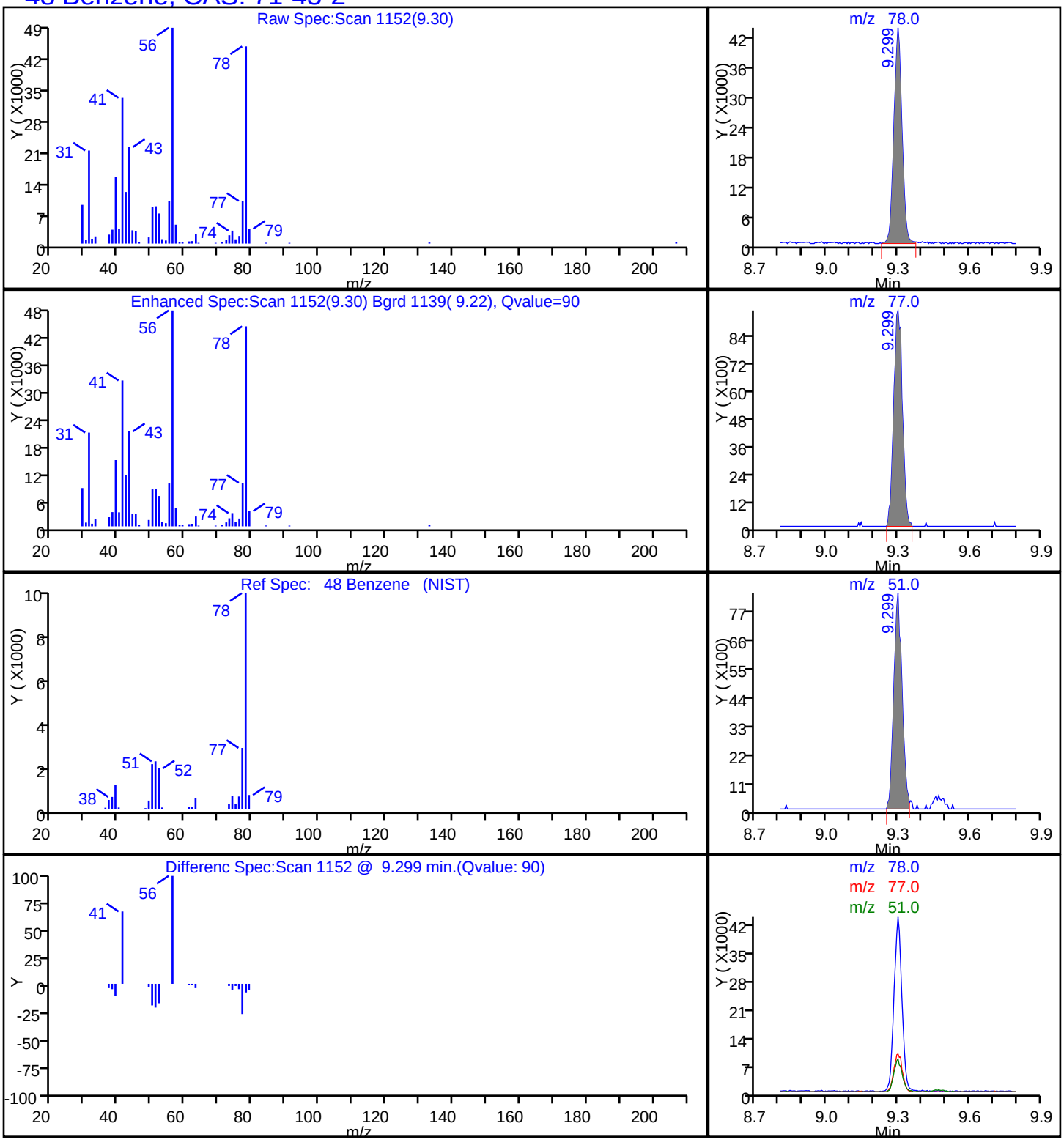
Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P107.D				
Lims ID:	140-10405-A-3				
Client ID:	C-EFFLUENT				
Sample Type:	Client				
Inject. Date:	11-Jan-2018 20:05:30	ALS Bottle#:	7	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007100-013				
Misc. Info.:	140-10405-a-3				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	12-Jan-2018 10:15:00	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				
First Level Reviewer: tajh		Date:	12-Jan-2018 09:21:40		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.45	111.28

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P107.D		
Injection Date:	11-Jan-2018 20:05:30	Instrument ID:	MR
Lims ID:	140-10405-A-3	Lab Sample ID:	140-10405-3
Client ID:	C-EFFLUENT		
Operator ID:		ALS Bottle#:	7 Worklist Smp#: 13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

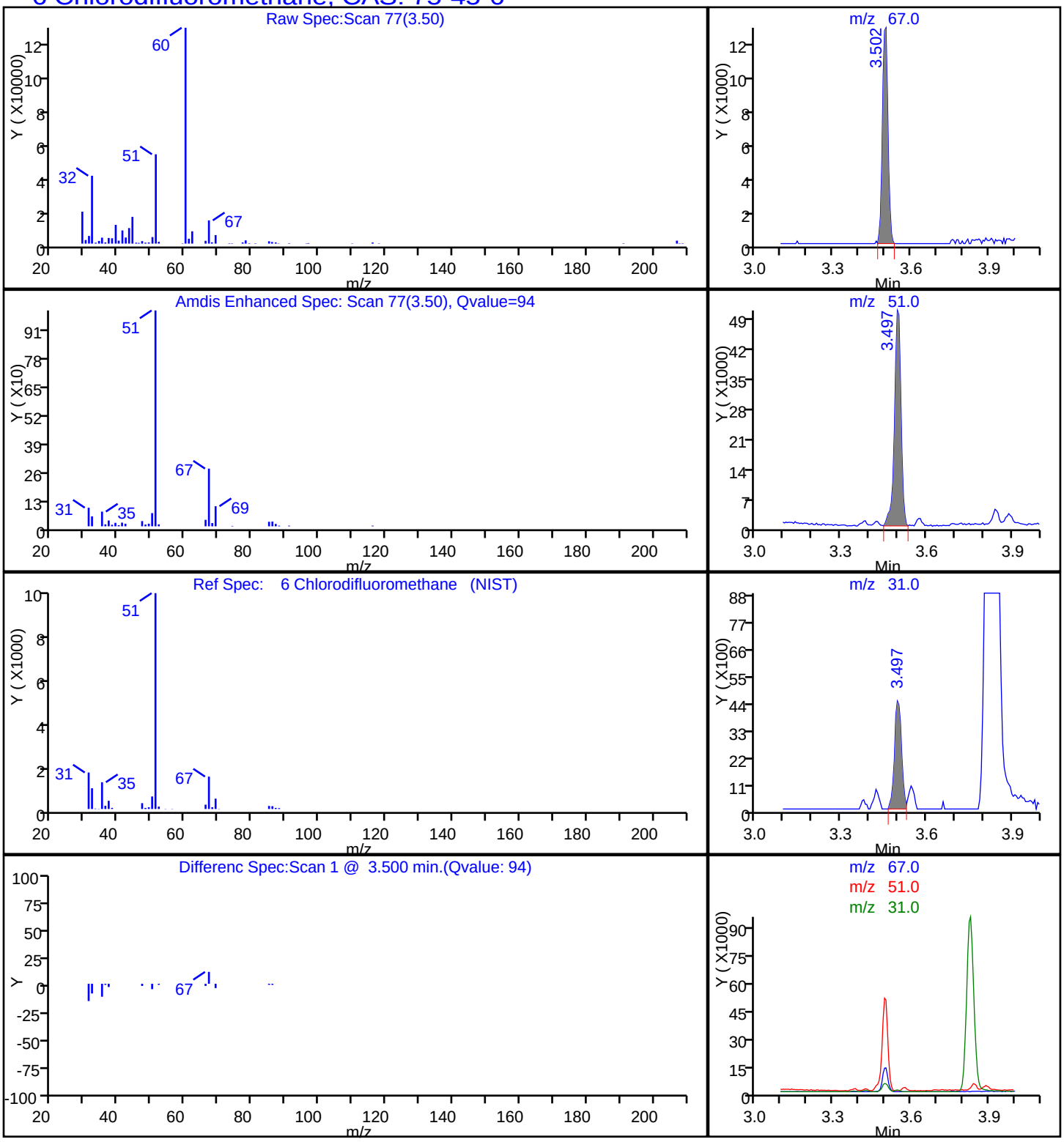
48 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P107.D				
Injection Date:	11-Jan-2018 20:05:30	Instrument ID:	MR		
Lims ID:	140-10405-A-3	Lab Sample ID:	140-10405-3		
Client ID:	C-EFFLUENT				
Operator ID:		ALS Bottle#:	7	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

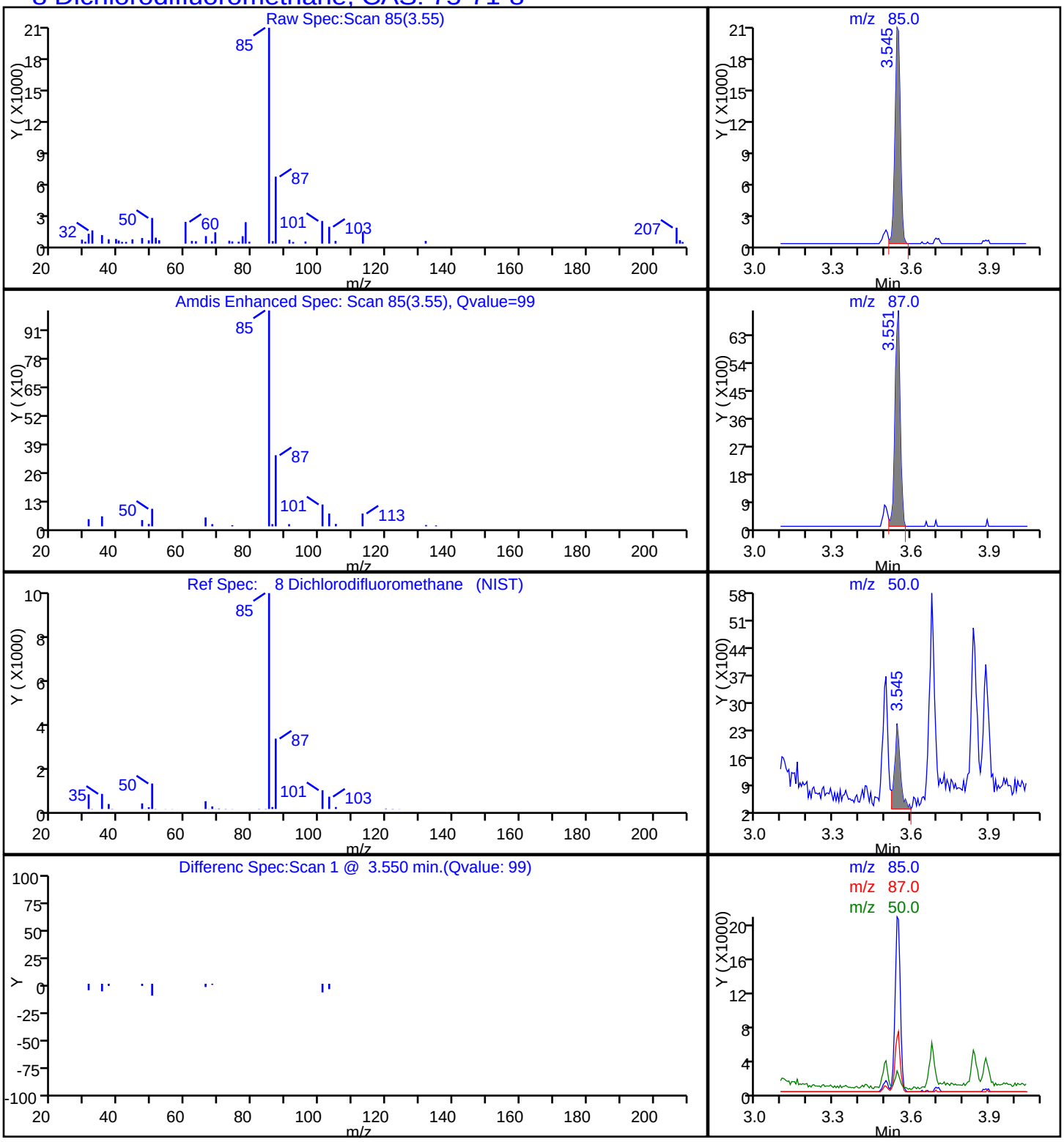
6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P107.D		
Injection Date:	11-Jan-2018 20:05:30	Instrument ID:	MR
Lims ID:	140-10405-A-3	Lab Sample ID:	140-10405-3
Client ID:	C-EFFLUENT		
Operator ID:		ALS Bottle#:	7 Worklist Smp#: 13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



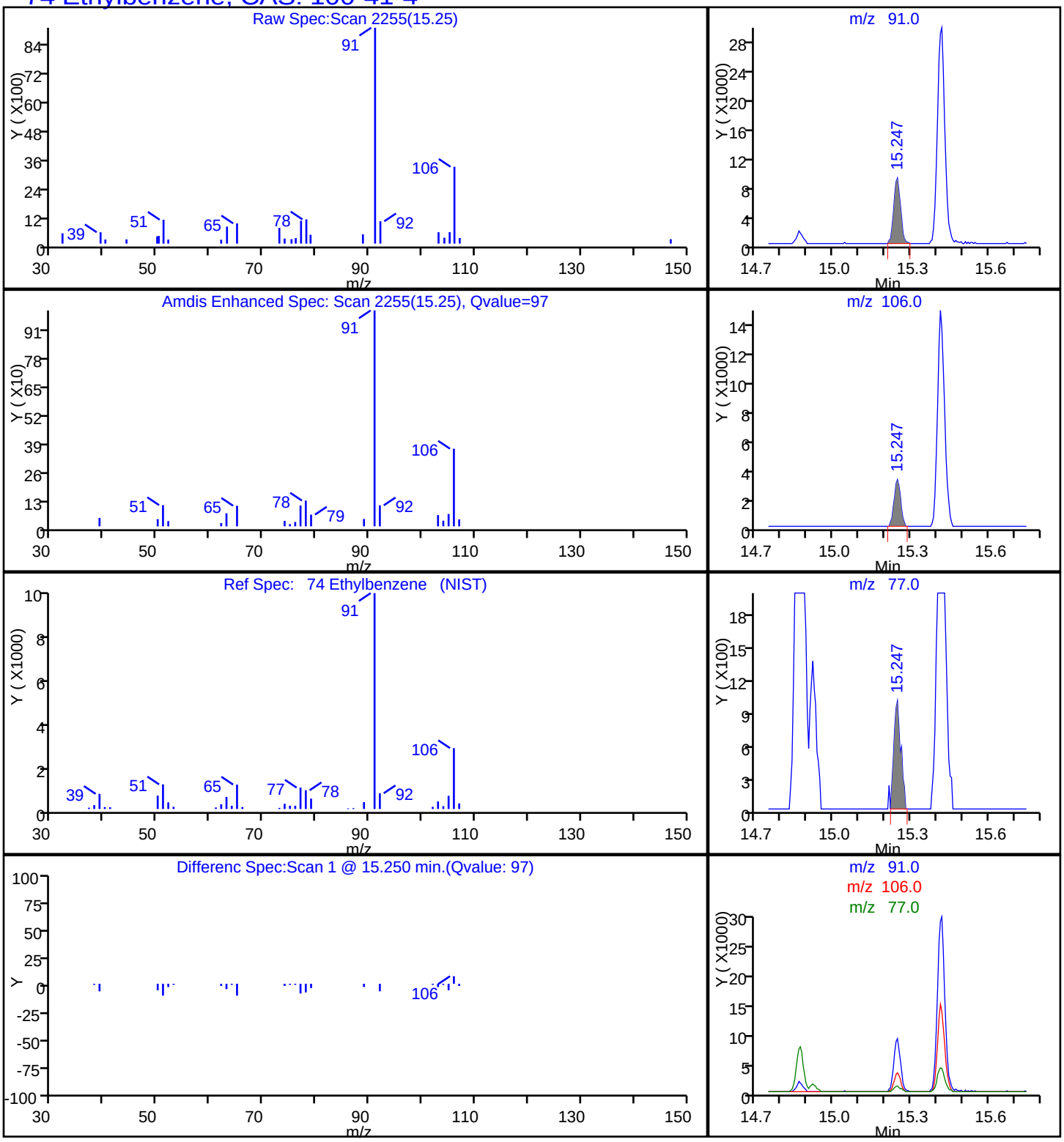
Report Date: 12-Jan-2018 10:15:46 Chrom Revision: 2.2 10-Jan-2018 22:54:36

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P107.D

Injection Date:	11-Jan-2018 20:05:30	Instrument ID:	MR
Lims ID:	140-10405-A-3	Lab Sample ID:	140-10405-3
Client ID:	C-EFFLUENT		
Operator ID:		ALS Bottle#:	7 Worklist Smp#: 13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

74 Ethylbenzene, CAS: 100-41-4



Report Date: 12-Jan-2018 10:15:46 Chrom Revision: 2.2 10-Jan-2018 22:54:36

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P107.D

Injection Date: 11-Jan-2018 20:05:30 Instrument ID: MR

Lims ID: 140-10405-A-3 Lab Sample ID: 140-10405-3

Client ID: C-EFFLUENT

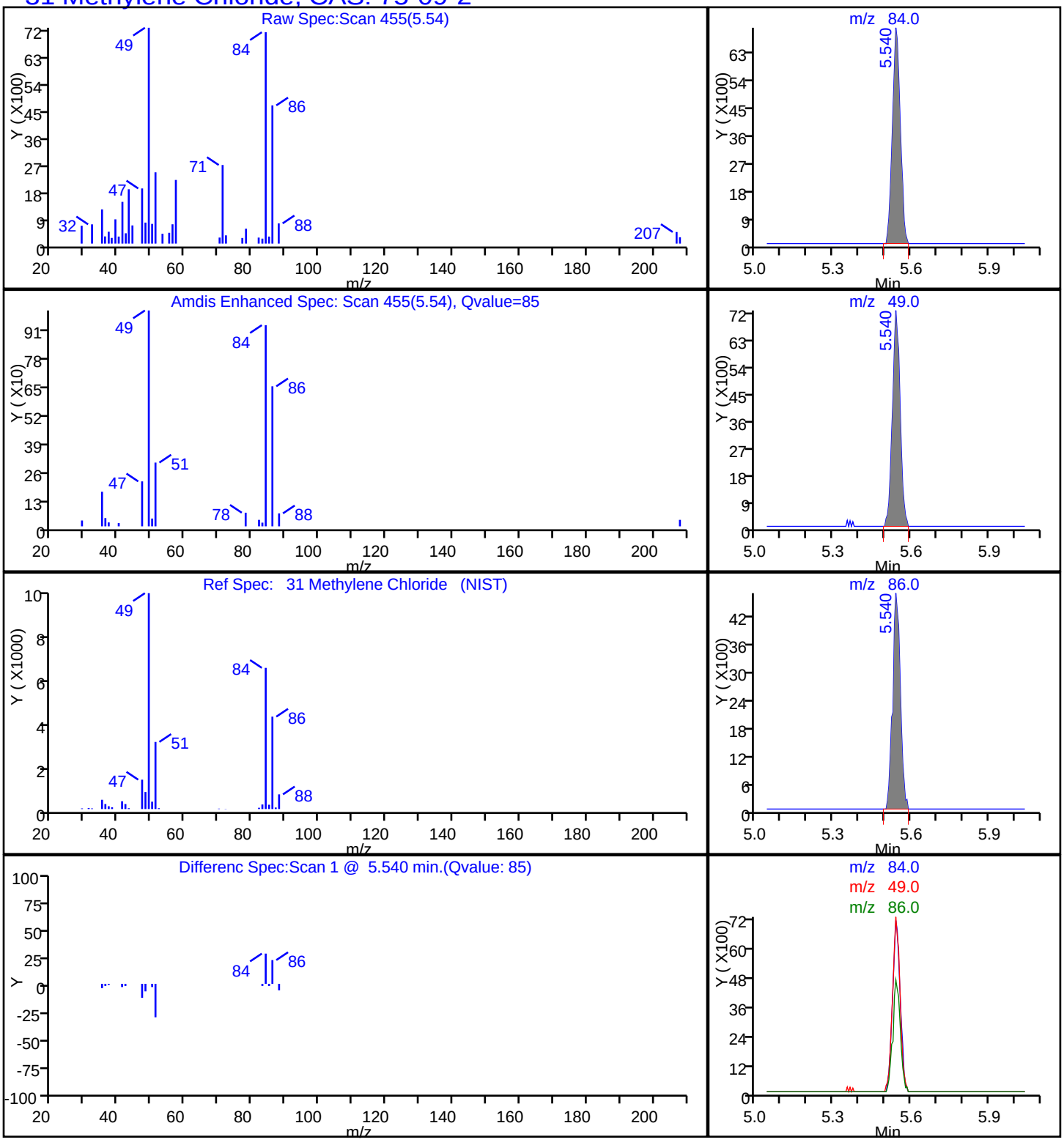
Operator ID: ALS Bottle#: 7 Worklist Smp#: 13

Purge Vol: 500.000 mL Dil. Factor: 1.0000

Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm) Detector MS SCAN

31 Methylene Chloride, CAS: 75-09-2



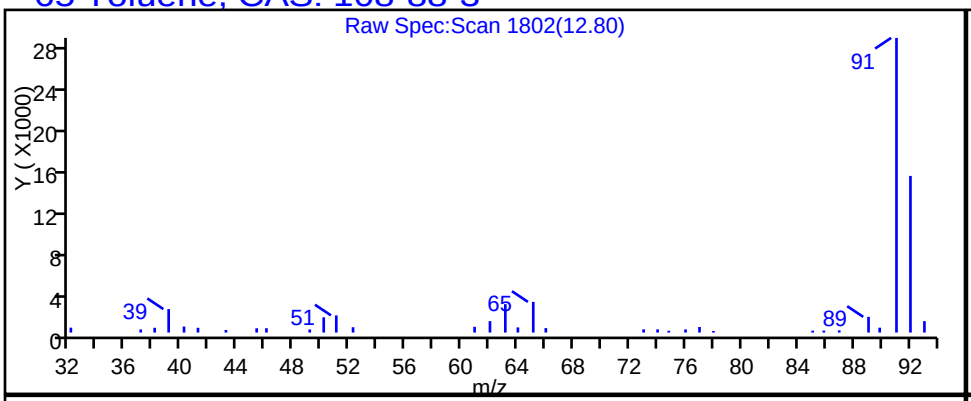
Report Date: 12-Jan-2018 10:15:46 Chrom Revision: 2.2 10-Jan-2018 22:54:36

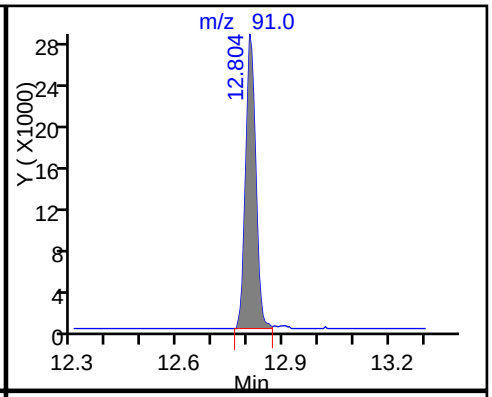
TestAmerica Knoxville

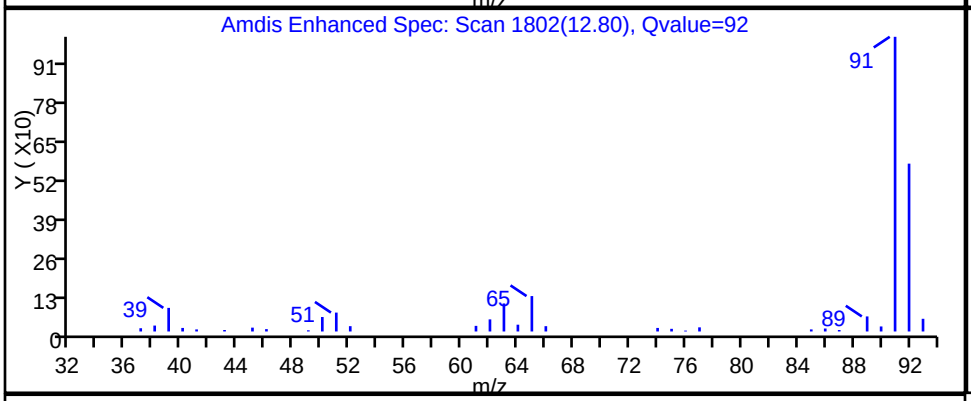
Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P107.D

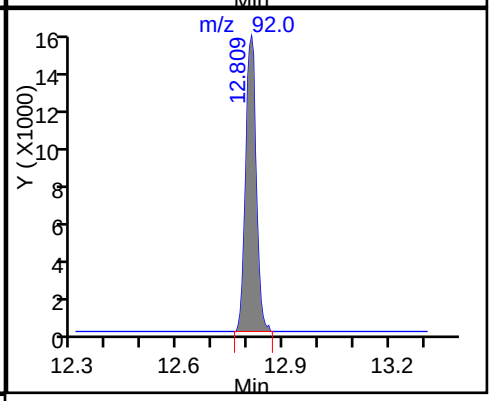
Injection Date:	11-Jan-2018 20:05:30	Instrument ID:	MR		
Lims ID:	140-10405-A-3	Lab Sample ID:	140-10405-3		
Client ID:	C-EFFLUENT				
Operator ID:		ALS Bottle#:	7	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

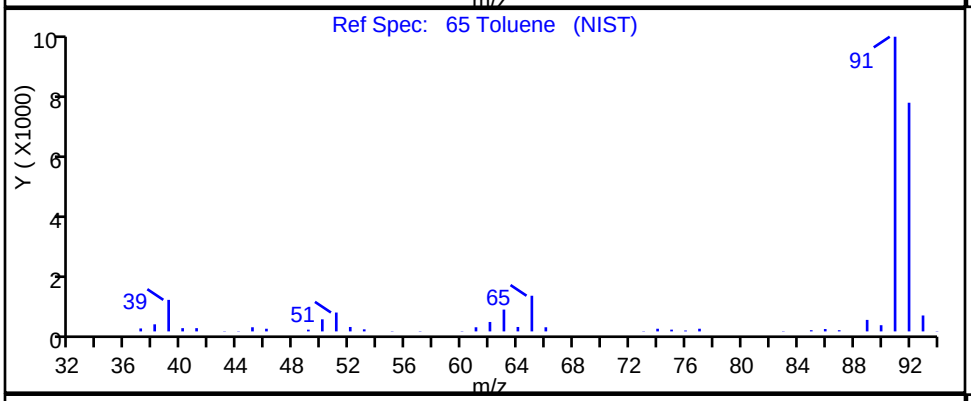
65 Toluene, CAS: 108-88-3

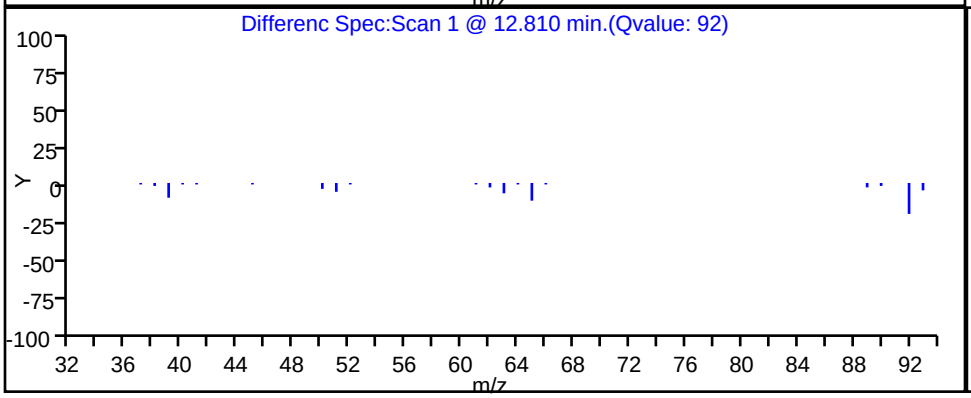


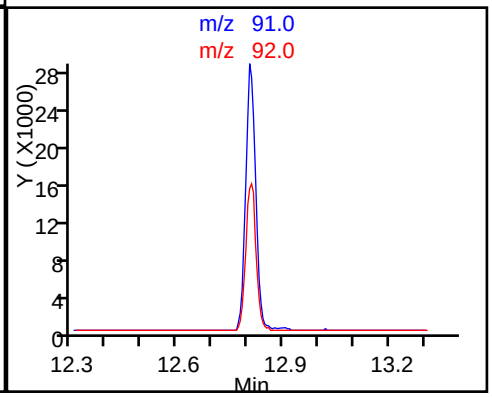








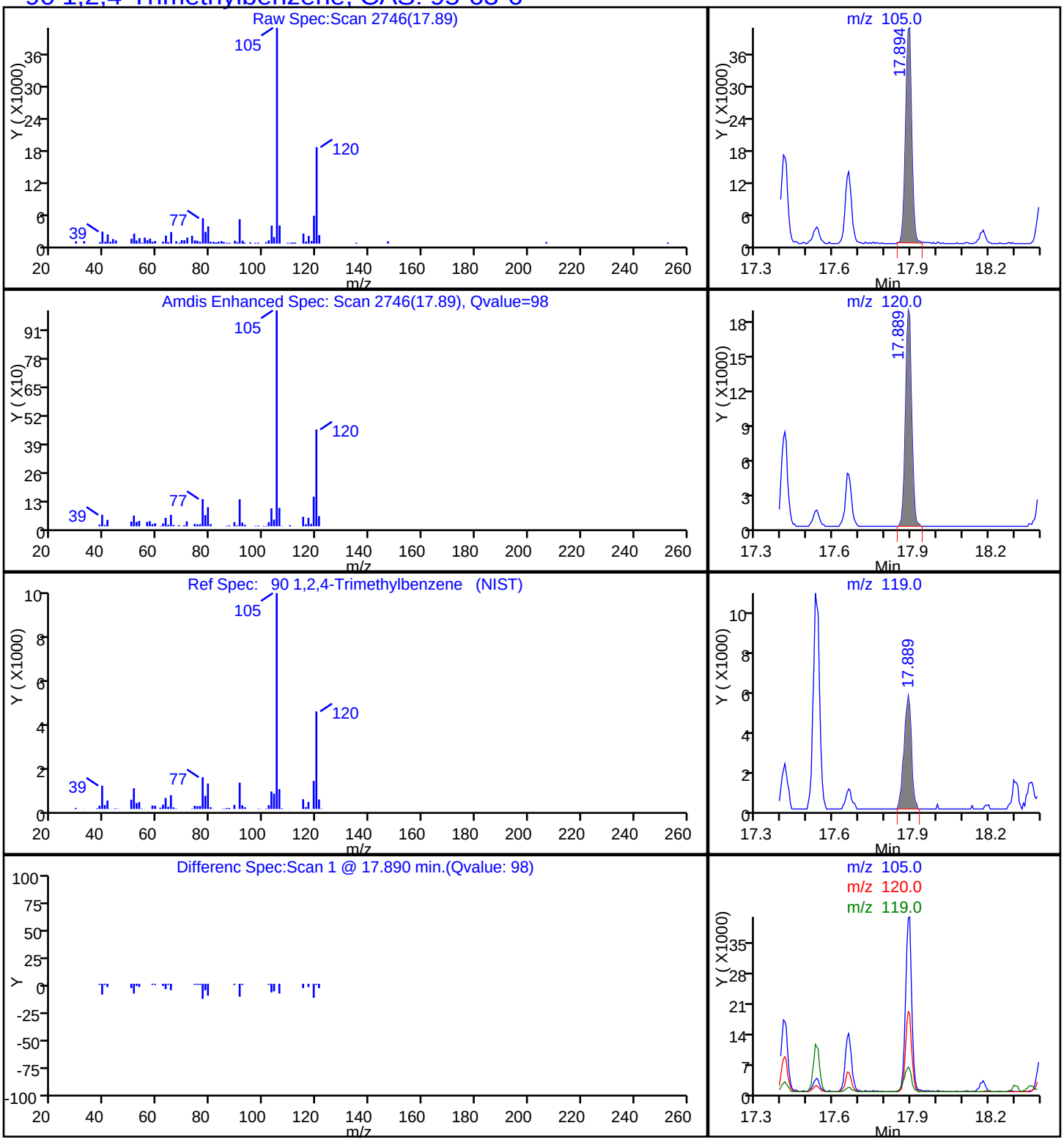




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P107.D		
Injection Date:	11-Jan-2018 20:05:30	Instrument ID:	MR
Lims ID:	140-10405-A-3	Lab Sample ID:	140-10405-3
Client ID:	C-EFFLUENT		
Operator ID:		ALS Bottle#:	7 Worklist Smp#: 13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

90 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

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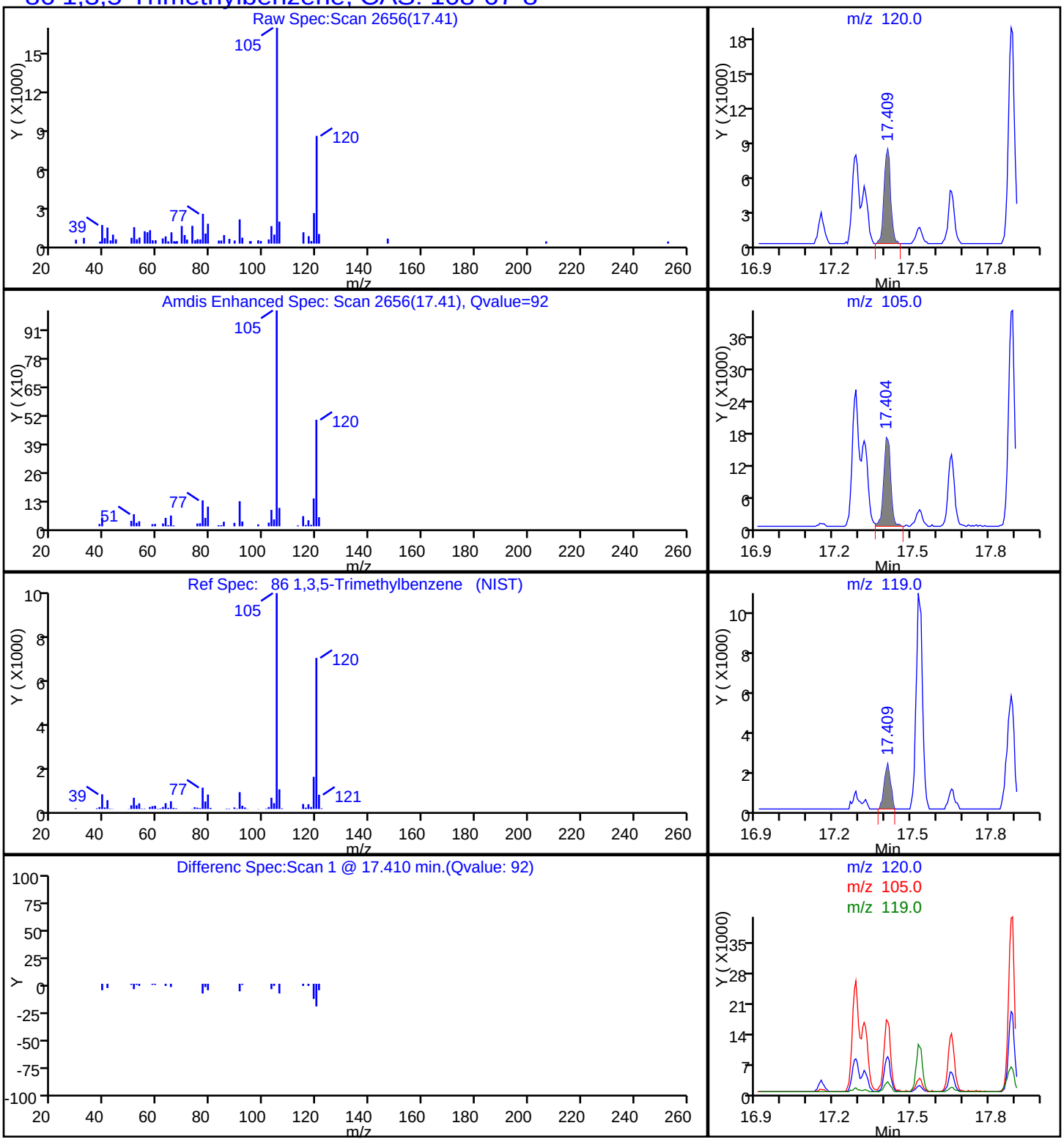
Lims ID:	140-10405-A-3	Lab Sample ID:	140-10405-3		
Client ID:	C-EFFLUENT				
Operator ID:		ALS Bottle#:	7	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

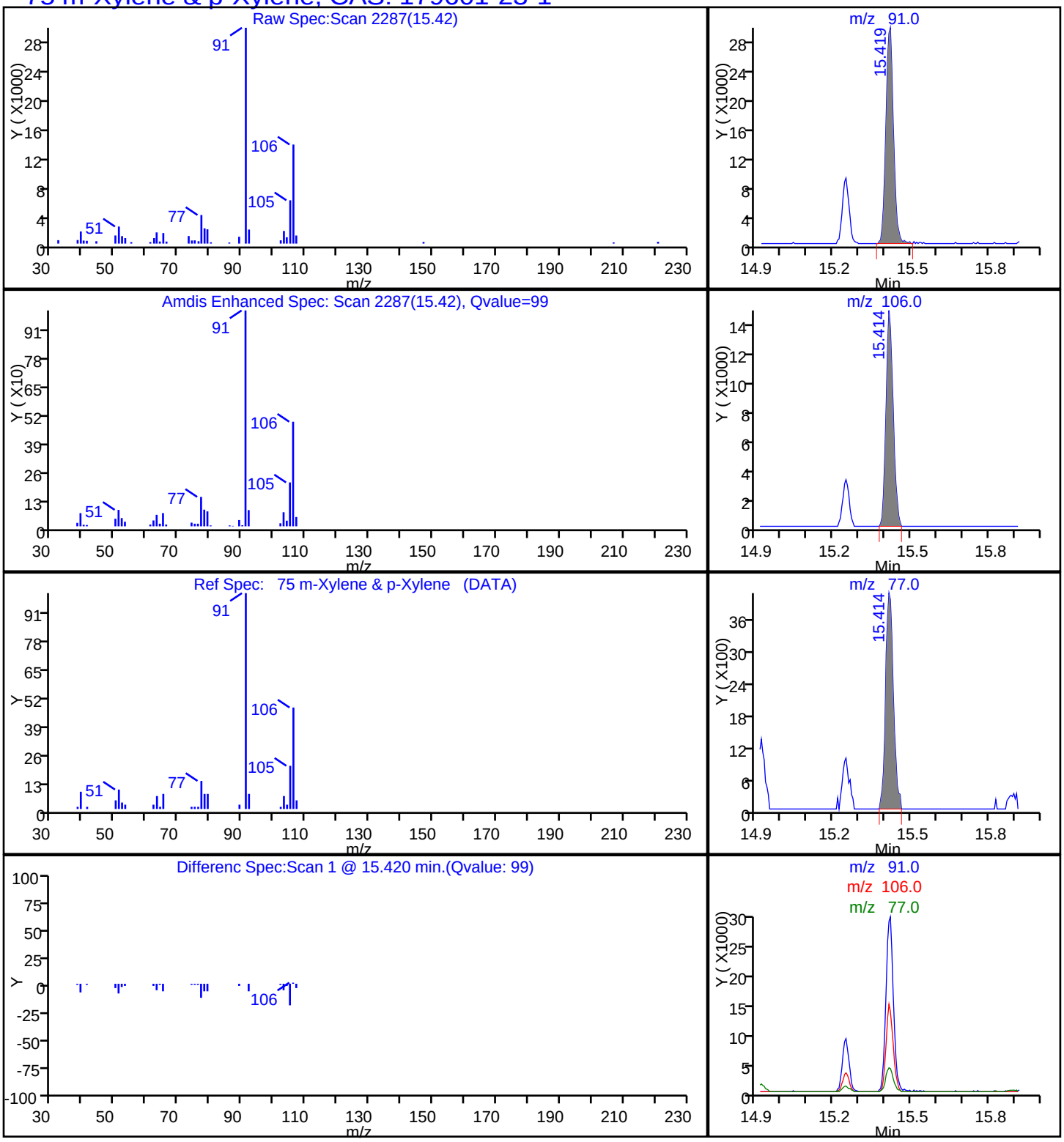
86 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P107.D		
Injection Date:	11-Jan-2018 20:05:30	Instrument ID:	MR
Lims ID:	140-10405-A-3	Lab Sample ID:	140-10405-3
Client ID:	C-EFFLUENT		
Operator ID:		ALS Bottle#:	7 Worklist Smp#: 13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

75 m-Xylene & p-Xylene, CAS: 179601-23-1



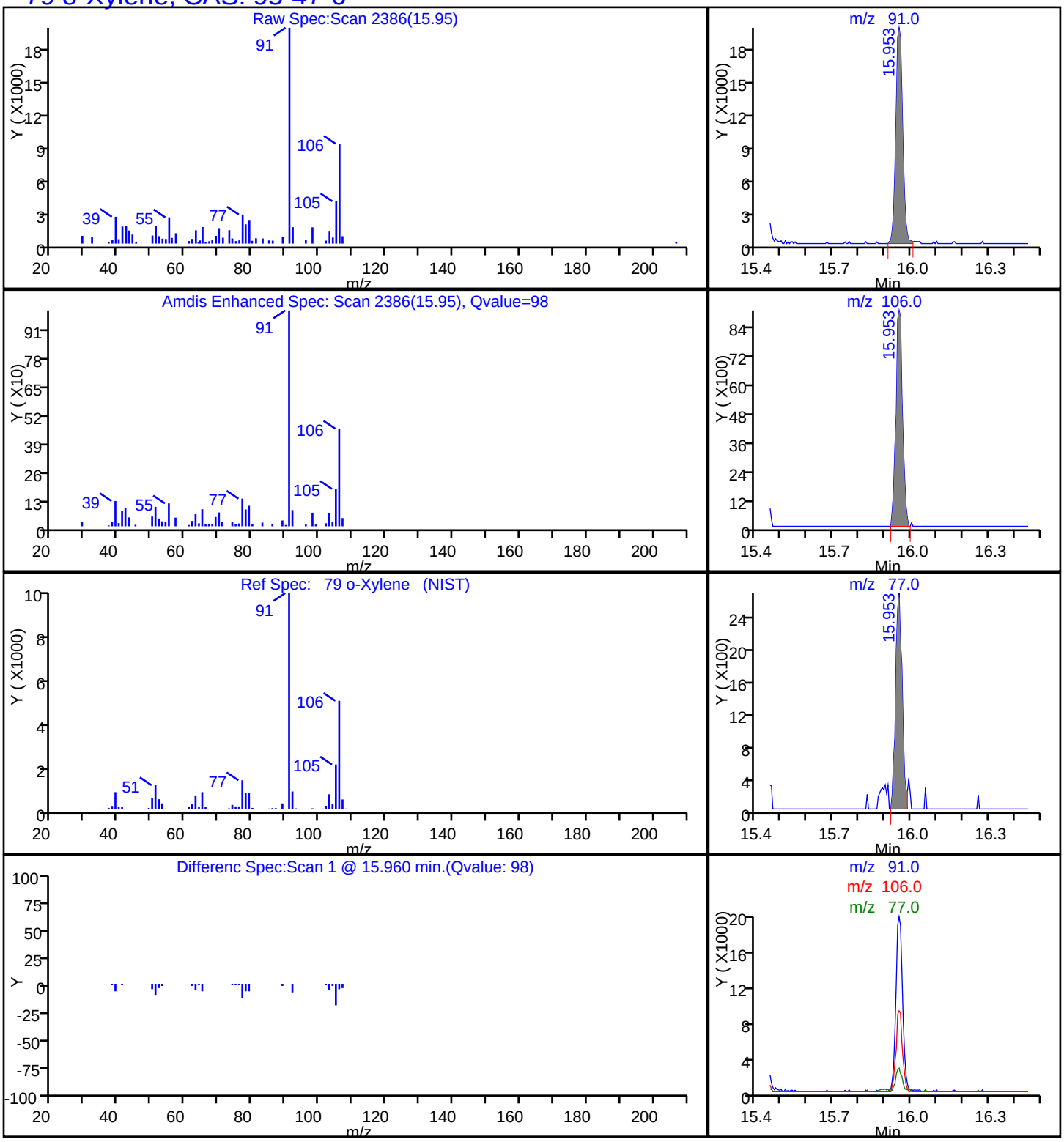
Report Date: 12-Jan-2018 10:15:46 Chrom Revision: 2.2 10-Jan-2018 22:54:36

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P107.D

Injection Date:	11-Jan-2018 20:05:30	Instrument ID:	MR
Lims ID:	140-10405-A-3	Lab Sample ID:	140-10405-3
Client ID:	C-EFFLUENT		
Operator ID:		ALS Bottle#:	7 Worklist Smp#: 13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

79 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1

SDG No.:

Client Sample ID: A-INFLUENT DL Lab Sample ID: 140-10405-4 DL

Matrix: Air Lab File ID: RA11P102.D

Analysis Method: TO 15 LL Date Collected: 01/09/2018 12:54

Sample wt/vol: 20(mL) Date Analyzed: 01/11/2018 16:09

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 17352 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	131.39	180		1.0	0.35

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1

SDG No.:

Client Sample ID: A-INFLUENT DL Lab Sample ID: 140-10405-4 DL

Matrix: Air Lab File ID: RA11P102.D

Analysis Method: TO 15 LL Date Collected: 01/09/2018 12:54

Sample wt/vol: 20(mL) Date Analyzed: 01/11/2018 16:09

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 17352 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	131.39	940		5.4	1.9

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P102.D				
Lims ID:	140-10405-A-4				
Client ID:	A-INFLUENT				
Sample Type:	Client				
Inject. Date:	11-Jan-2018 16:09:30	ALS Bottle#:	2	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007100-008				
Misc. Info.:	140-10405-a-4				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	12-Jan-2018 10:17:51	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				
First Level Reviewer: tajh		Date:	12-Jan-2018 10:08:54		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.724	7.779	-0.055	69	259260	4.00	
* 2 1,4-Difluorobenzene	114	9.865	9.918	-0.053	94	1450833	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.864	14.903	-0.039	87	1233172	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.579	16.610	-0.031	91	948093	4.20	
8 Dichlorodifluoromethane	85	3.545	3.554	-0.009	99	7225	0.0284	
27 1,1-Dichloroethene	96	5.233	5.274	-0.041	100	87660	0.8487	
37 1,1-Dichloroethane	63	6.565	6.609	-0.044	99	19195	0.1021	
41 cis-1,2-Dichloroethene	96	7.444	7.492	-0.048	91	64346	0.5922	
45 1,1,1-Trichloroethane	97	8.717	8.769	-0.052	94	787534	3.09	
48 Benzene	78	9.288	9.341	-0.053	96	62335	0.2142	
56 Trichloroethene	130	10.615	10.667	-0.052	99	982325	7.00	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

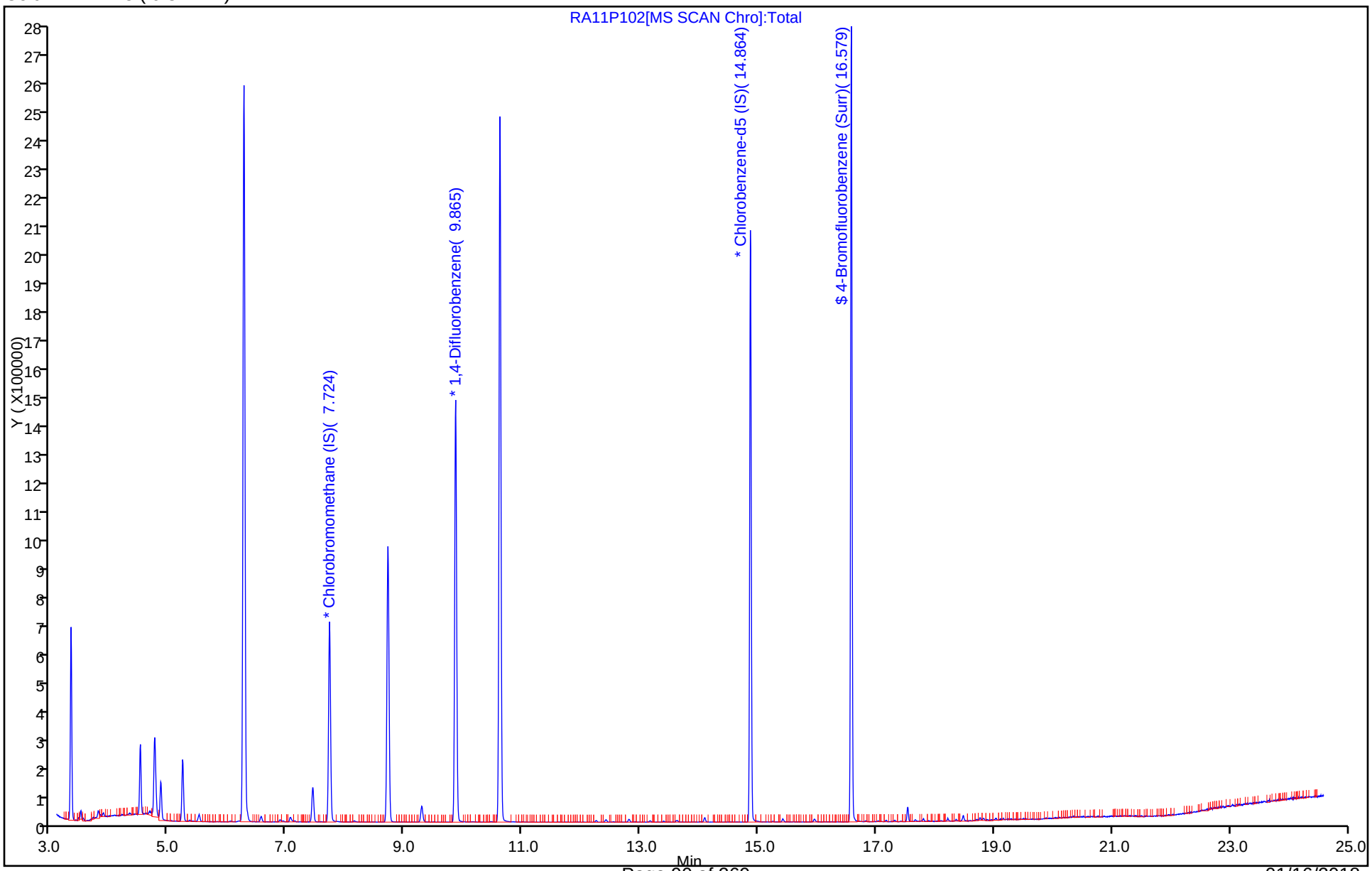
Report Date: 12-Jan-2018 10:18:31 Chrom Revision: 2.2 10-Jan-2018 22:54:36

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P102.D

Injection Date:	11-Jan-2018 16:09:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10405-A-4	Lab Sample ID:	140-10405-4	Worklist Smp#:	8
Client ID:	A-INFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P102.D				
Lims ID:	140-10405-A-4				
Client ID:	A-INFLUENT				
Sample Type:	Client				
Inject. Date:	11-Jan-2018 16:09:30	ALS Bottle#:	2	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007100-008				
Misc. Info.:	140-10405-a-4				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	12-Jan-2018 10:17:51	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				
First Level Reviewer: tajh		Date:	12-Jan-2018 10:08:54		

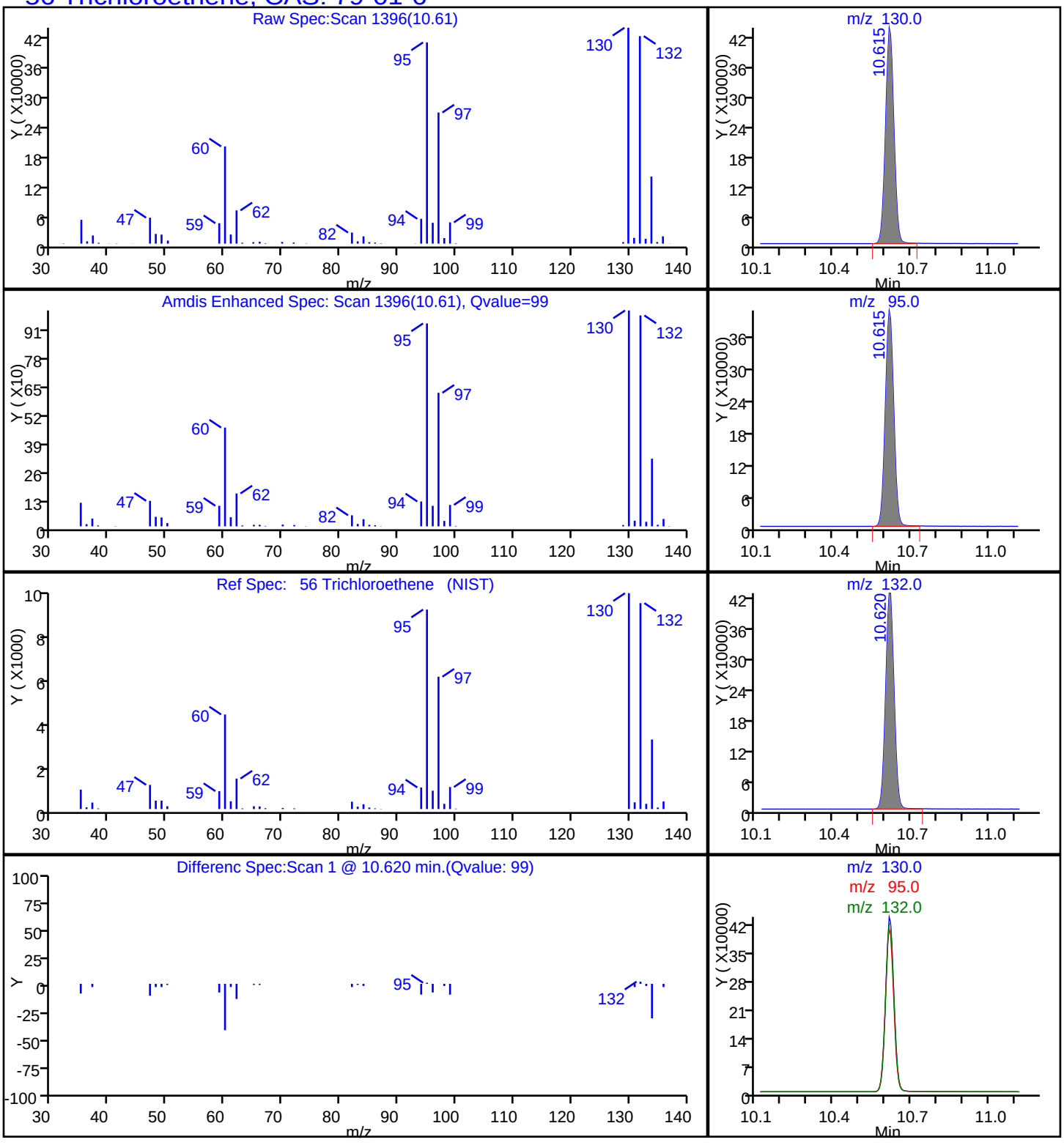
Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.20	104.89

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P102.D

Injection Date:	11-Jan-2018 16:09:30	Instrument ID:	MR		
Lims ID:	140-10405-A-4	Lab Sample ID:	140-10405-4		
Client ID:	A-INFLUENT				
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

56 Trichloroethene, CAS: 79-01-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10405-1

SDG No.:

Client Sample ID: A-INFLUENT | Lab Sample ID: 140-10405-4

Matrix: Air | Lab File ID: RA11P102R.D

Analysis Method: TO 15 LL | Date Collected: 01/09/2018 12:54

Sample wt/vol: 100(mL) | Date Analyzed: 01/12/2018 01:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17352 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	5.1		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.080	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.49		0.40	0.075
67-66-3	Chloroform	119.38	0.25	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	15		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	2.3		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	20		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.14	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.080	J	0.40	0.080
108-88-3	Toluene	92.14	0.67		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.29	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	71		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	*Trichloroethene*	*131.39*	*150*	*E*	*0.20*	*0.070*
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.95		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	110		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10405-1

SDG No.:

Client Sample ID: A-INFLUENT | Lab Sample ID: 140-10405-4

Matrix: Air | Lab File ID: RA11P102R.D

Analysis Method: TO 15 LL | Date Collected: 01/09/2018 12:54

Sample wt/vol: 100(mL) | Date Analyzed: 01/12/2018 01:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17352 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	16		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.50	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	1.2	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	58		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	9.4		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	79		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.59	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.55	J	2.7	0.54
108-88-3	Toluene	92.14	2.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	1.1	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	390		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	*Trichloroethene*	*131.39*	*800*	*E*	*1.1*	*0.38*
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.1		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	110		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P102R.D
Lims ID: 140-10405-A-4
Client ID: A-INFLUENT
Sample Type: Client
Inject. Date: 12-Jan-2018 01:44:30 ALS Bottle#: 2 Worklist Smp#: 20
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007100-020
Misc. Info.: 140-10405-a-4
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 12-Jan-2018 10:15:00 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 12-Jan-2018 09:22:50

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.724	7.779	-0.055	68	277521	4.00	
* 2 1,4-Difluorobenzene	114	9.870	9.918	-0.048	94	1537836	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.869	14.903	-0.034	87	1241722	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.579	16.610	-0.032	91	996720	4.38	
6 Chlorodifluoromethane	67	3.475	3.505	-0.030	94	3412	0.0979	
8 Dichlorodifluoromethane	85	3.518	3.554	-0.036	99	22507	0.0827	
27 1,1-Dichloroethene	96	5.222	5.274	-0.052	100	438807	3.97	
34 trans-1,2-Dichloroethene	96	6.214	6.253	-0.039	93	6600	0.0580	
37 1,1-Dichloroethane	63	6.565	6.609	-0.044	99	93574	0.4648	
41 cis-1,2-Dichloroethene	96	7.438	7.492	-0.054	90	340023	2.92	
43 Chloroform	83	7.757	7.811	-0.054	94	13335	0.0509	
45 1,1,1-Trichloroethane	97	8.716	8.769	-0.053	94	3889690	14.2	
48 Benzene	78	9.293	9.341	-0.048	96	315351	1.02	
51 Carbon tetrachloride	117	9.331	9.378	-0.047	91	4211	0.0160	
56 Trichloroethene	130	10.620	10.667	-0.047	98	4435102	29.8	E
65 Toluene	91	12.804	12.845	-0.041	92	46683	0.1343	
71 Tetrachloroethene	129	14.012	14.048	-0.036	94	2189	0.0161	
74 Ethylbenzene	91	15.247	15.278	-0.031	98	12356	0.0272	
75 m-Xylene & p-Xylene	91	15.419	15.452	-0.033	99	42361	0.1214	
79 o-Xylene	91	15.953	15.986	-0.033	98	25396	0.0681	
S 114 Xylenes, Total	100				0		0.1895	

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

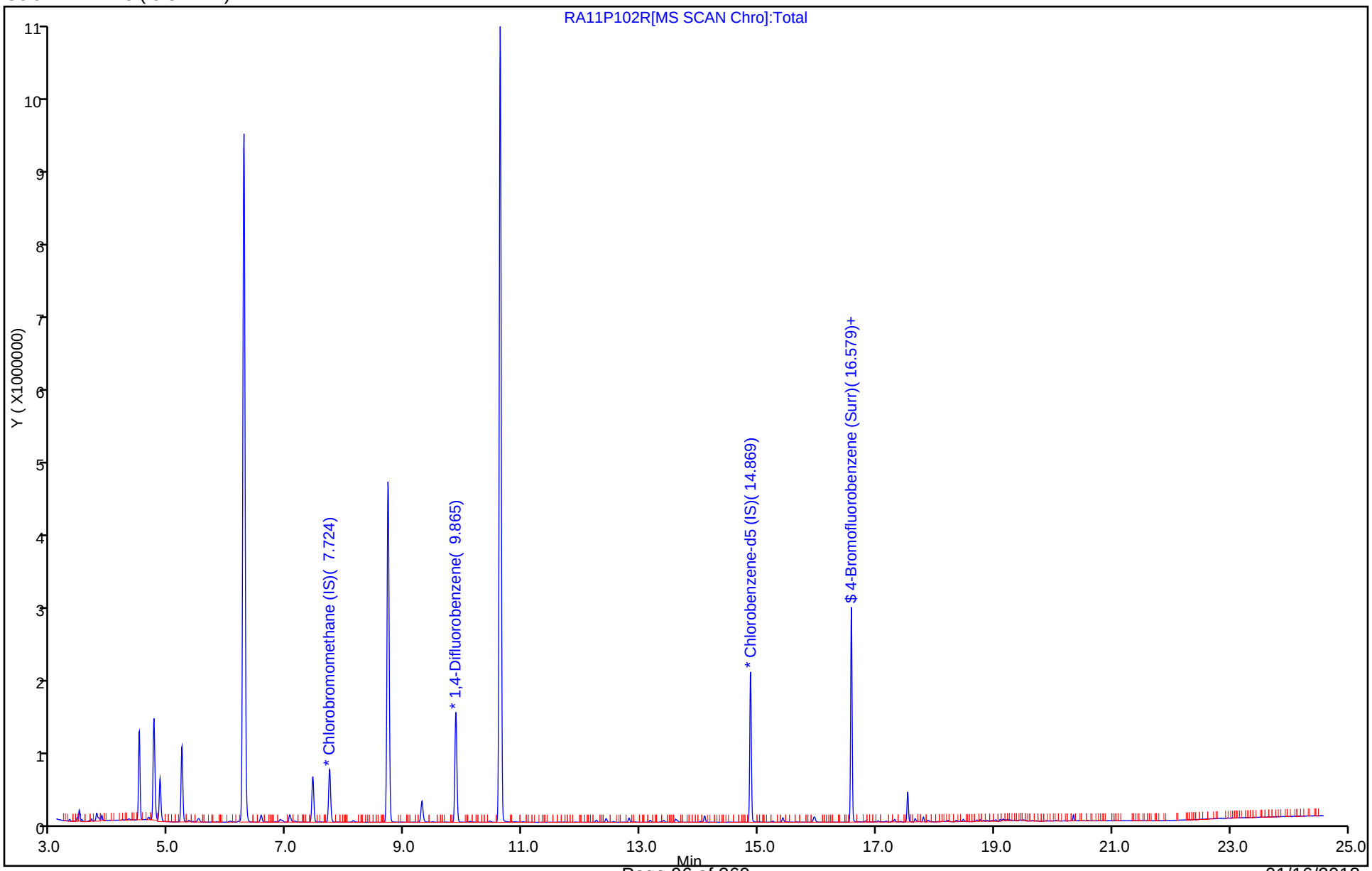
Report Date: 12-Jan-2018 10:16:06 Chrom Revision: 2.2 10-Jan-2018 22:54:36

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P102R.D

Injection Date:	12-Jan-2018 01:44:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10405-A-4	Lab Sample ID:	140-10405-4	Worklist Smp#:	20
Client ID:	A-INFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P102R.D				
Lims ID:	140-10405-A-4				
Client ID:	A-INFLUENT				
Sample Type:	Client				
Inject. Date:	12-Jan-2018 01:44:30	ALS Bottle#:	2	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007100-020				
Misc. Info.:	140-10405-a-4				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	12-Jan-2018 10:15:00	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				
First Level Reviewer: tajh		Date:	12-Jan-2018 09:22:50		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.38	109.51

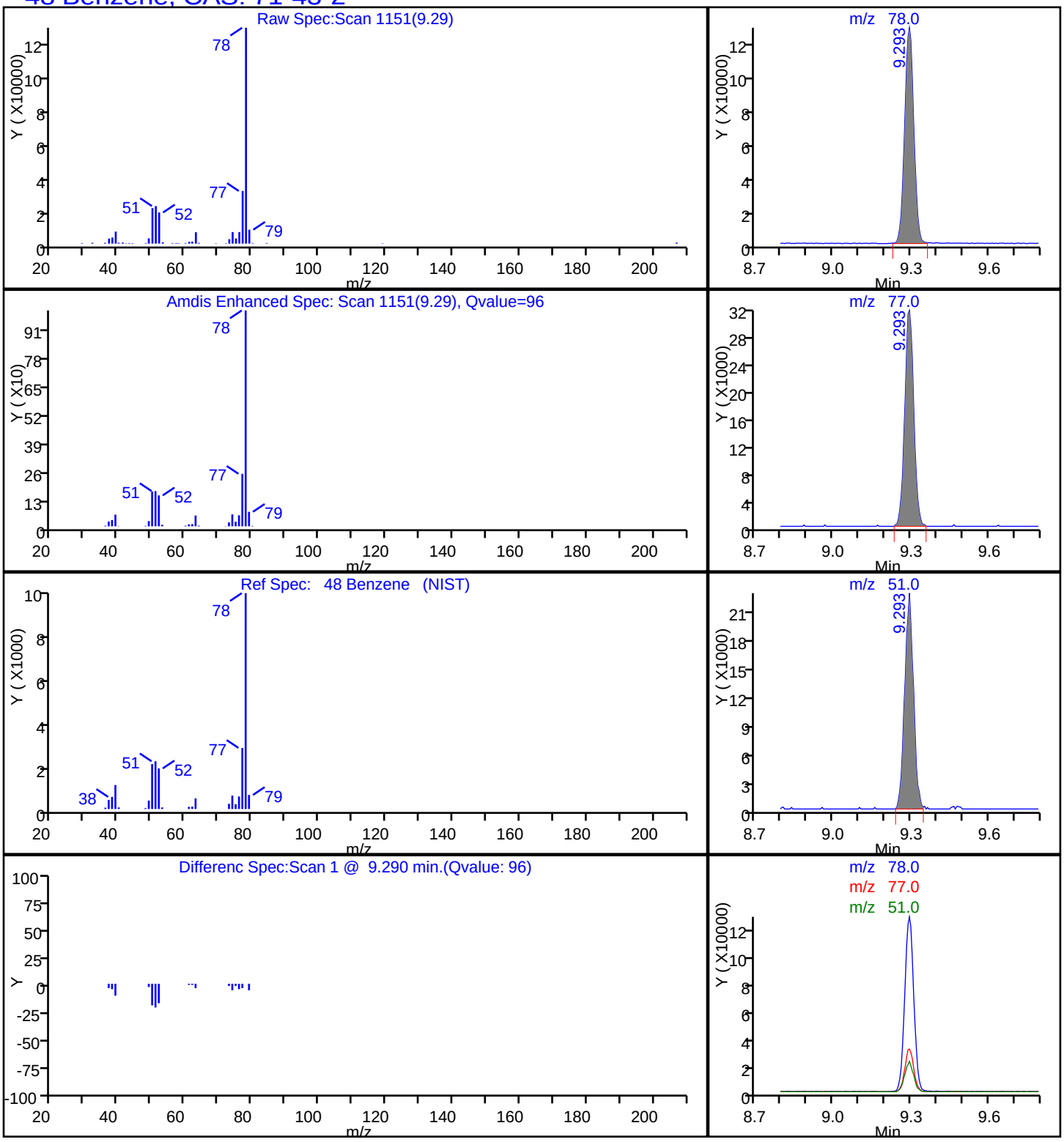
Report Date: 12-Jan-2018 10:16:06 Chrom Revision: 2.2 10-Jan-2018 22:54:36

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P102R.D

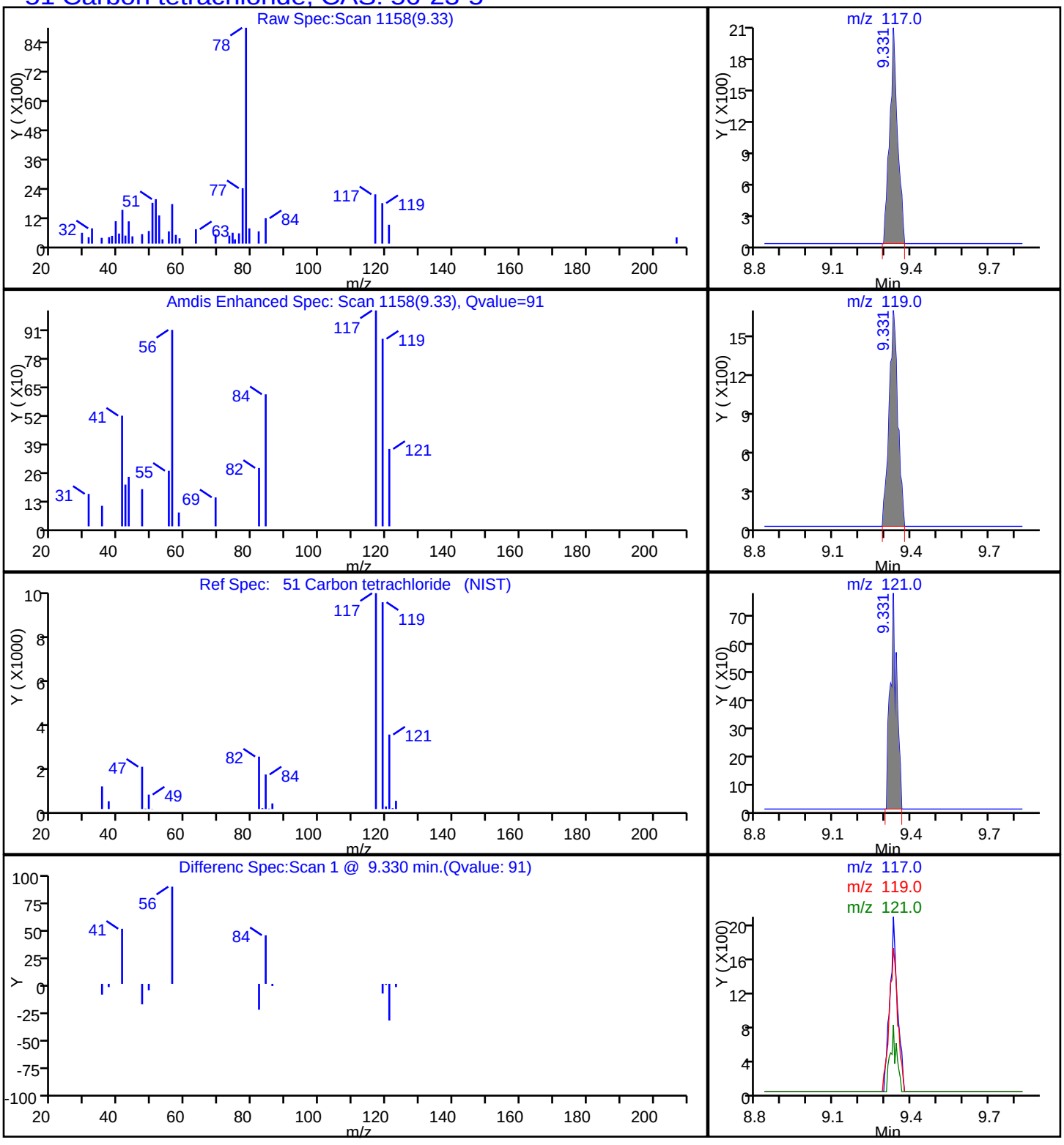
Injection Date:	12-Jan-2018 01:44:30	Instrument ID:	MR		
Lims ID:	140-10405-A-4	Lab Sample ID:	140-10405-4		
Client ID:	A-INFLUENT				
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

48 Benzene, CAS: 71-43-2



Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P102R.D
Injection Date: 12-Jan-2018 01:44:30 Instrument ID: MR
Lims ID: 140-10405-A-4 Lab Sample ID: 140-10405-4
Client ID: A-INFLUENT
Operator ID: ALS Bottle#: 2 Worklist Smp#: 20
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

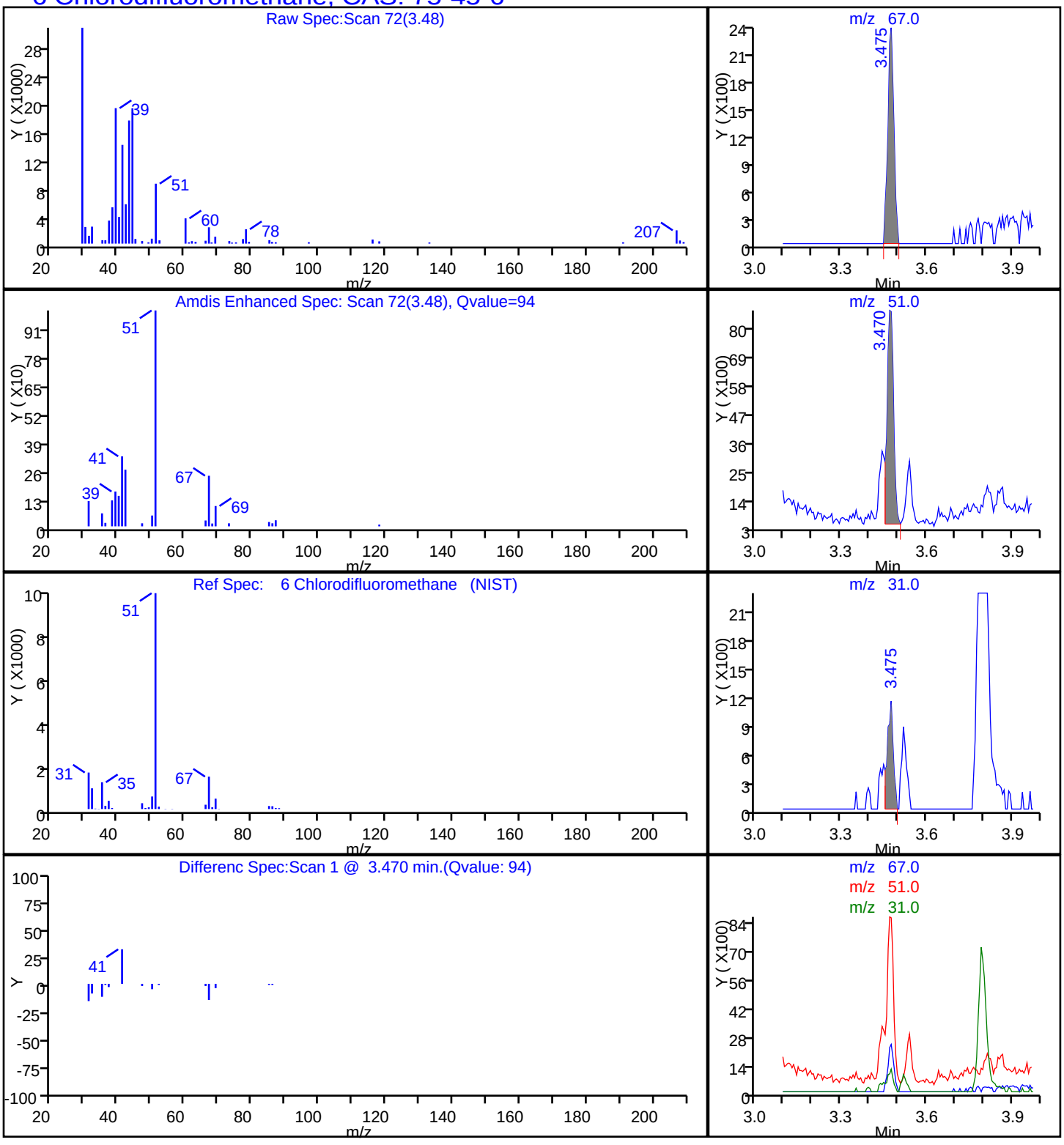
51 Carbon tetrachloride, CAS: 56-23-5



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P102R.D				
Injection Date:	12-Jan-2018 01:44:30	Instrument ID:	MR		
Lims ID:	140-10405-A-4	Lab Sample ID:	140-10405-4		
Client ID:	A-INFLUENT				
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

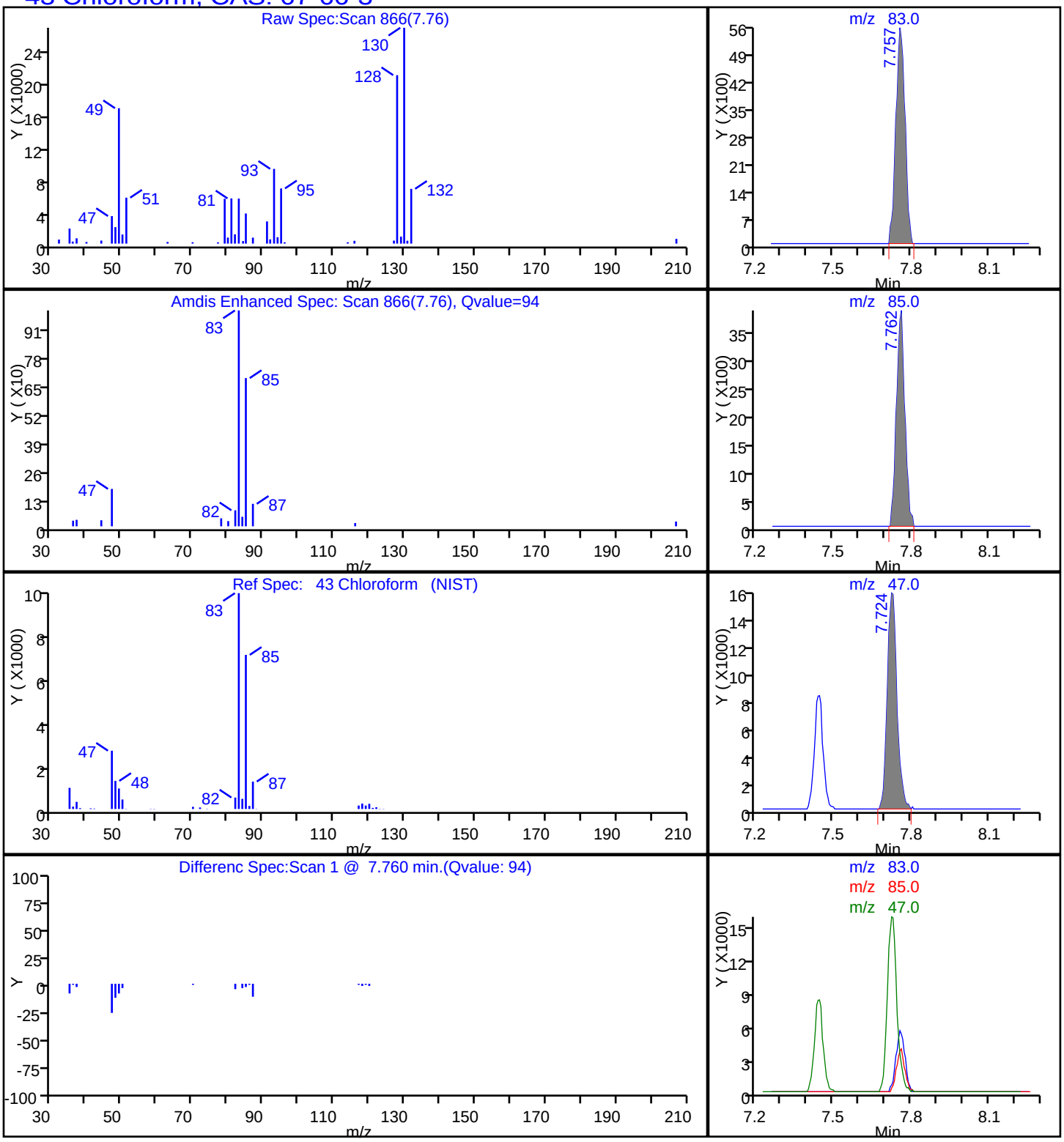
6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P102R.D				
Injection Date:	12-Jan-2018 01:44:30	Instrument ID:	MR		
Lims ID:	140-10405-A-4	Lab Sample ID:	140-10405-4		
Client ID:	A-INFLUENT				
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

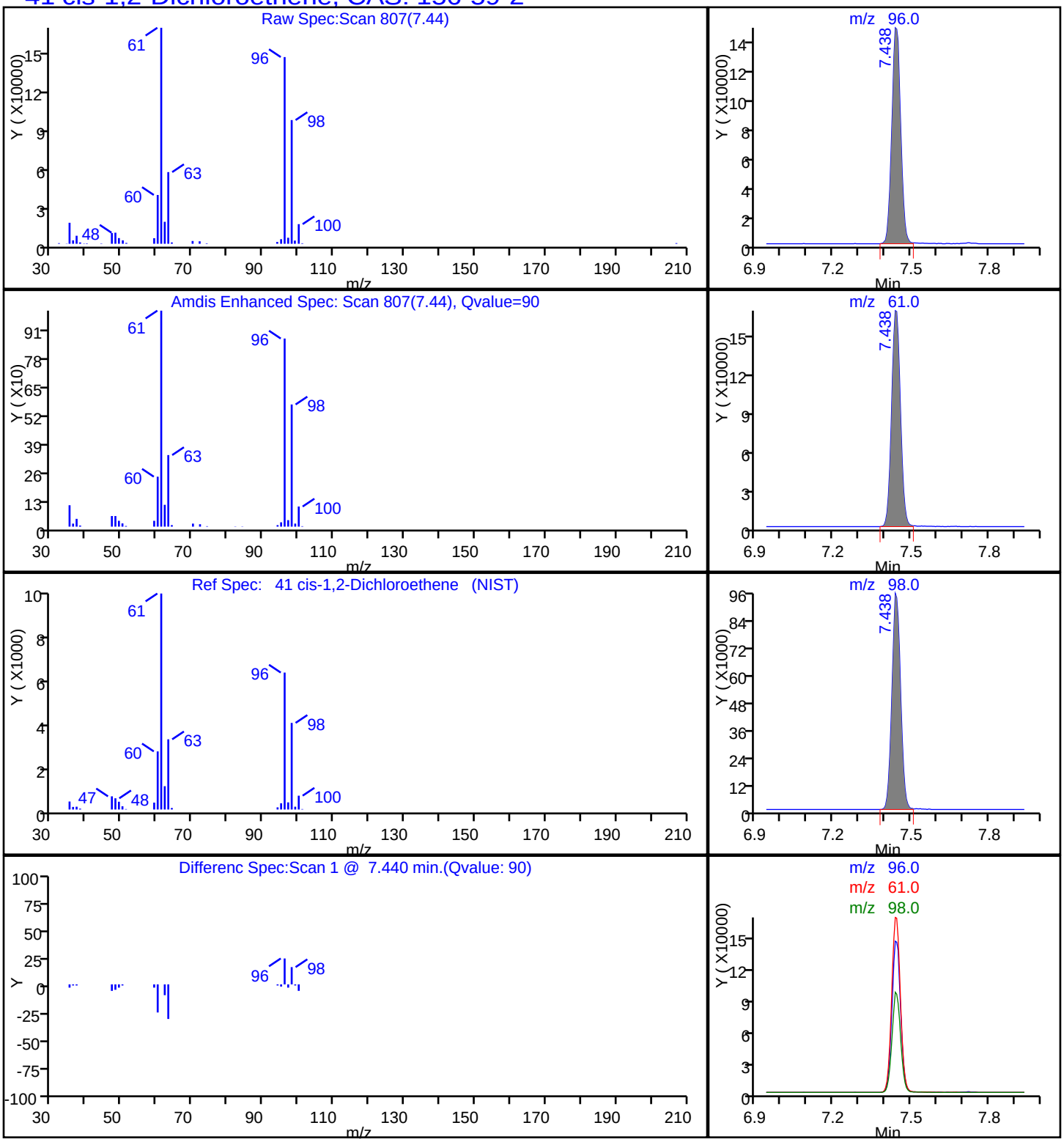
43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

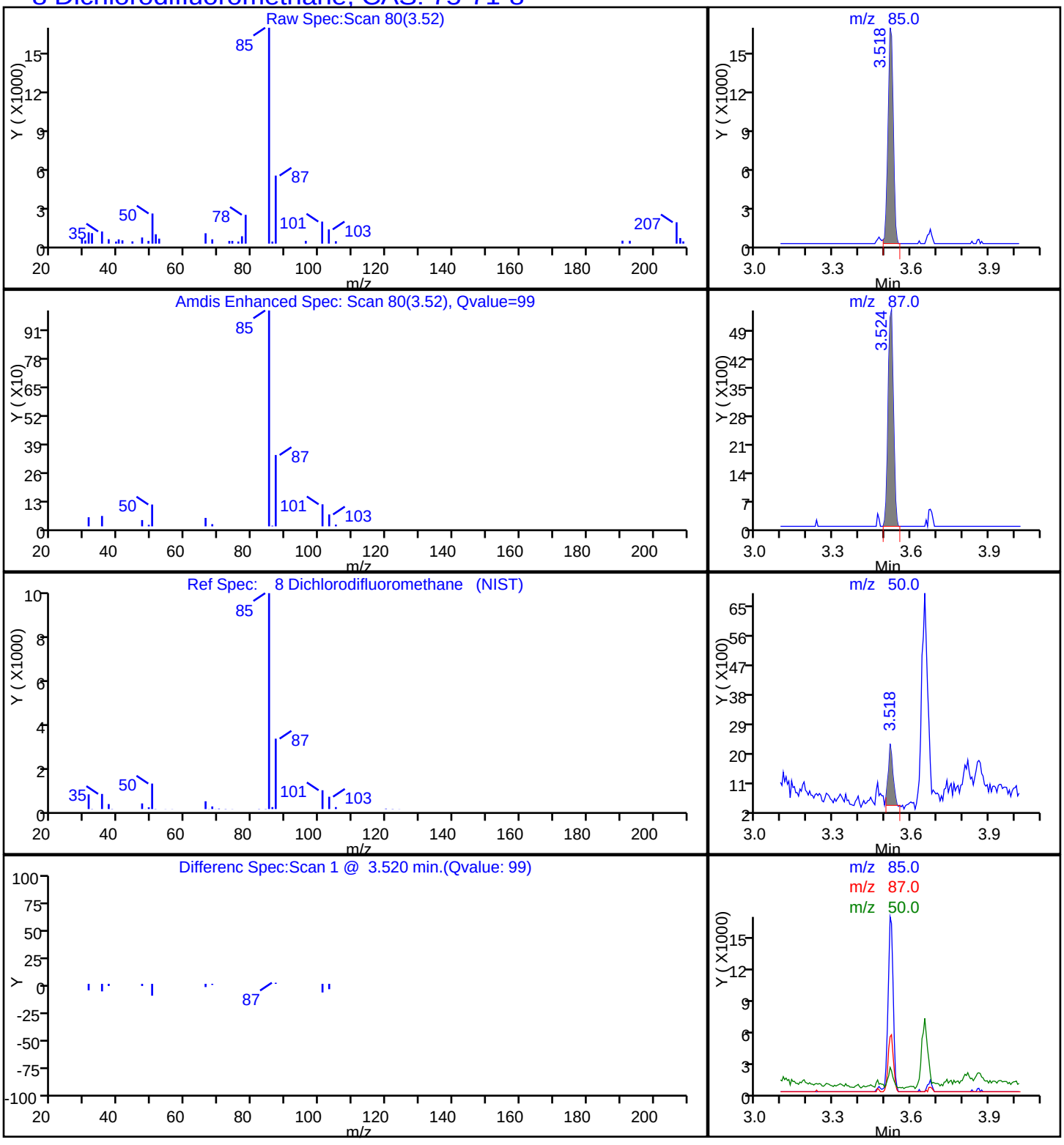
Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P102R.D				
Injection Date:	12-Jan-2018 01:44:30	Instrument ID:	MR		
Lims ID:	140-10405-A-4	Lab Sample ID:	140-10405-4		
Client ID:	A-INFLUENT				
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

41 cis-1,2-Dichloroethene, CAS: 156-59-2



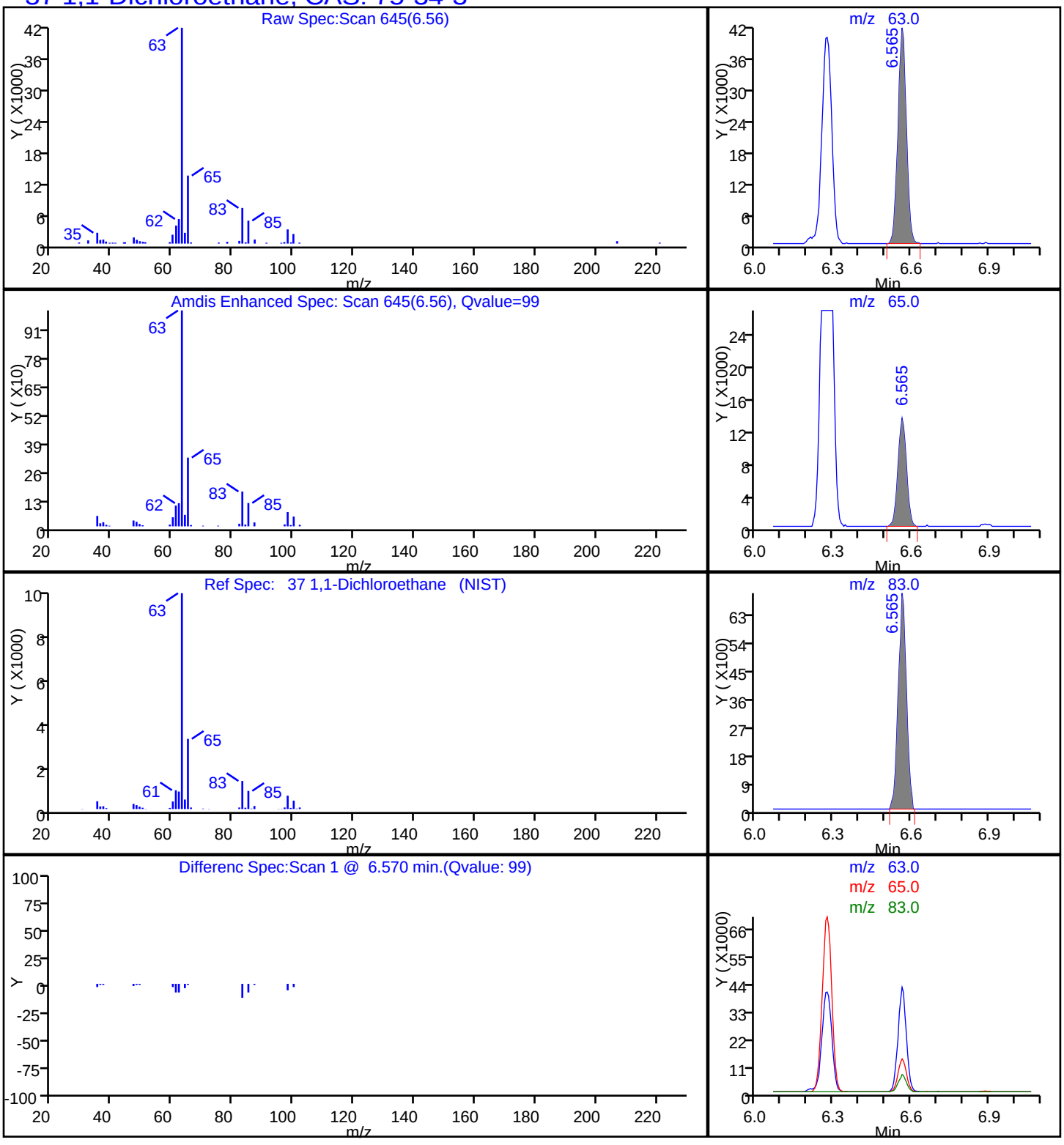
Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P102R.D
Injection Date: 12-Jan-2018 01:44:30 Instrument ID: MR
Lims ID: 140-10405-A-4 Lab Sample ID: 140-10405-4
Client ID: A-INFLUENT
Operator ID: ALS Bottle#: 2 Worklist Smp#: 20
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P102R.D
Injection Date: 12-Jan-2018 01:44:30 Instrument ID: MR
Lims ID: 140-10405-A-4 Lab Sample ID: 140-10405-4
Client ID: A-INFLUENT
Operator ID: ALS Bottle#: 2 Worklist Smp#: 20
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

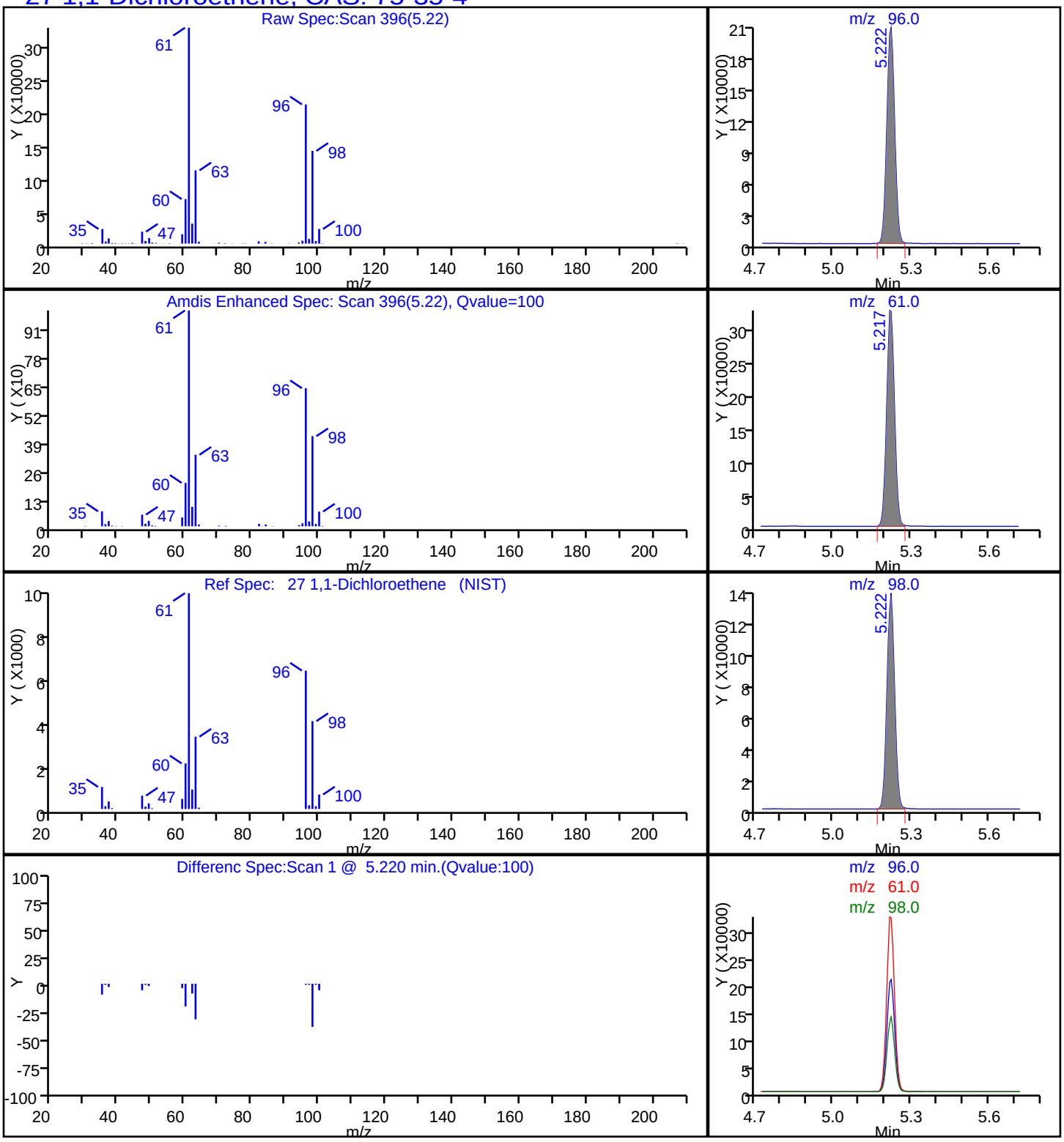
37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P102R.D		
Injection Date:	12-Jan-2018 01:44:30	Instrument ID:	MR
Lims ID:	140-10405-A-4	Lab Sample ID:	140-10405-4
Client ID:	A-INFLUENT		
Operator ID:		ALS Bottle#:	2 Worklist Smp#: 20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

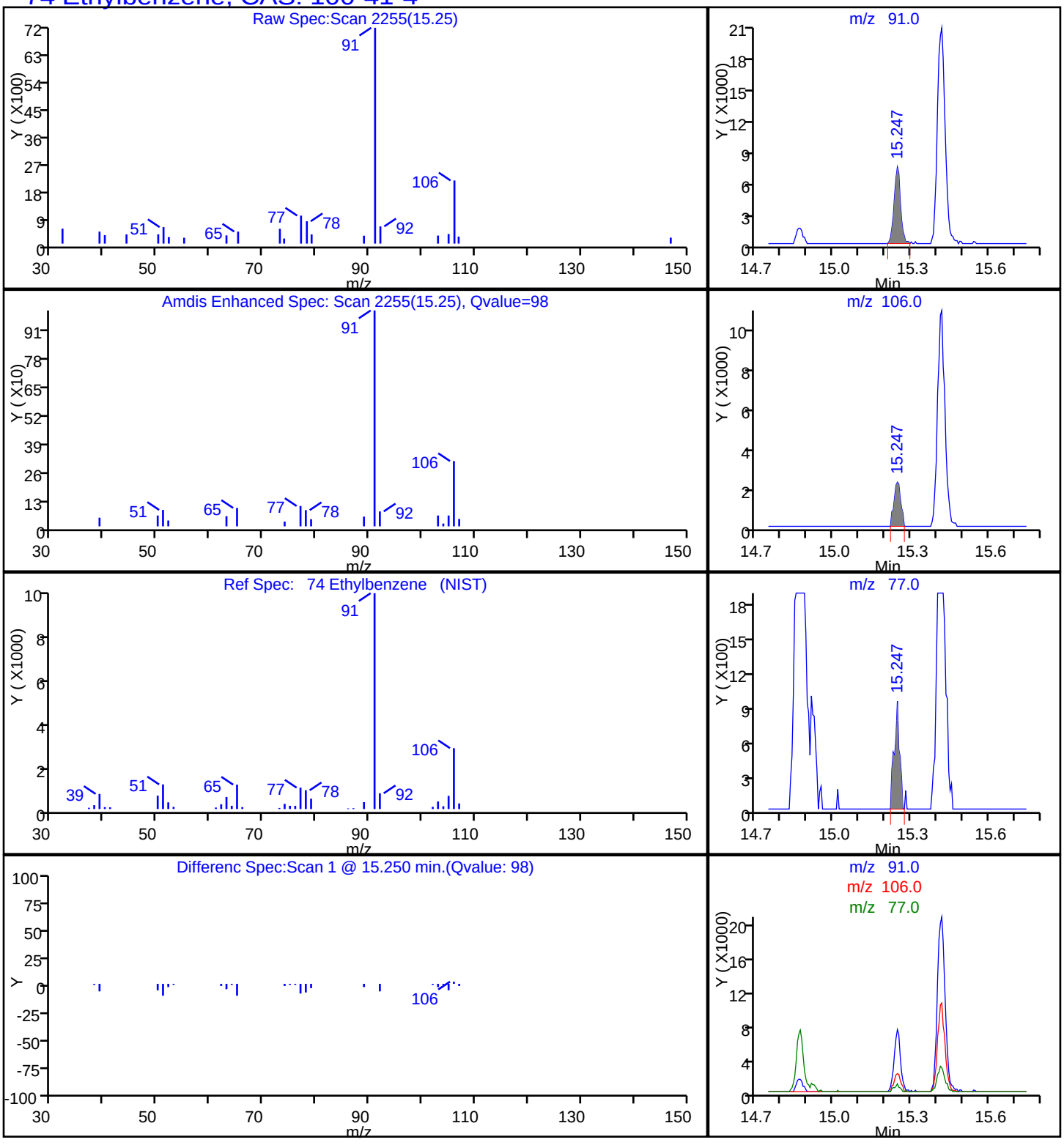
27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

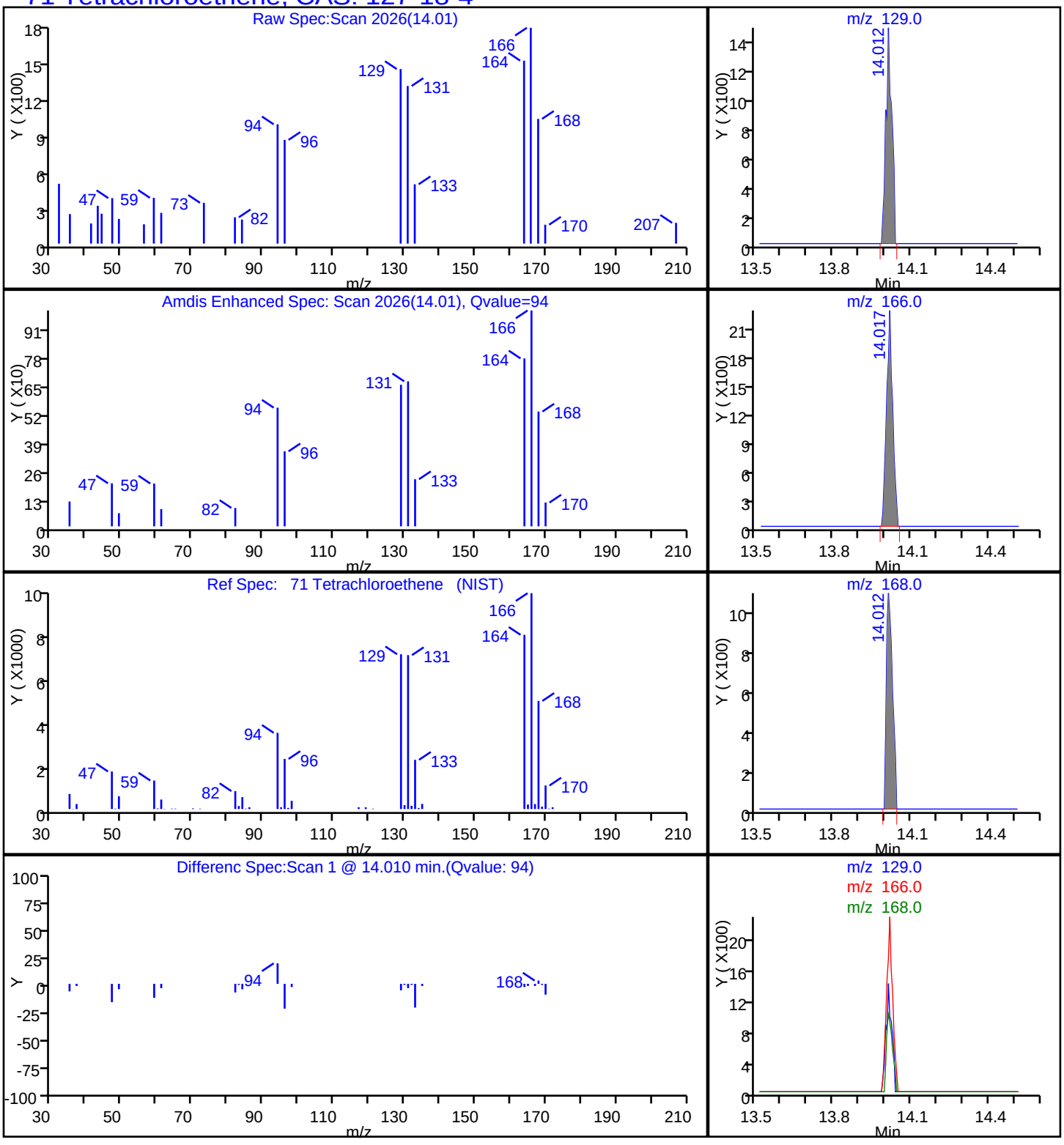
Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P102R.D		
Injection Date:	12-Jan-2018 01:44:30	Instrument ID:	MR
Lims ID:	140-10405-A-4	Lab Sample ID:	140-10405-4
Client ID:	A-INFLUENT		
Operator ID:		ALS Bottle#:	2 Worklist Smp#: 20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

74 Ethylbenzene, CAS: 100-41-4



Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P102R.D
Injection Date: 12-Jan-2018 01:44:30 Instrument ID: MR
Lims ID: 140-10405-A-4 Lab Sample ID: 140-10405-4
Client ID: A-INFLUENT
Operator ID: ALS Bottle#: 2 Worklist Smp#: 20
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

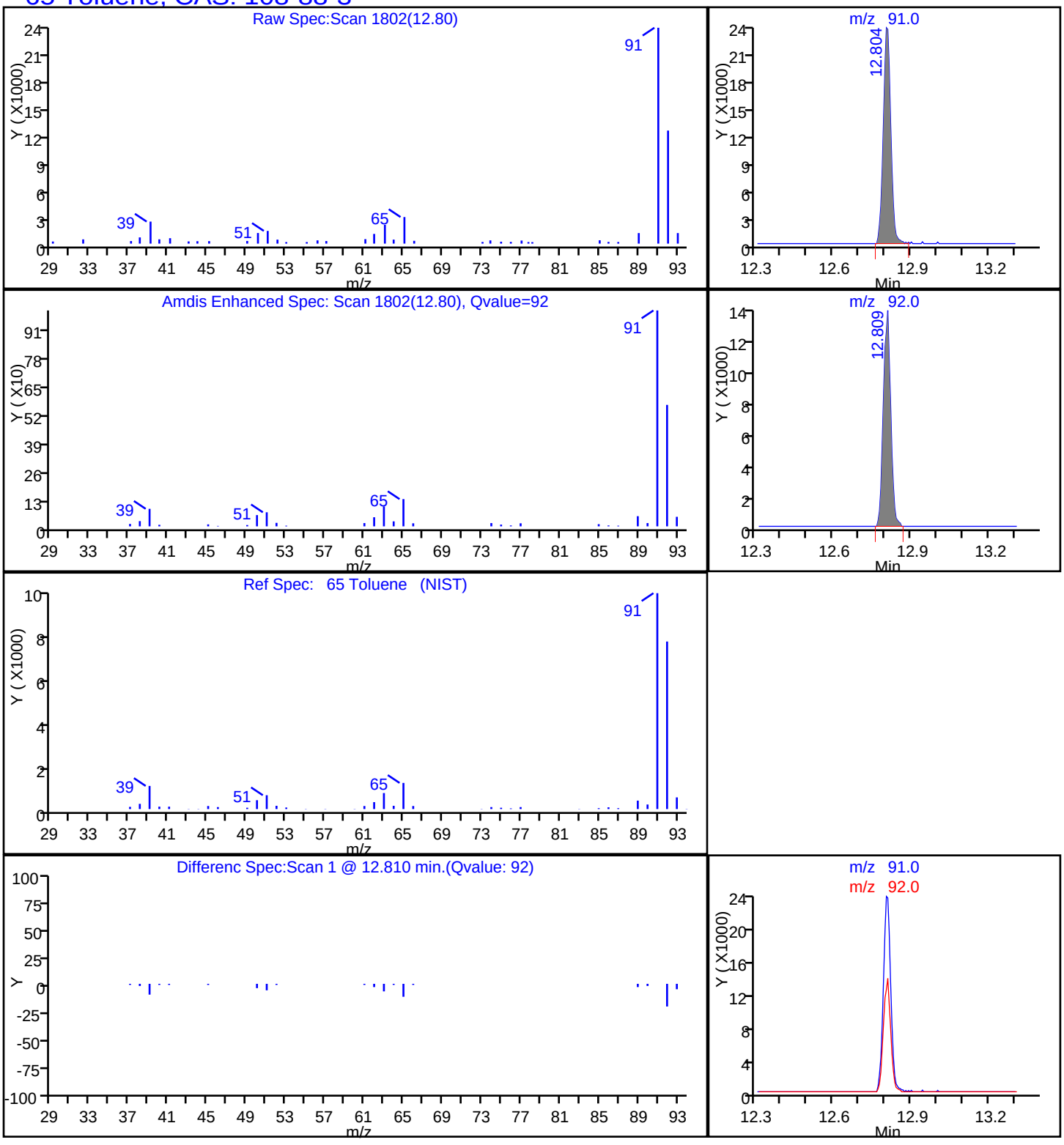
71 Tetrachloroethene, CAS: 127-18-4



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P102R.D		
Injection Date:	12-Jan-2018 01:44:30	Instrument ID:	MR
Lims ID:	140-10405-A-4	Lab Sample ID:	140-10405-4
Client ID:	A-INFLUENT		
Operator ID:		ALS Bottle#:	2 Worklist Smp#: 20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

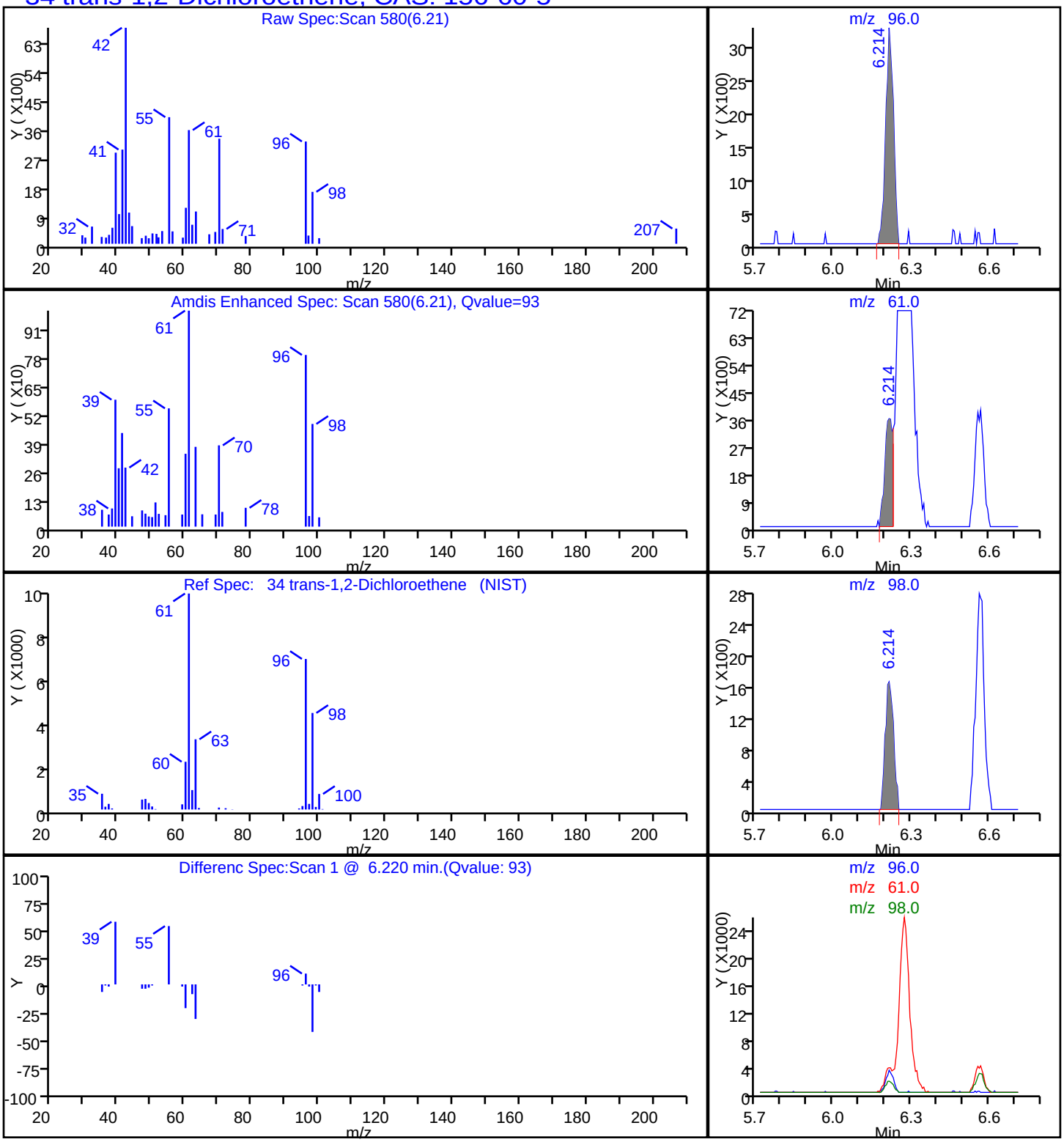
65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P102R.D		
Injection Date:	12-Jan-2018 01:44:30	Instrument ID:	MR
Lims ID:	140-10405-A-4	Lab Sample ID:	140-10405-4
Client ID:	A-INFLUENT		
Operator ID:		ALS Bottle#:	2 Worklist Smp#: 20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

34 trans-1,2-Dichloroethene, CAS: 156-60-5

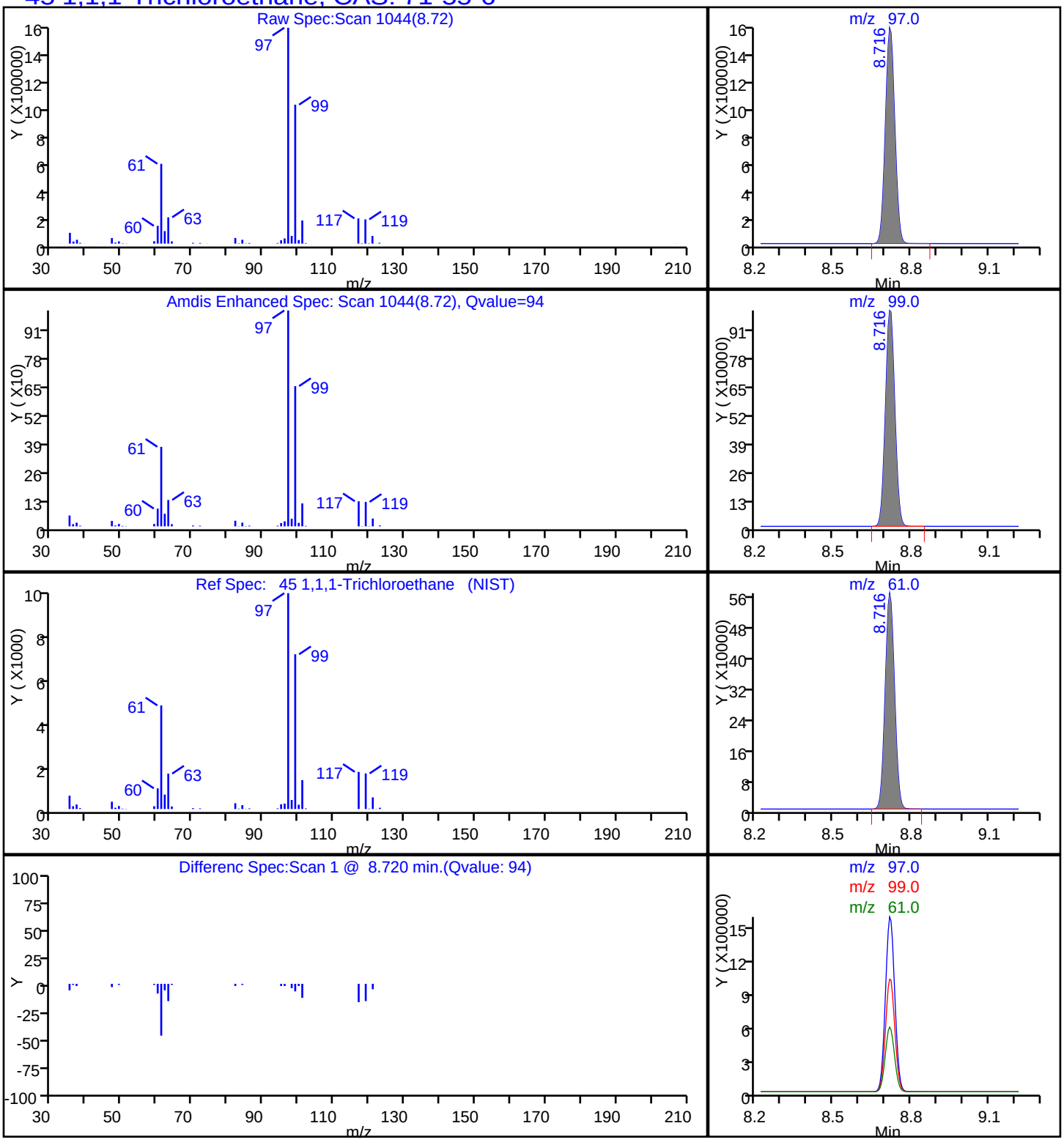


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P102R.D

Injection Date:	12-Jan-2018 01:44:30	Instrument ID:	MR		
Lims ID:	140-10405-A-4	Lab Sample ID:	140-10405-4		
Client ID:	A-INFLUENT				
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

45 1,1,1-Trichloroethane, CAS: 71-55-6

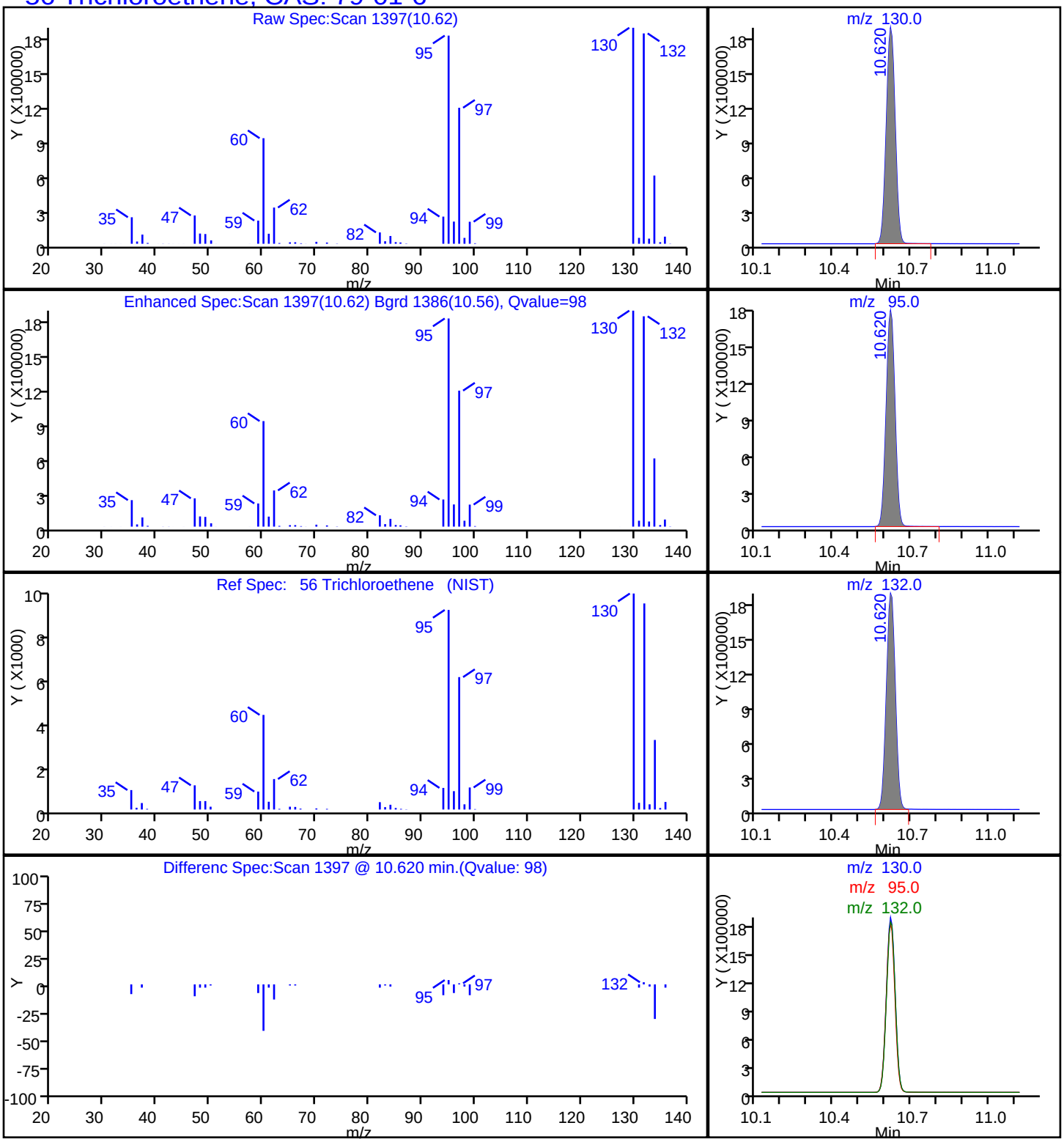


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P102R.D

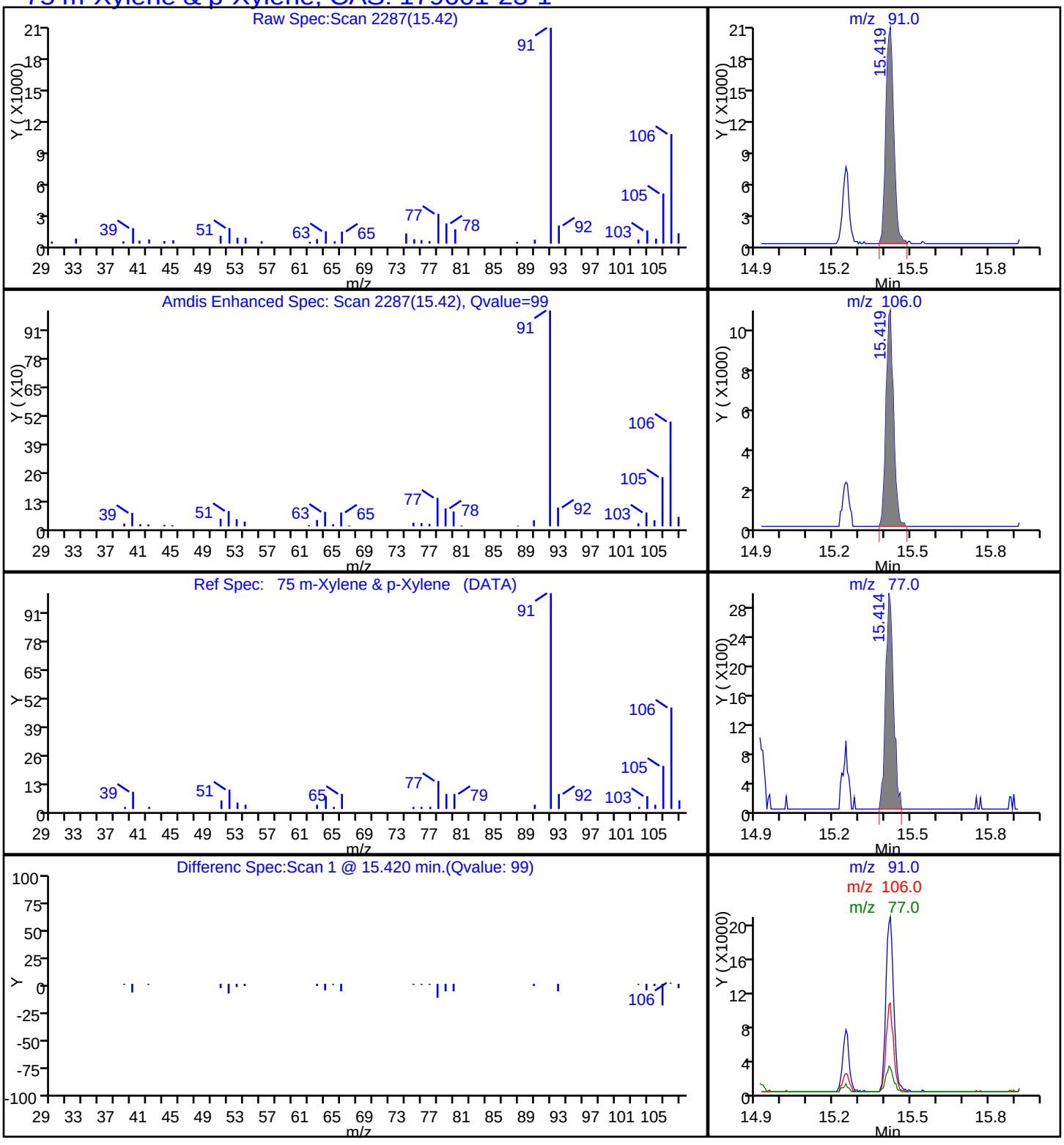
Injection Date:	12-Jan-2018 01:44:30	Instrument ID:	MR		
Lims ID:	140-10405-A-4	Lab Sample ID:	140-10405-4		
Client ID:	A-INFLUENT				
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

56 Trichloroethene, CAS: 79-01-6



Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P102R.D
Injection Date: 12-Jan-2018 01:44:30 Instrument ID: MR
Lims ID: 140-10405-A-4 Lab Sample ID: 140-10405-4
Client ID: A-INFLUENT
Operator ID: ALS Bottle#: 2 Worklist Smp#: 20
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

75 m-Xylene & p-Xylene, CAS: 179601-23-1



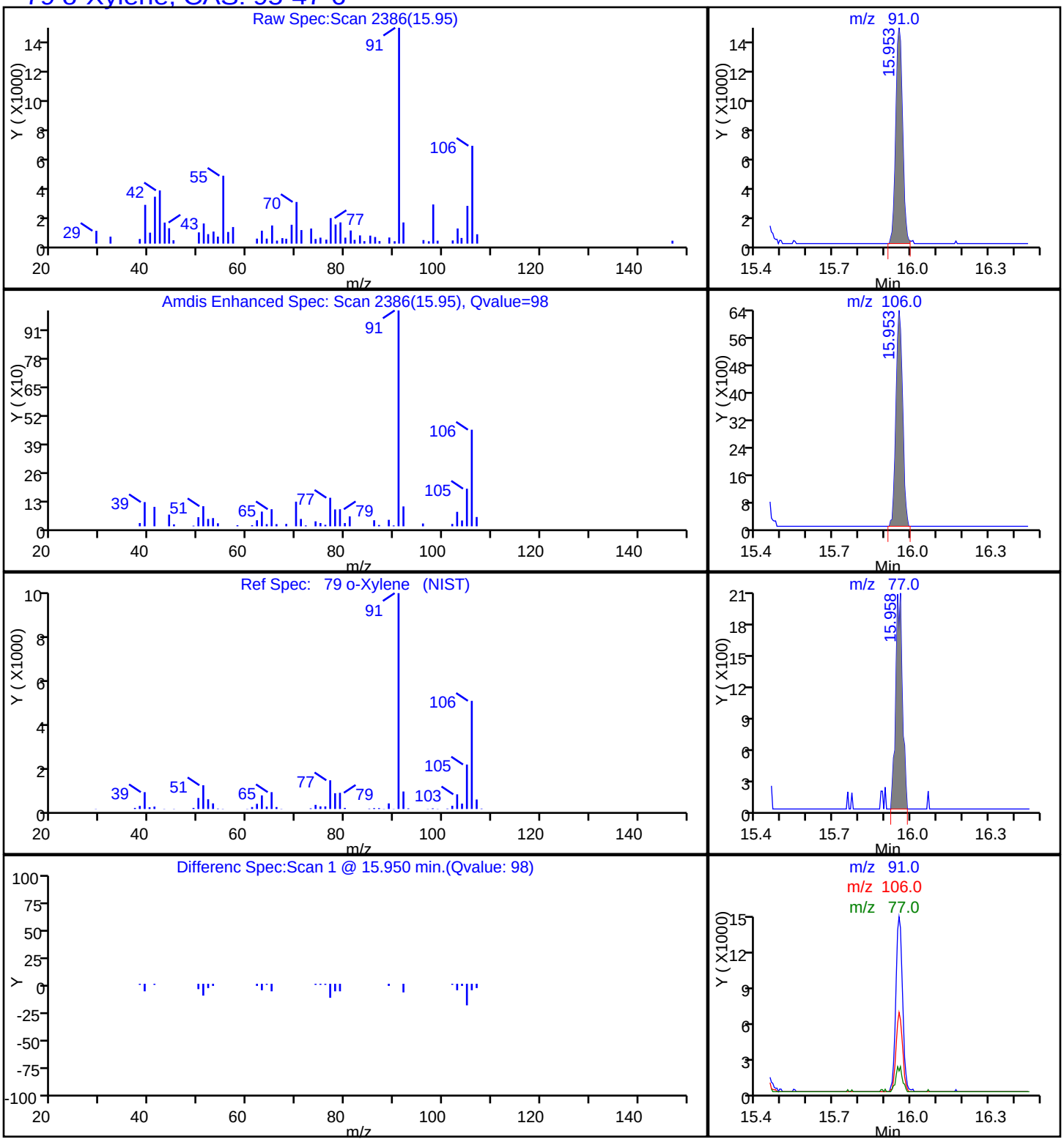
Report Date: 12-Jan-2018 10:16:07 Chrom Revision: 2.2 10-Jan-2018 22:54:36

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P102R.D

Injection Date:	12-Jan-2018 01:44:30	Instrument ID:	MR
Lims ID:	140-10405-A-4	Lab Sample ID:	140-10405-4
Client ID:	A-INFLUENT		
Operator ID:		ALS Bottle#:	2 Worklist Smp#: 20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

79 o-Xylene, CAS: 95-47-6



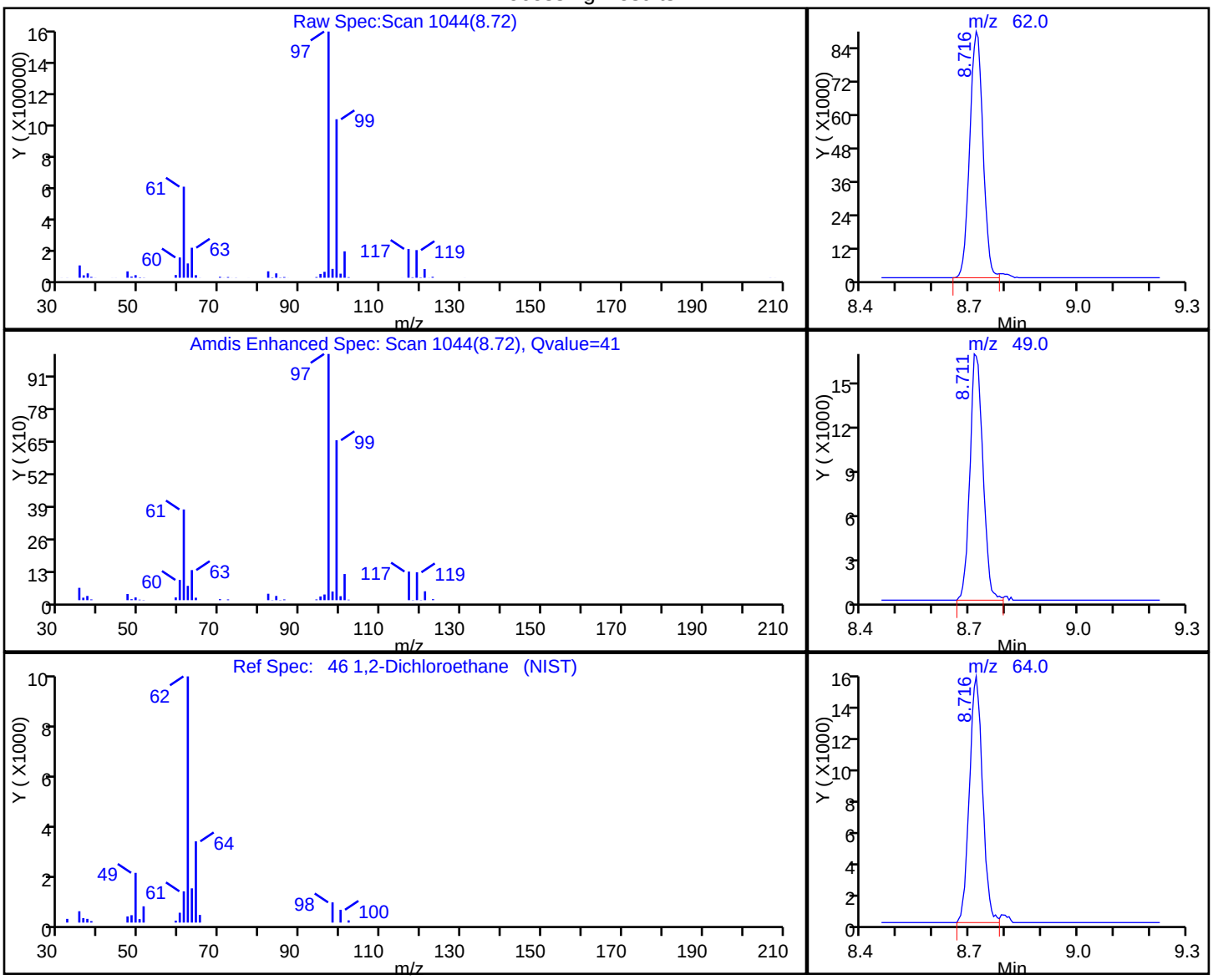
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P102R.D		
Injection Date:	12-Jan-2018 01:44:30	Instrument ID:	MR
Lims ID:	140-10405-A-4	Lab Sample ID:	140-10405-4
Client ID:	A-INFLUENT		
Operator ID:		ALS Bottle#:	2 Worklist Smp#: 20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

46 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
8.72	62.00	228534	1.379191
8.71	49.00	40464	
8.72	64.00	40465	

Reviewer: tajh, 12-Jan-2018 10:14:44

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1

SDG No.:

Client Sample ID: A-MID GAC Lab Sample ID: 140-10405-5

Matrix: Air Lab File ID: RA11P103.D

Analysis Method: TO 15 LL Date Collected: 01/09/2018 12:38

Sample wt/vol: 100(mL) Date Analyzed: 01/11/2018 16:56

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 17352 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	16		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.46		0.40	0.075
67-66-3	Chloroform	119.38	0.39	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	16		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	3.2		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	21		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.65	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.31	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	59		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.78	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1

SDG No.:

Client Sample ID: A-MID GAC Lab Sample ID: 140-10405-5

Matrix: Air Lab File ID: RA11P103.D

Analysis Method: TO 15 LL Date Collected: 01/09/2018 12:38

Sample wt/vol: 100(mL) Date Analyzed: 01/11/2018 16:56

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 17352 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	51		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.6		1.4	0.27
67-66-3	Chloroform	119.38	1.9	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	61		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	13		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	84		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.64	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	1.2	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	320		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.4	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P103.D
Lims ID: 140-10405-A-5
Client ID: A-MID GAC
Sample Type: Client
Inject. Date: 11-Jan-2018 16:56:30 ALS Bottle#: 3 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007100-009
Misc. Info.: 140-10405-a-5
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 12-Jan-2018 10:15:00 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 12-Jan-2018 10:10:04

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.724	7.779	-0.055	69	270945	4.00	
* 2 1,4-Difluorobenzene	114	9.865	9.918	-0.053	94	1519354	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.864	14.903	-0.039	87	1283785	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.579	16.610	-0.031	93	998272	4.24	
6 Chlorodifluoromethane	67	3.470	3.505	-0.035	48	3128	0.0919	
8 Dichlorodifluoromethane	85	3.518	3.554	-0.036	99	22014	0.0829	
27 1,1-Dichloroethene	96	5.222	5.274	-0.052	100	456945	4.23	
31 Methylene Chloride	84	5.519	5.552	-0.033	84	14356	0.1301	
34 trans-1,2-Dichloroethene	96	6.220	6.253	-0.033	97	6822	0.0614	
37 1,1-Dichloroethane	63	6.565	6.609	-0.044	99	125396	0.6380	
41 cis-1,2-Dichloroethene	96	7.444	7.492	-0.048	91	352249	3.10	
43 Chloroform	83	7.762	7.811	-0.049	93	19876	0.0777	
45 1,1,1-Trichloroethane	97	8.717	8.769	-0.052	94	3144577	11.8	
48 Benzene	78	9.288	9.341	-0.053	96	966091	3.17	
65 Toluene	91	12.804	12.845	-0.041	94	39317	0.1094	
74 Ethylbenzene	91	15.241	15.278	-0.037	98	13912	0.0296	
75 m-Xylene & p-Xylene	91	15.419	15.452	-0.033	100	35964	0.0997	
79 o-Xylene	91	15.953	15.986	-0.033	96	21457	0.0557	
S 114 Xylenes, Total	100				0		0.1553	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

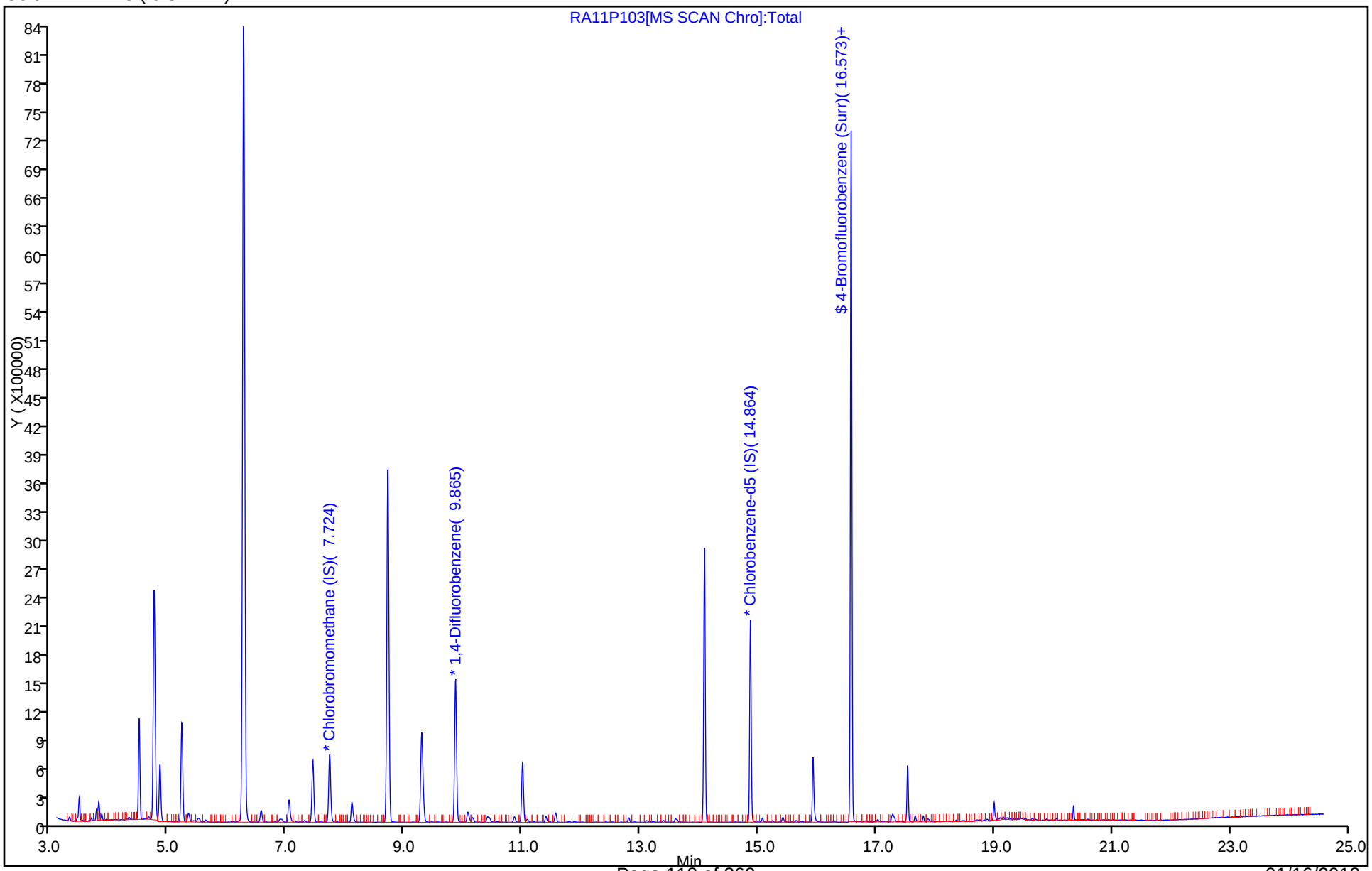
Report Date: 12-Jan-2018 10:15:31 Chrom Revision: 2.2 10-Jan-2018 22:54:36

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P103.D

Injection Date:	11-Jan-2018 16:56:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10405-A-5	Lab Sample ID:	140-10405-5	Worklist Smp#:	9
Client ID:	A-MID GAC				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P103.D				
Lims ID:	140-10405-A-5				
Client ID:	A-MID GAC				
Sample Type:	Client				
Inject. Date:	11-Jan-2018 16:56:30	ALS Bottle#:	3	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007100-009				
Misc. Info.:	140-10405-a-5				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	12-Jan-2018 10:15:00	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				
First Level Reviewer: tajh		Date:	12-Jan-2018 10:10:04		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.24	106.09

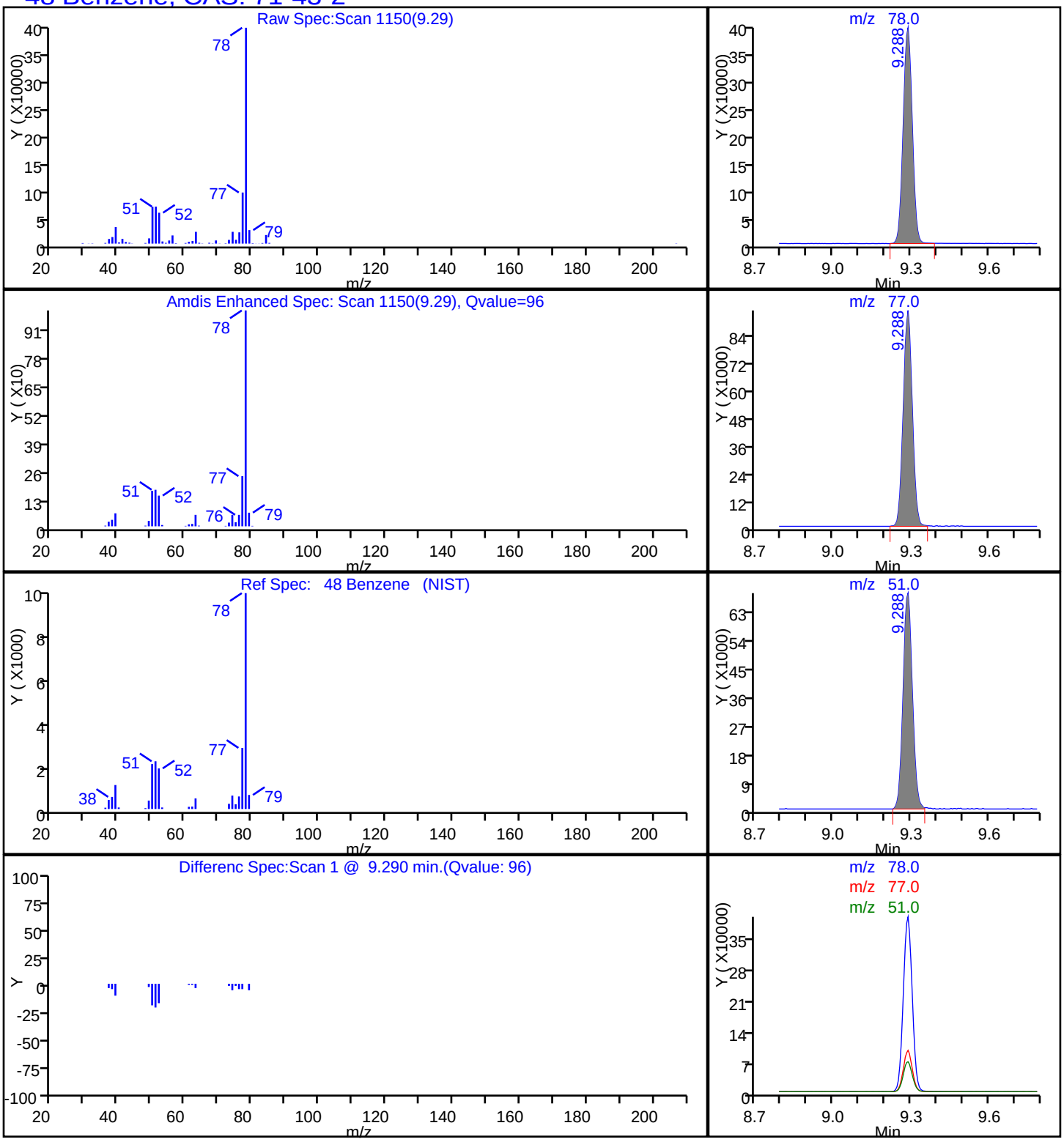
Report Date: 12-Jan-2018 10:15:32 Chrom Revision: 2.2 10-Jan-2018 22:54:36

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P103.D

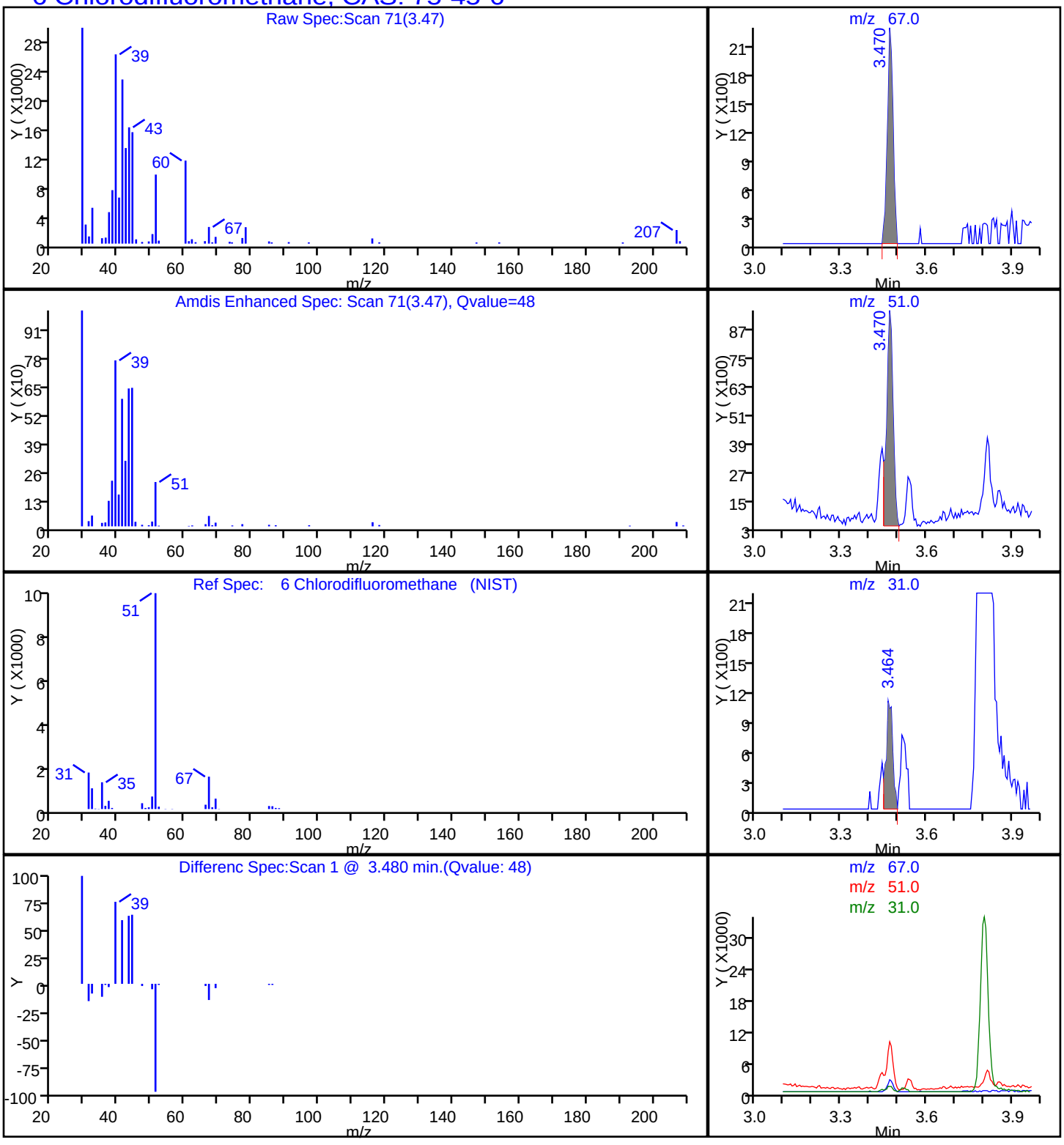
Injection Date:	11-Jan-2018 16:56:30	Instrument ID:	MR		
Lims ID:	140-10405-A-5	Lab Sample ID:	140-10405-5		
Client ID:	A-MID GAC				
Operator ID:		ALS Bottle#:	3	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

48 Benzene, CAS: 71-43-2



Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P103.D
Injection Date: 11-Jan-2018 16:56:30 Instrument ID: MR
Lims ID: 140-10405-A-5 Lab Sample ID: 140-10405-5
Client ID: A-MID GAC
Operator ID: ALS Bottle#: 3 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

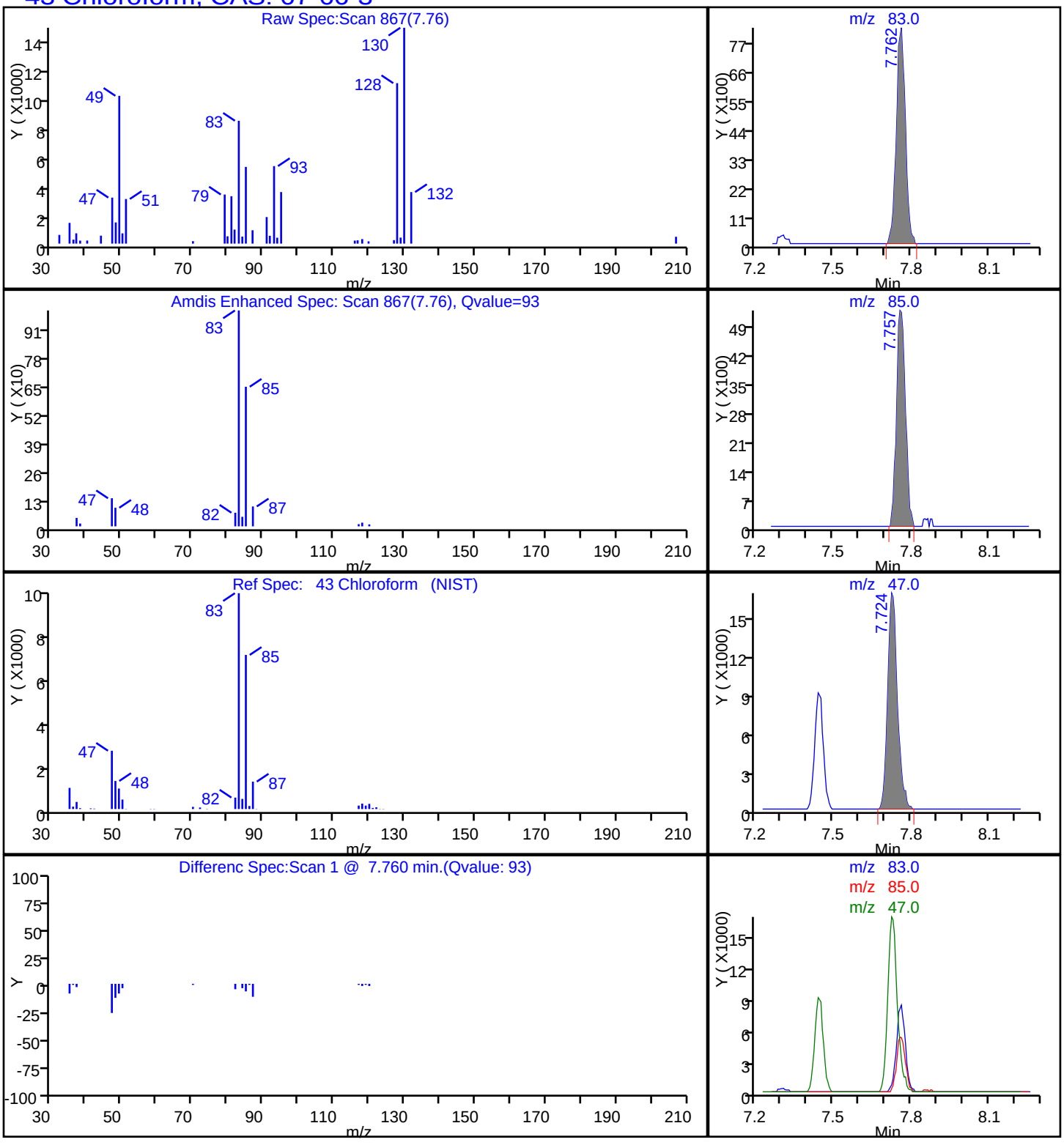


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P103.D

Injection Date:	11-Jan-2018 16:56:30	Instrument ID:	MR
Lims ID:	140-10405-A-5	Lab Sample ID:	140-10405-5
Client ID:	A-MID GAC		
Operator ID:		ALS Bottle#:	3 Worklist Smp#: 9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

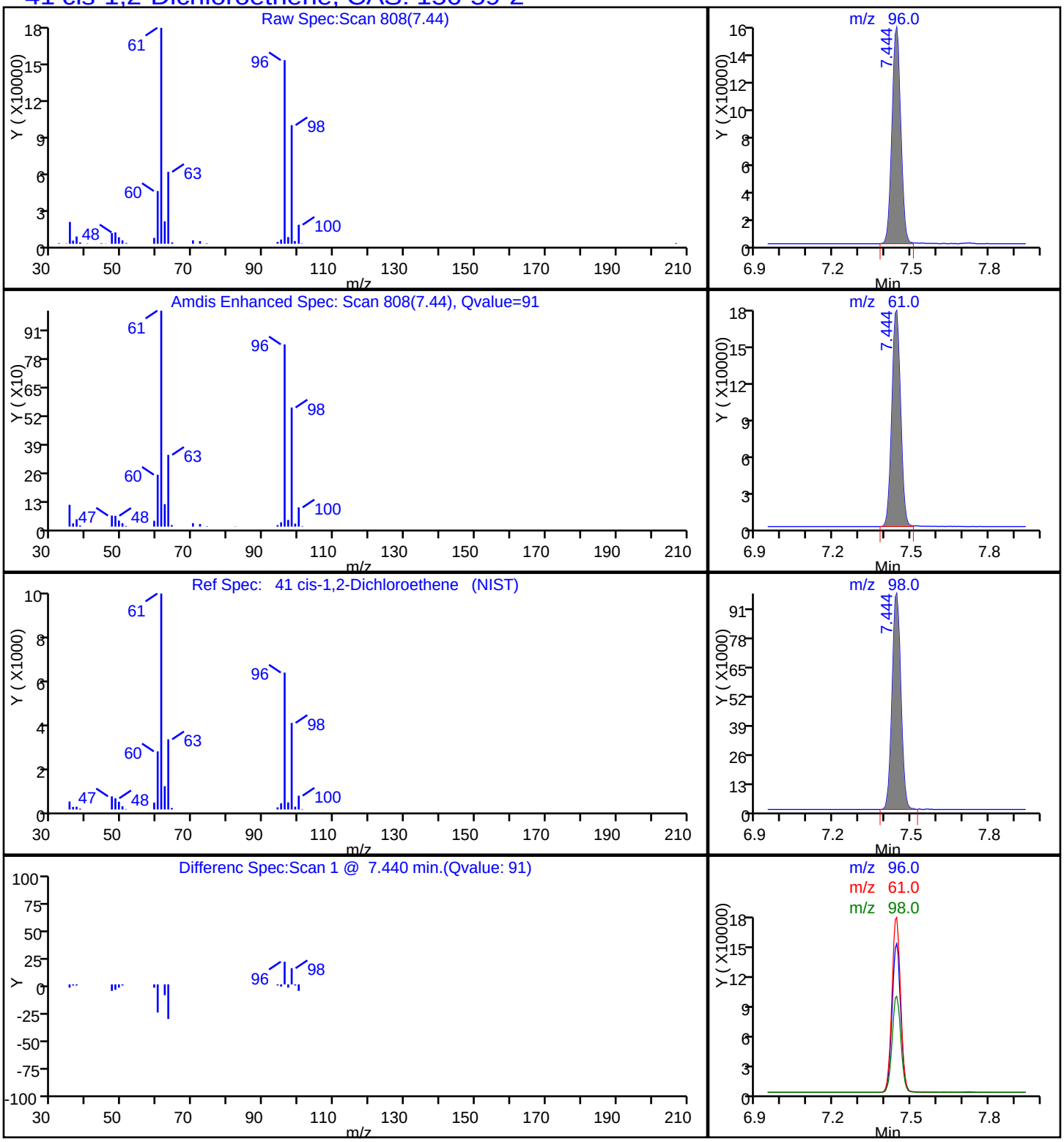
43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

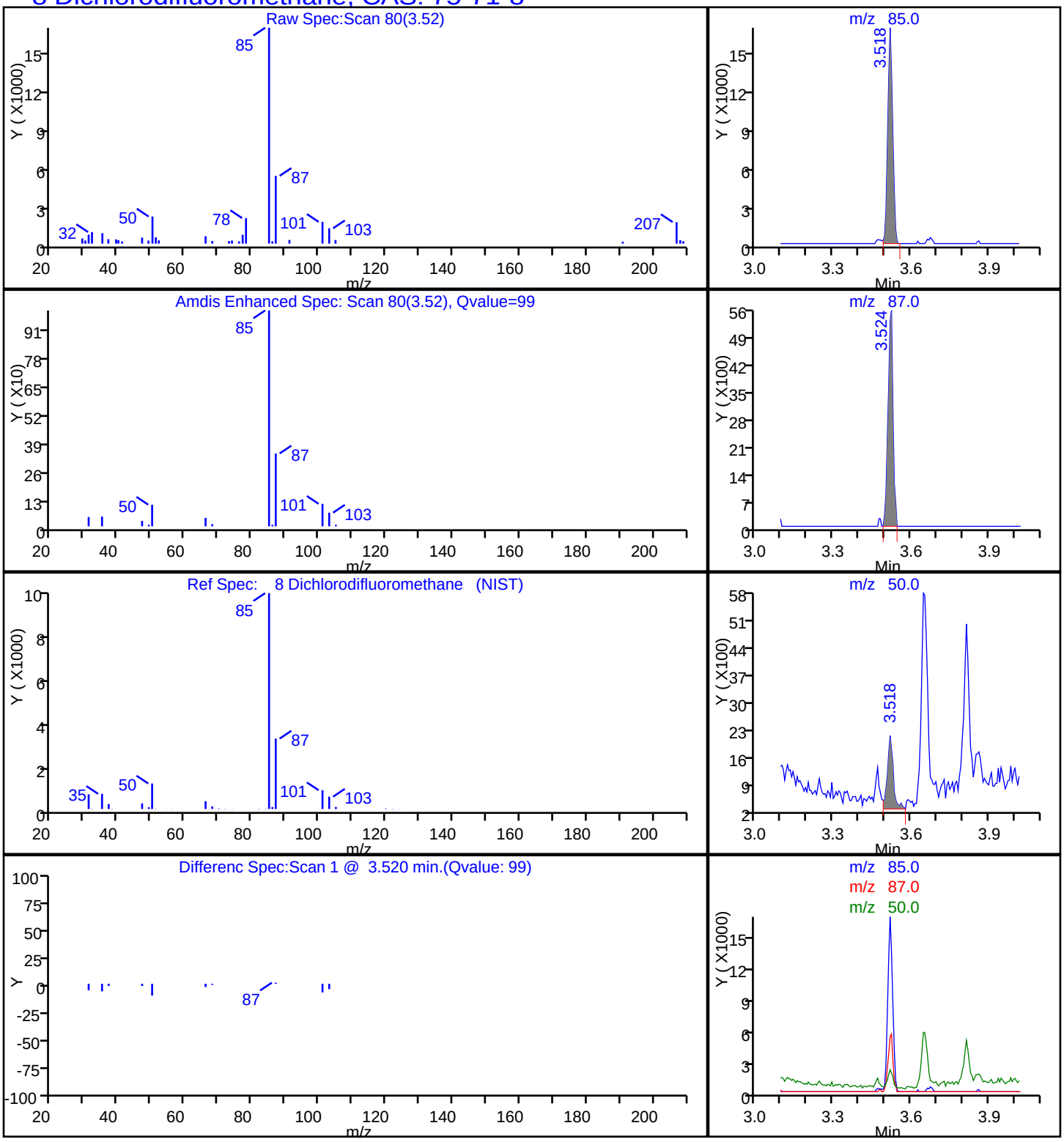
Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P103.D		
Injection Date:	11-Jan-2018 16:56:30	Instrument ID:	MR
Lims ID:	140-10405-A-5	Lab Sample ID:	140-10405-5
Client ID:	A-MID GAC		
Operator ID:		ALS Bottle#:	3 Worklist Smp#: 9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P103.D
Injection Date: 11-Jan-2018 16:56:30 Instrument ID: MR
Lims ID: 140-10405-A-5 Lab Sample ID: 140-10405-5
Client ID: A-MID GAC
Operator ID: ALS Bottle#: 3 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



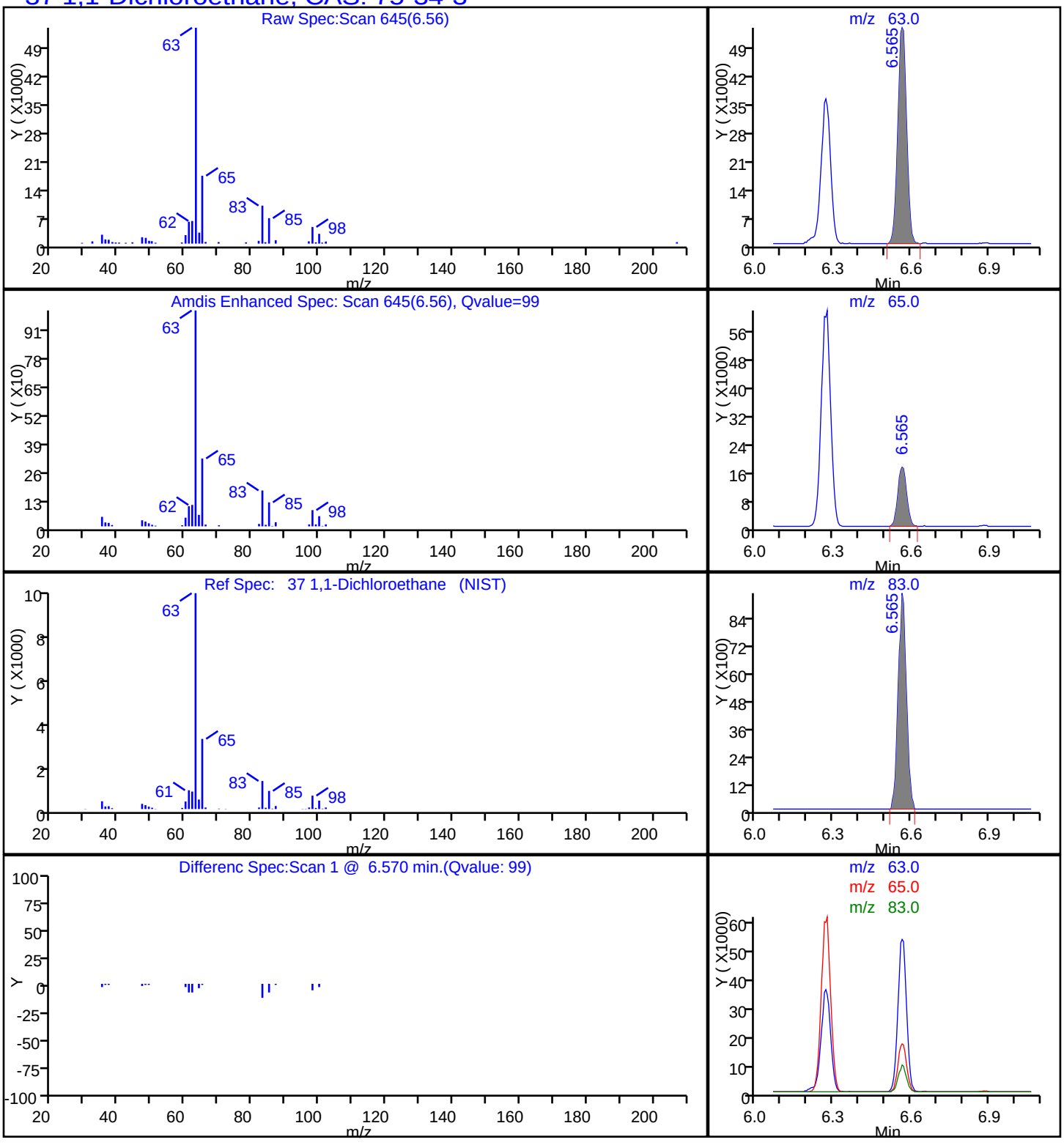
Report Date: 12-Jan-2018 10:15:32 Chrom Revision: 2.2 10-Jan-2018 22:54:36

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P103.D

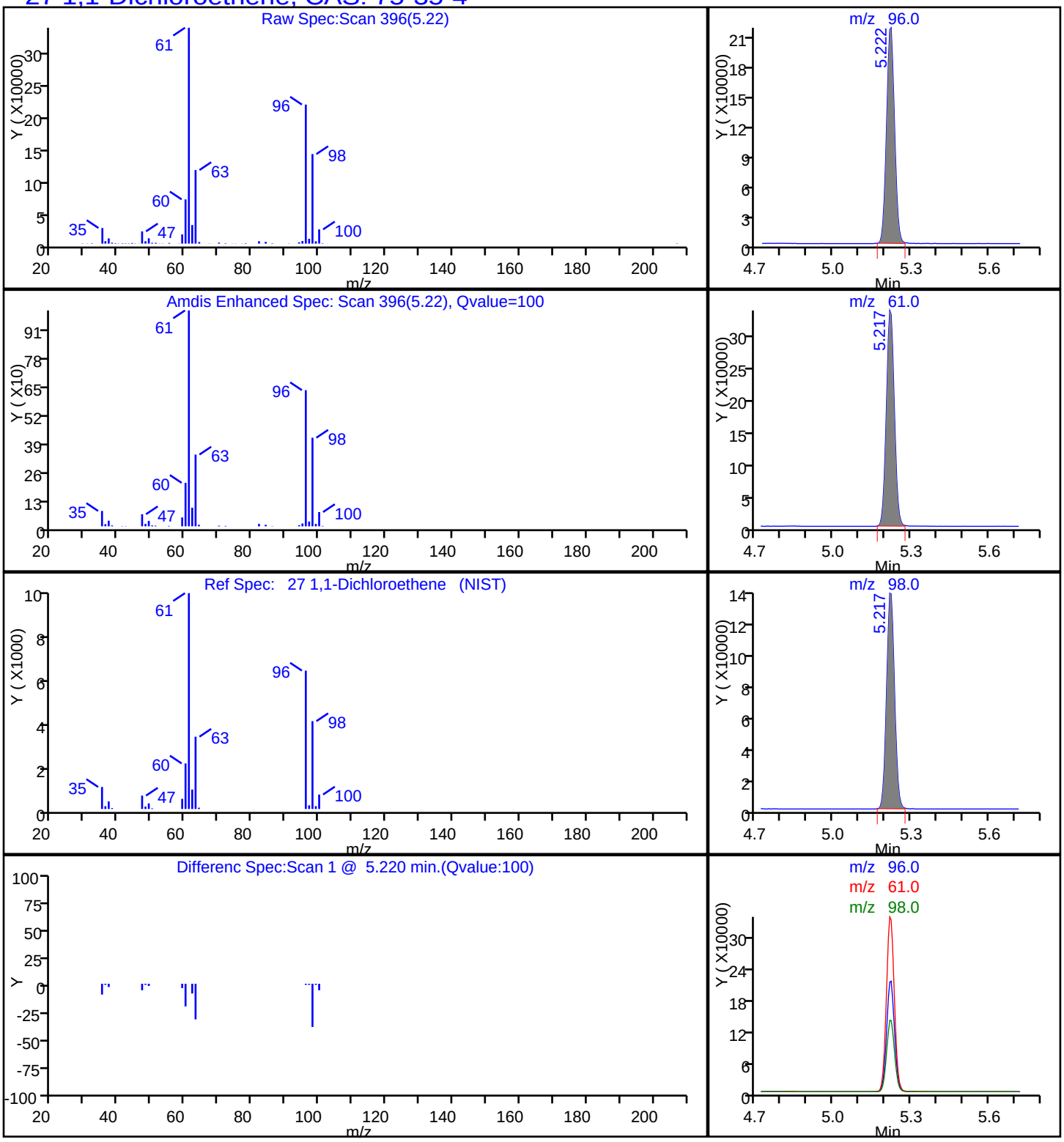
Injection Date:	11-Jan-2018 16:56:30	Instrument ID:	MR
Lims ID:	140-10405-A-5	Lab Sample ID:	140-10405-5
Client ID:	A-MID GAC		
Operator ID:		ALS Bottle#:	3 Worklist Smp#: 9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P103.D
Injection Date: 11-Jan-2018 16:56:30 Instrument ID: MR
Lims ID: 140-10405-A-5 Lab Sample ID: 140-10405-5
Client ID: A-MID GAC
Operator ID: ALS Bottle#: 3 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4

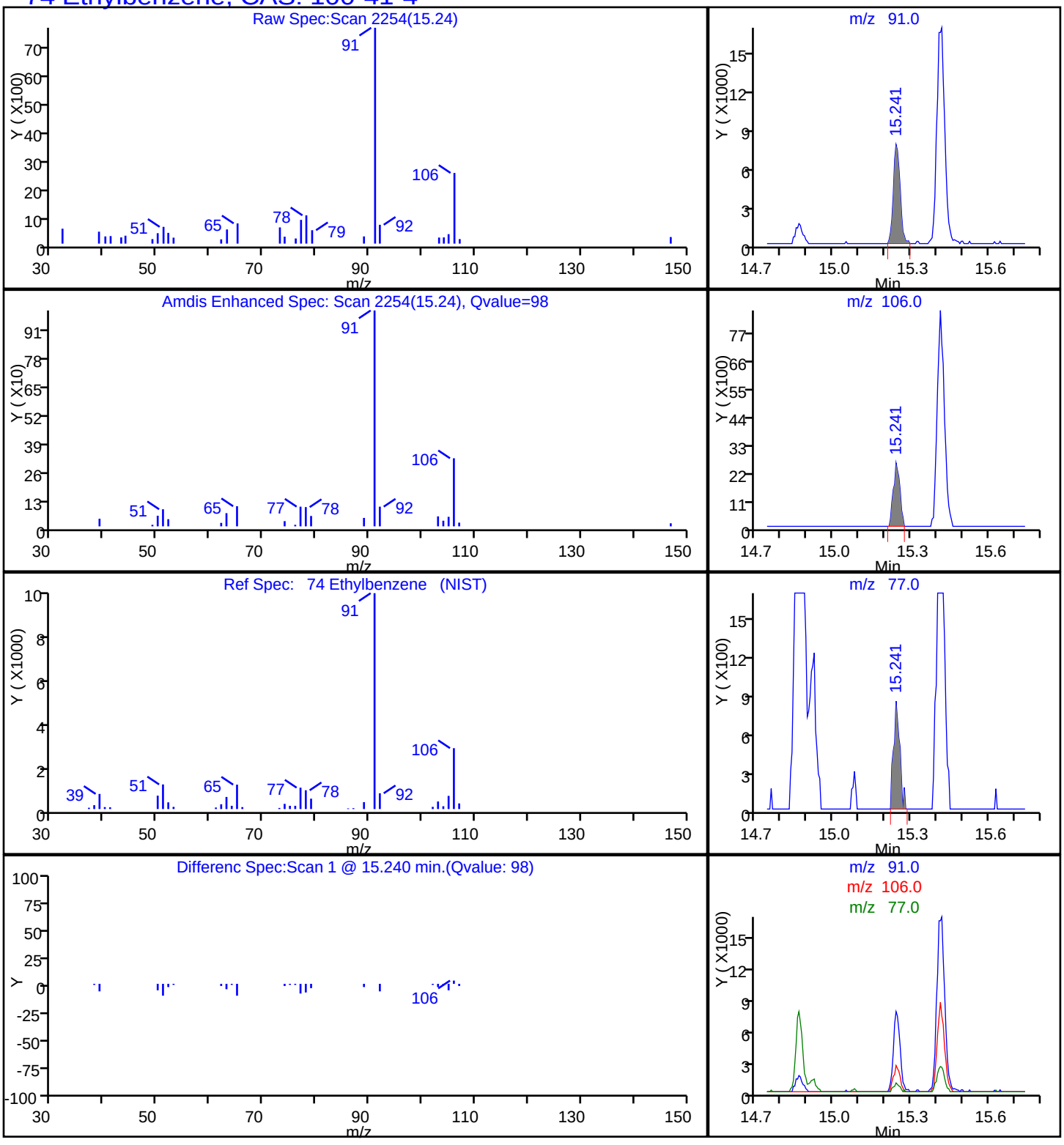


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P103.D

Injection Date:	11-Jan-2018 16:56:30	Instrument ID:	MR
Lims ID:	140-10405-A-5	Lab Sample ID:	140-10405-5
Client ID:	A-MID GAC		
Operator ID:		ALS Bottle#:	3 Worklist Smp#: 9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

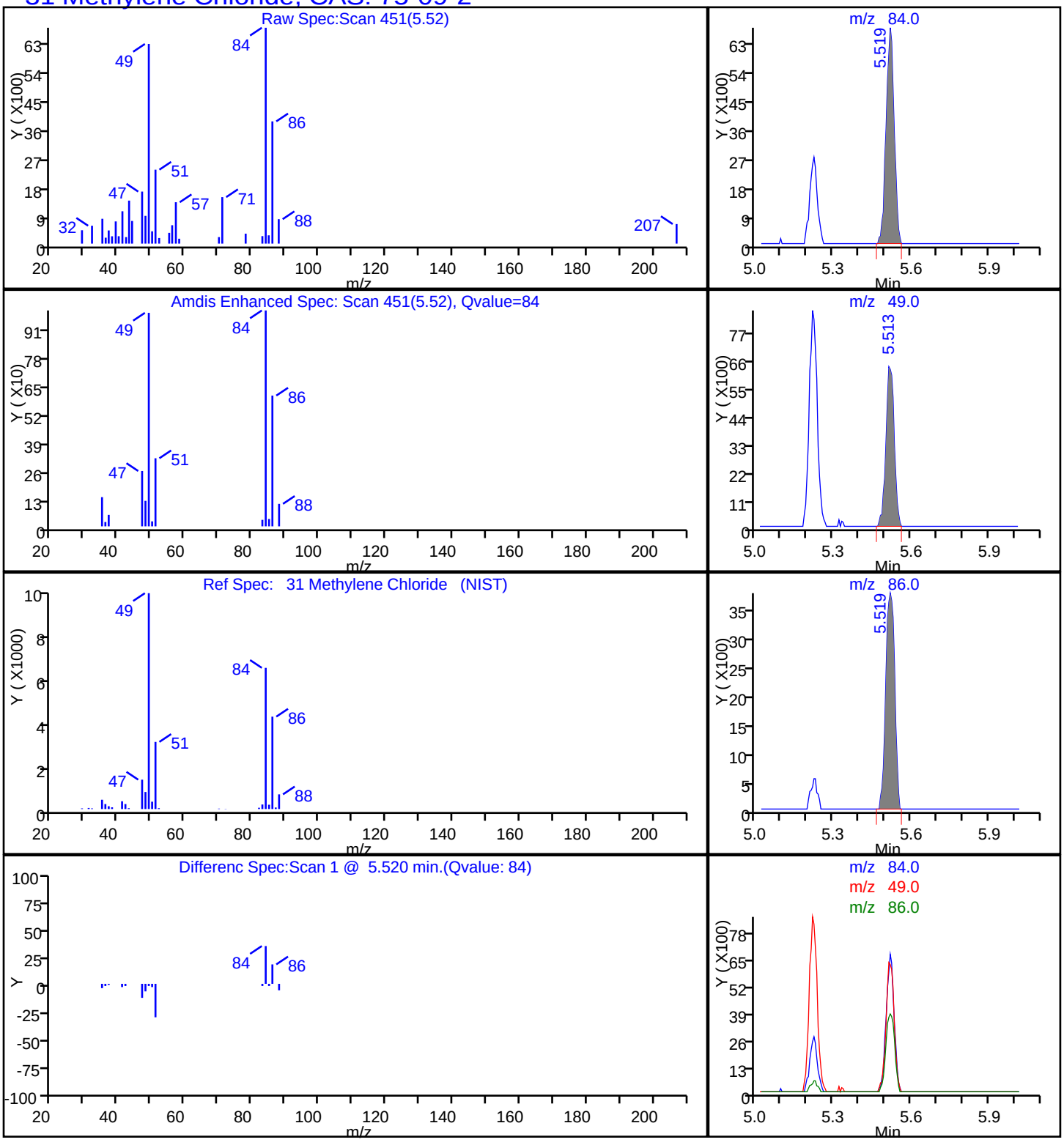
74 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P103.D
Injection Date: 11-Jan-2018 16:56:30 Instrument ID: MR
Lims ID: 140-10405-A-5 Lab Sample ID: 140-10405-5
Client ID: A-MID GAC
Operator ID: ALS Bottle#: 3 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

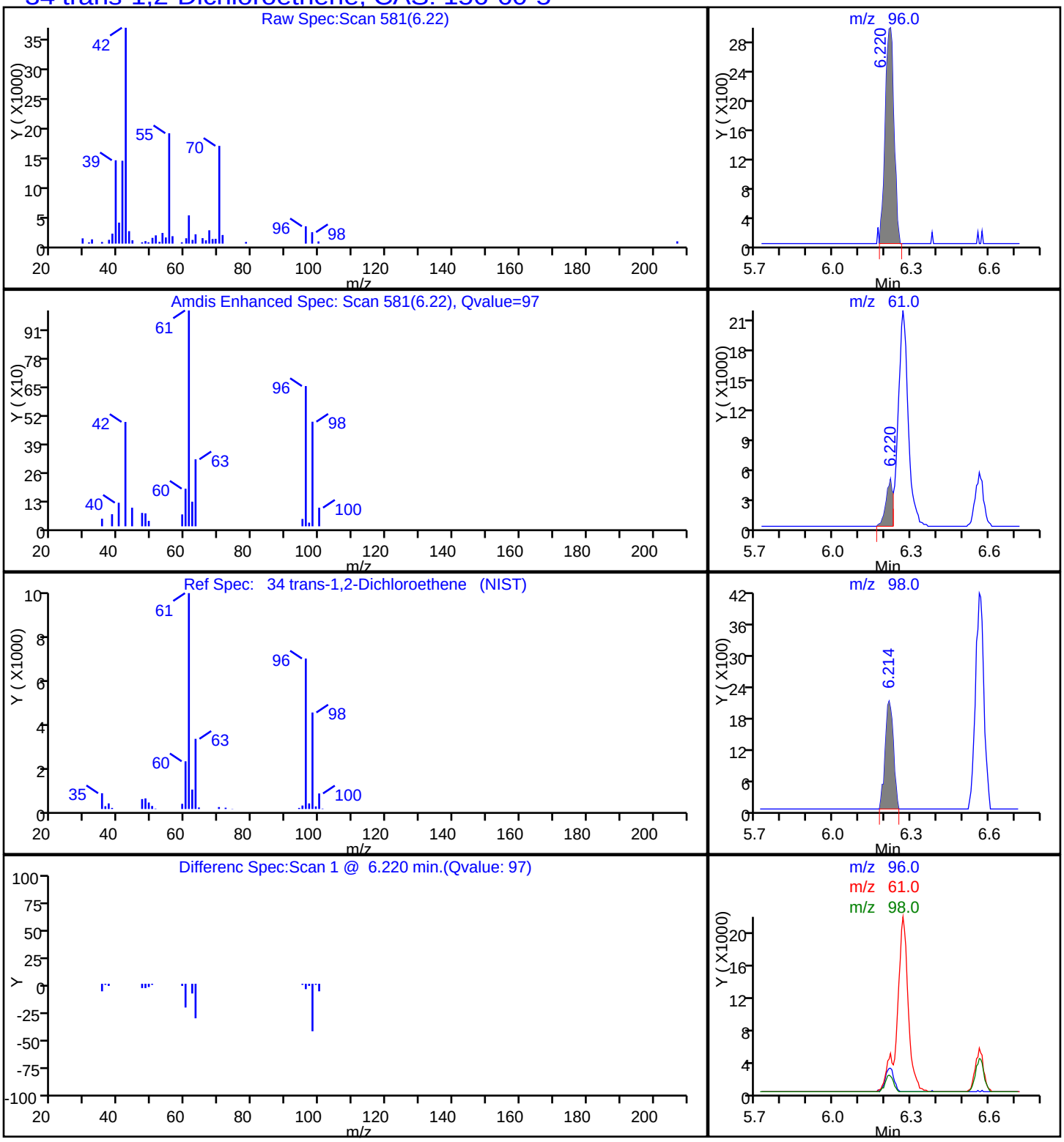
31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

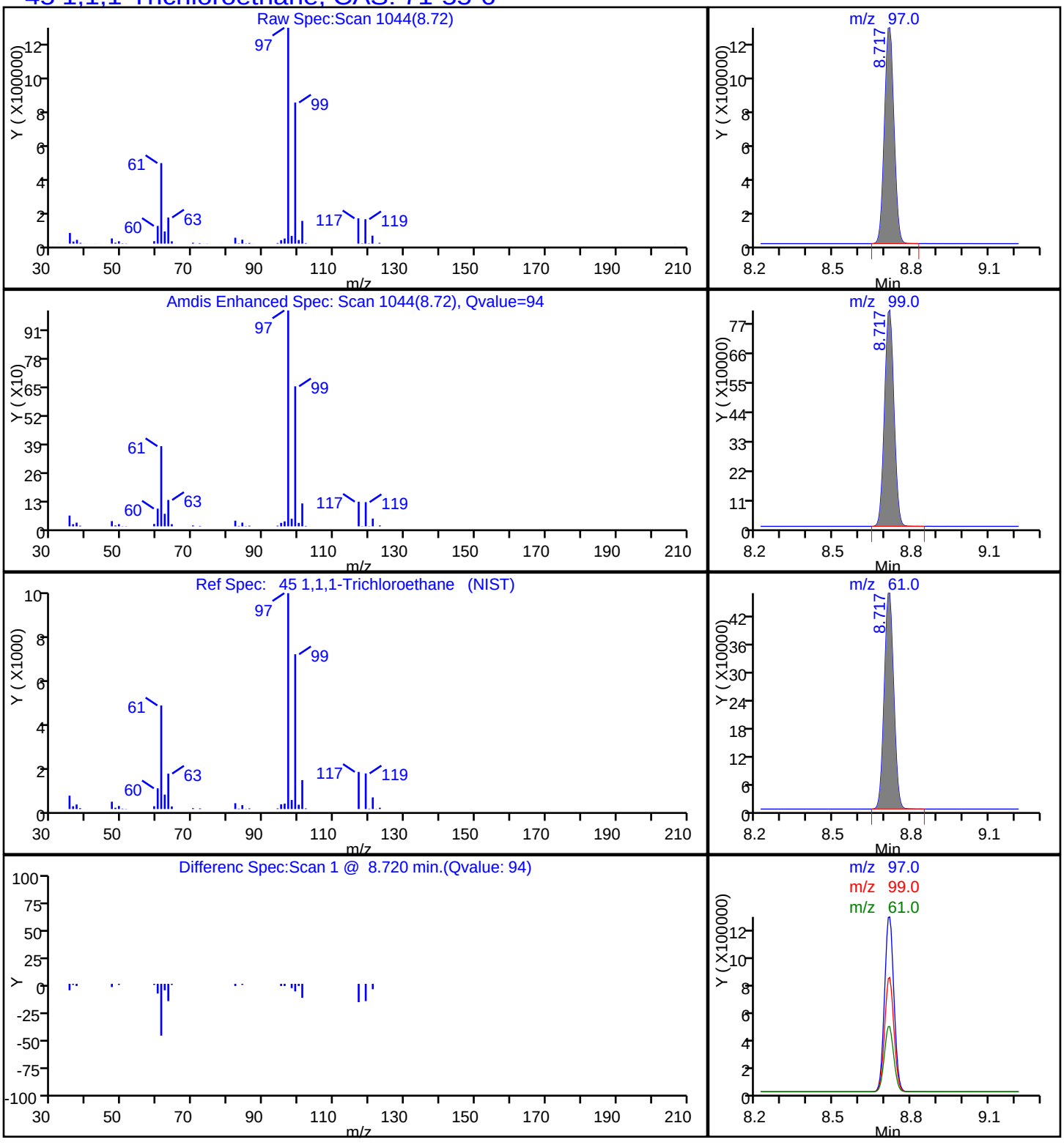
Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P103.D		
Injection Date:	11-Jan-2018 16:56:30	Instrument ID:	MR
Lims ID:	140-10405-A-5	Lab Sample ID:	140-10405-5
Client ID:	A-MID GAC		
Operator ID:		ALS Bottle#:	3 Worklist Smp#: 9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

34 trans-1,2-Dichloroethene, CAS: 156-60-5



Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P103.D
Injection Date: 11-Jan-2018 16:56:30 Instrument ID: MR
Lims ID: 140-10405-A-5 Lab Sample ID: 140-10405-5
Client ID: A-MID GAC
Operator ID: ALS Bottle#: 3 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

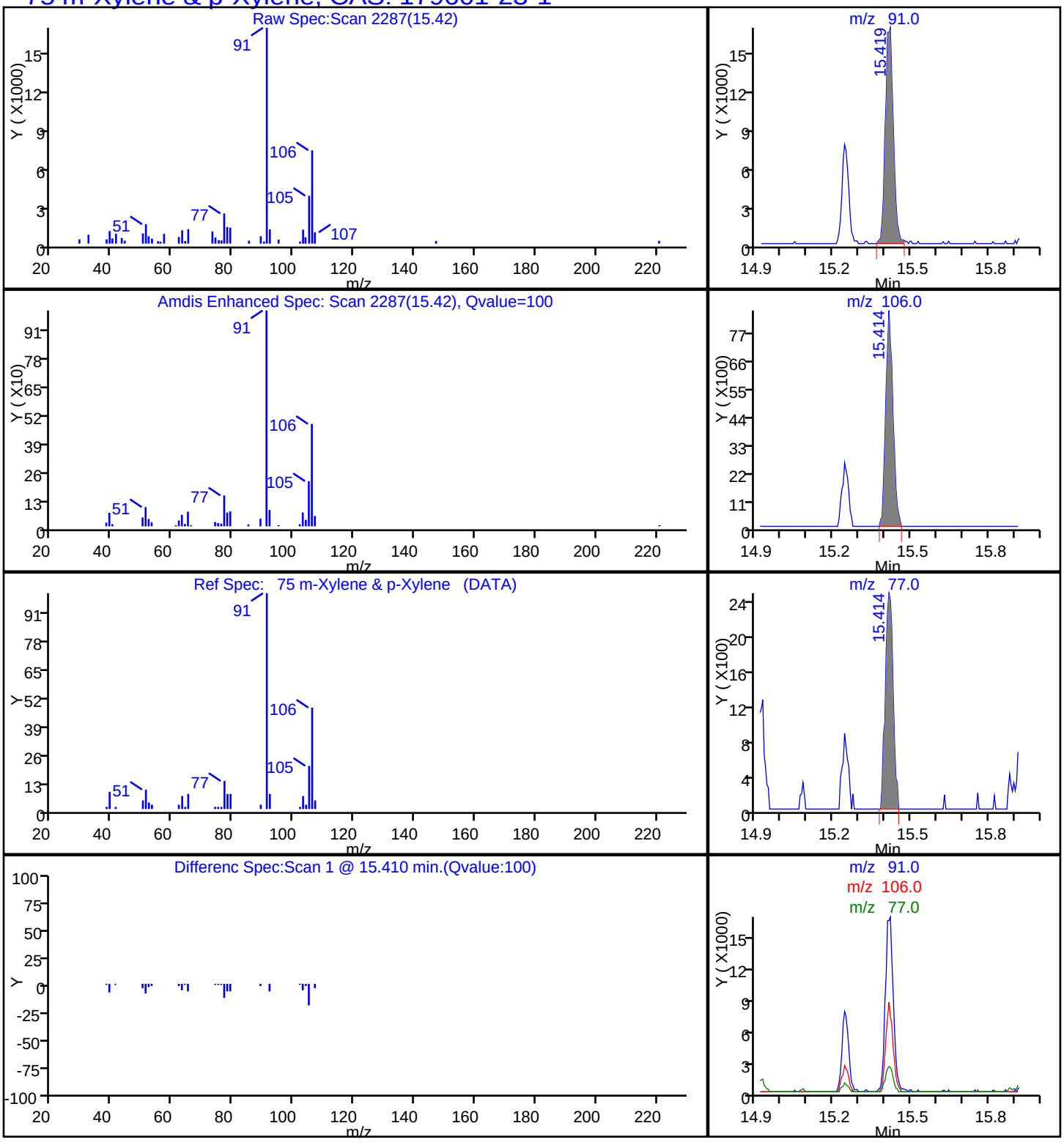
45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P103.D		
Injection Date:	11-Jan-2018 16:56:30	Instrument ID:	MR
Lims ID:	140-10405-A-5	Lab Sample ID:	140-10405-5
Client ID:	A-MID GAC		
Operator ID:		ALS Bottle#:	3 Worklist Smp#: 9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

75 m-Xylene & p-Xylene, CAS: 179601-23-1



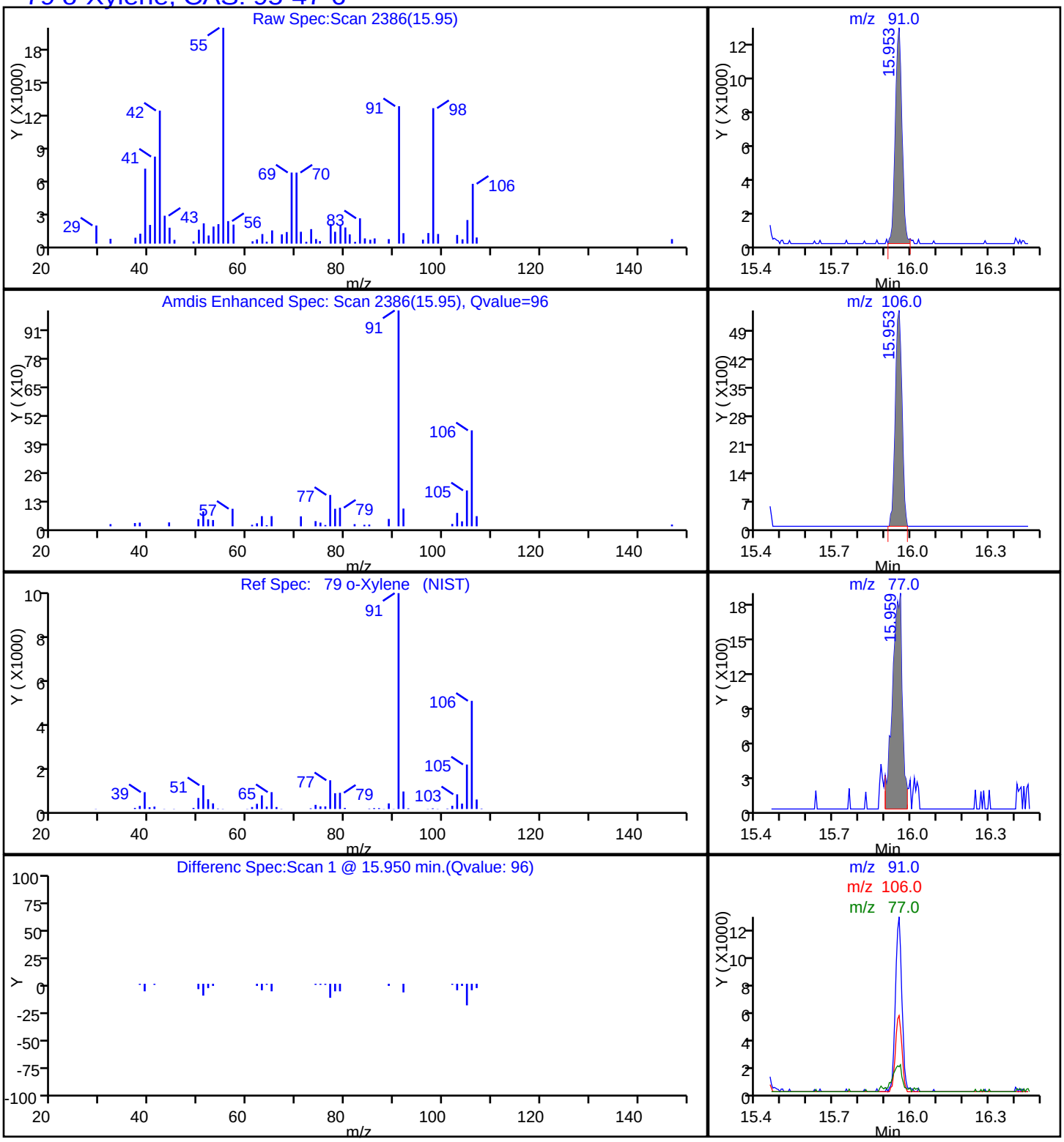
Report Date: 12-Jan-2018 10:15:32 Chrom Revision: 2.2 10-Jan-2018 22:54:36

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P103.D

Injection Date:	11-Jan-2018 16:56:30	Instrument ID:	MR		
Lims ID:	140-10405-A-5	Lab Sample ID:	140-10405-5		
Client ID:	A-MID GAC				
Operator ID:		ALS Bottle#:	3	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

79 o-Xylene, CAS: 95-47-6



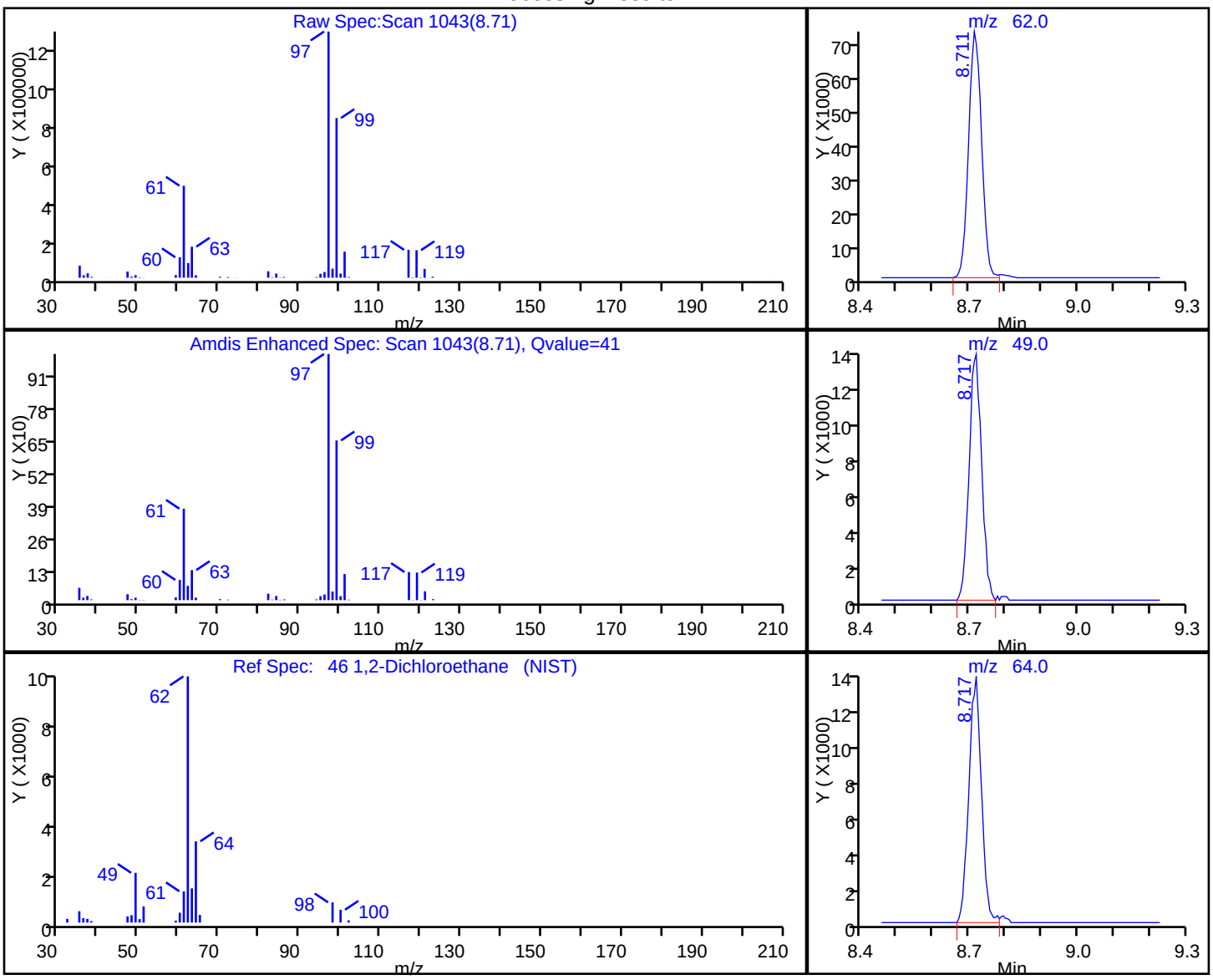
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P103.D				
Injection Date:	11-Jan-2018 16:56:30	Instrument ID:	MR		
Lims ID:	140-10405-A-5	Lab Sample ID:	140-10405-5		
Client ID:	A-MID GAC				
Operator ID:		ALS Bottle#:	3	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

46 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
8.71	62.00	185570	1.133528
8.72	49.00	32572	
8.72	64.00	32566	

Reviewer: tajh, 12-Jan-2018 10:10:04

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1

SDG No.:

Client Sample ID: A-EFFLUENT Lab Sample ID: 140-10405-6

Matrix: Air Lab File ID: RA11P104.D

Analysis Method: TO 15 LL Date Collected: 01/09/2018 12:47

Sample wt/vol: 100(mL) Date Analyzed: 01/11/2018 17:44

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 17352 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.66		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.16	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.50		0.40	0.075
67-66-3	Chloroform	119.38	0.40		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	6.3		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.49		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	3.8		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	20		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.88	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.14	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	54		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.4		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.55	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	111		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1

SDG No.:

Client Sample ID: A-EFFLUENT Lab Sample ID: 140-10405-6

Matrix: Air Lab File ID: RA11P104.D

Analysis Method: TO 15 LL Date Collected: 01/09/2018 12:47

Sample wt/vol: 100(mL) Date Analyzed: 01/11/2018 17:44

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 17352 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.1		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	1.0	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.8		1.4	0.27
67-66-3	Chloroform	119.38	1.9		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	25		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	15		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	79		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.0	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	0.54	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	300		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	7.6		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.4	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	111		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P104.D				
Lims ID:	140-10405-A-6				
Client ID:	A-EFFLUENT				
Sample Type:	Client				
Inject. Date:	11-Jan-2018 17:44:30	ALS Bottle#:	4	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007100-010				
Misc. Info.:	140-10405-a-6				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	12-Jan-2018 10:15:00	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				
First Level Reviewer: tajh		Date:	12-Jan-2018 10:10:33		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.730	7.779	-0.049	70	270629	4.00	
* 2 1,4-Difluorobenzene	114	9.870	9.918	-0.048	94	1505498	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.864	14.903	-0.039	87	1277624	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.579	16.610	-0.031	91	1036051	4.43	
6 Chlorodifluoromethane	67	3.502	3.505	-0.003	89	3391	0.0998	
8 Dichlorodifluoromethane	85	3.545	3.554	-0.009	99	26234	0.0989	
27 1,1-Dichloroethene	96	5.238	5.274	-0.036	99	430436	3.99	
31 Methylene Chloride	84	5.513	5.552	-0.039	82	19331	0.1754	
34 trans-1,2-Dichloroethene	96	6.220	6.253	-0.033	83	3018	0.0272	
37 1,1-Dichloroethane	63	6.570	6.609	-0.039	99	148799	0.7580	
41 cis-1,2-Dichloroethene	96	7.449	7.492	-0.043	91	143111	1.26	
43 Chloroform	83	7.762	7.811	-0.049	93	20373	0.0797	
45 1,1,1-Trichloroethane	97	8.722	8.769	-0.047	94	2895093	10.9	
48 Benzene	78	9.293	9.341	-0.048	96	39761	0.1317	
51 Carbon tetrachloride	117	9.342	9.378	-0.036	96	8400	0.0326	
56 Trichloroethene	130	10.625	10.667	-0.042	99	41210	0.2832	
65 Toluene	91	12.804	12.845	-0.041	92	24746	0.0692	
75 m-Xylene & p-Xylene	91	15.414	15.452	-0.038	100	24854	0.0692	
79 o-Xylene	91	15.953	15.986	-0.033	98	15024	0.0392	
S 114 Xylenes, Total	100				0		0.1084	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

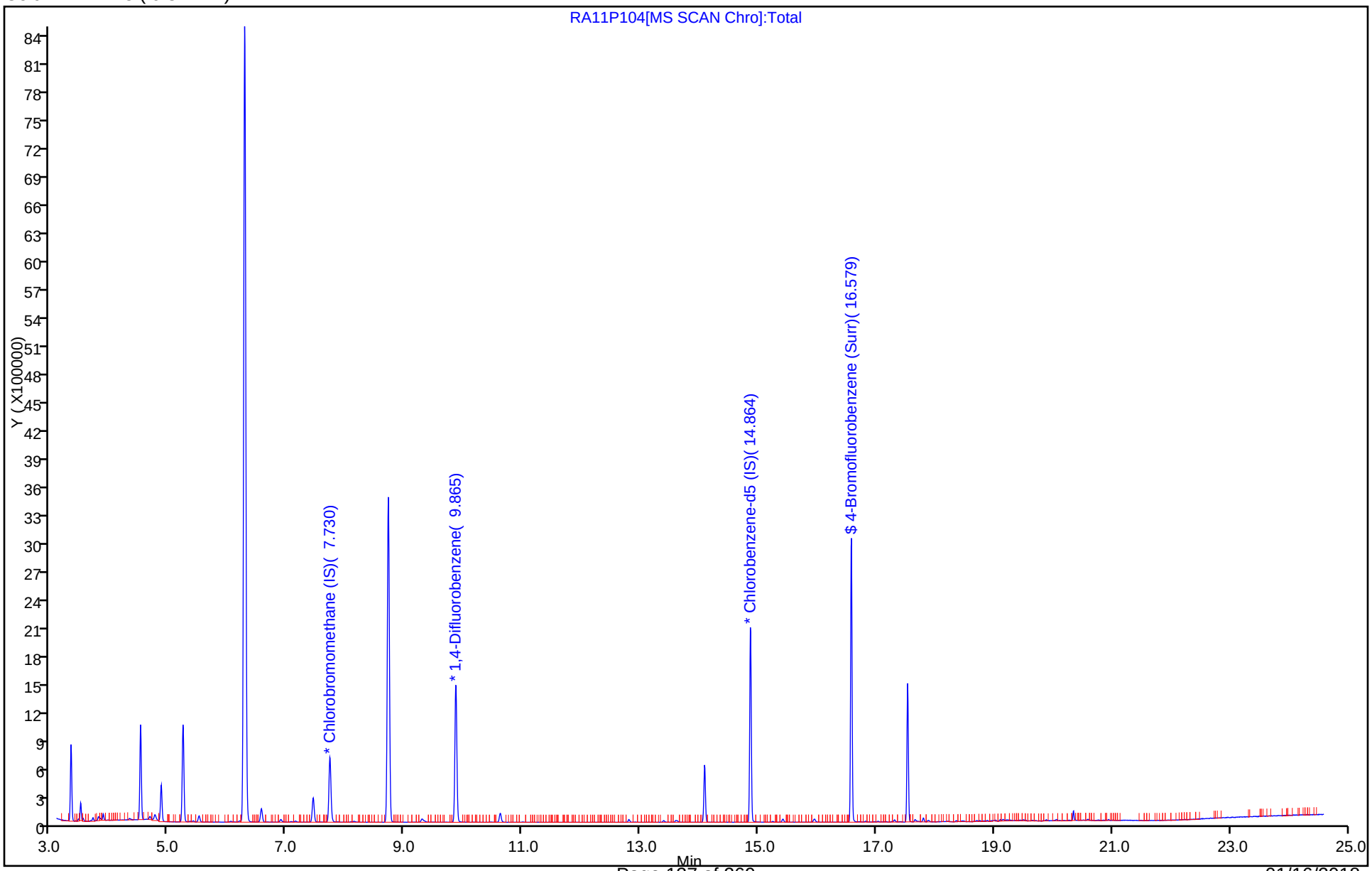
Report Date: 12-Jan-2018 10:15:35 Chrom Revision: 2.2 10-Jan-2018 22:54:36

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P104.D

Injection Date:	11-Jan-2018 17:44:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10405-A-6	Lab Sample ID:	140-10405-6	Worklist Smp#:	10
Client ID:	A-EFFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P104.D				
Lims ID:	140-10405-A-6				
Client ID:	A-EFFLUENT				
Sample Type:	Client				
Inject. Date:	11-Jan-2018 17:44:30	ALS Bottle#:	4	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007100-010				
Misc. Info.:	140-10405-a-6				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	12-Jan-2018 10:15:00	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				

First Level Reviewer: tajh Date: 12-Jan-2018 10:10:33

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.43	110.64

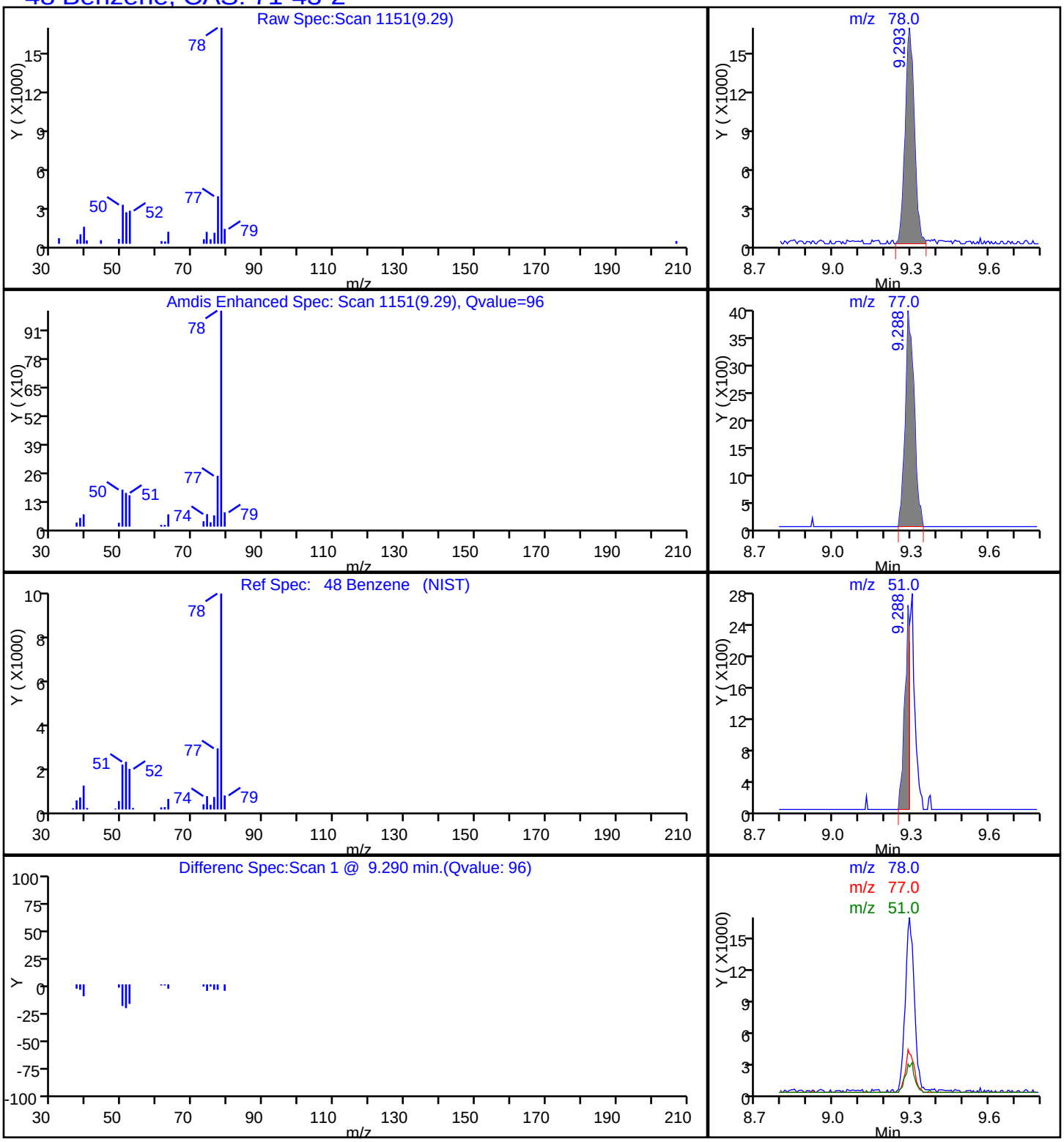
Report Date: 12-Jan-2018 10:15:36 Chrom Revision: 2.2 10-Jan-2018 22:54:36

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P104.D

Injection Date:	11-Jan-2018 17:44:30	Instrument ID:	MR		
Lims ID:	140-10405-A-6	Lab Sample ID:	140-10405-6		
Client ID:	A-EFFLUENT				
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

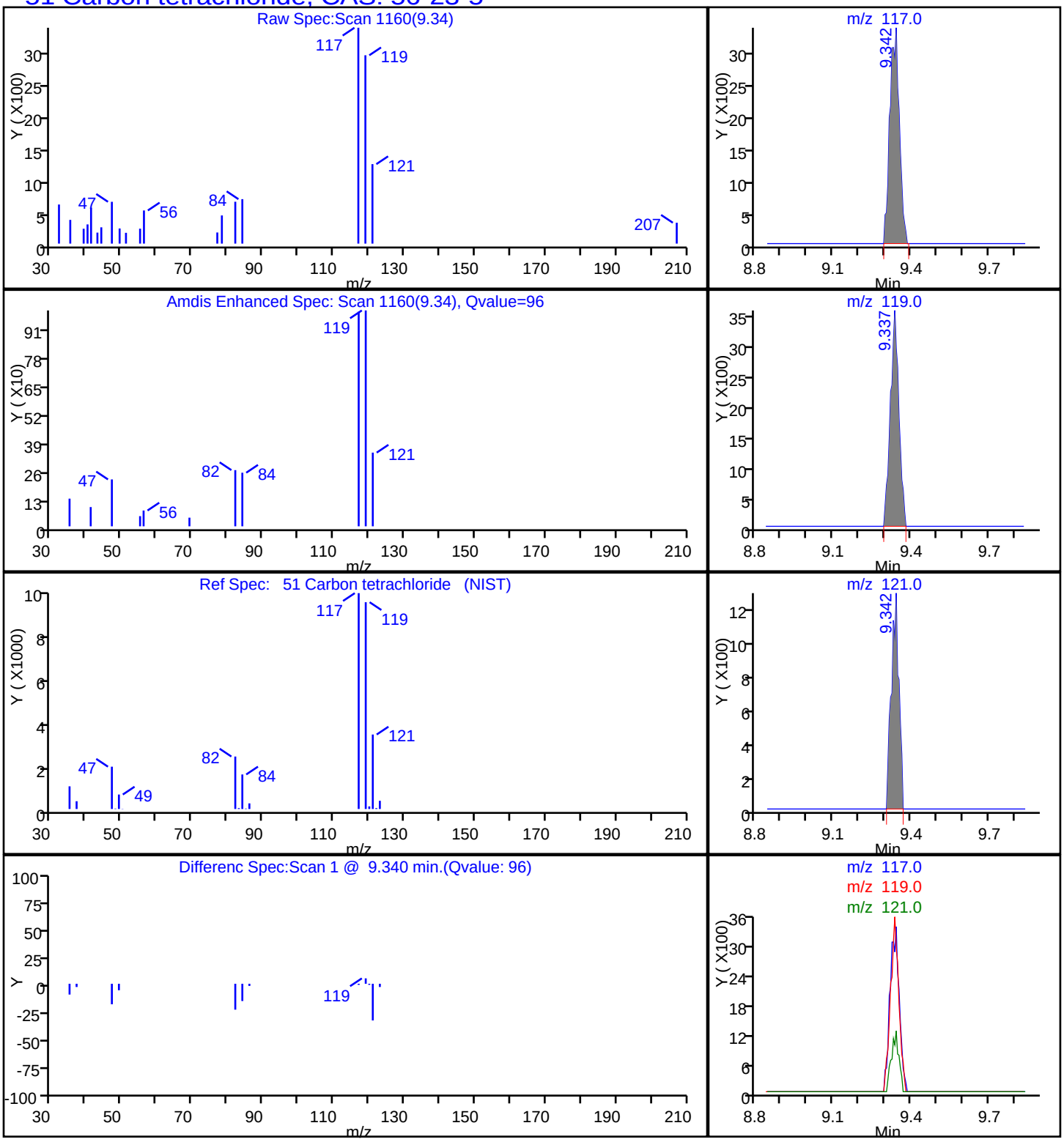
48 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P104.D		
Injection Date:	11-Jan-2018 17:44:30	Instrument ID:	MR
Lims ID:	140-10405-A-6	Lab Sample ID:	140-10405-6
Client ID:	A-EFFLUENT		
Operator ID:		ALS Bottle#:	4 Worklist Smp#: 10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

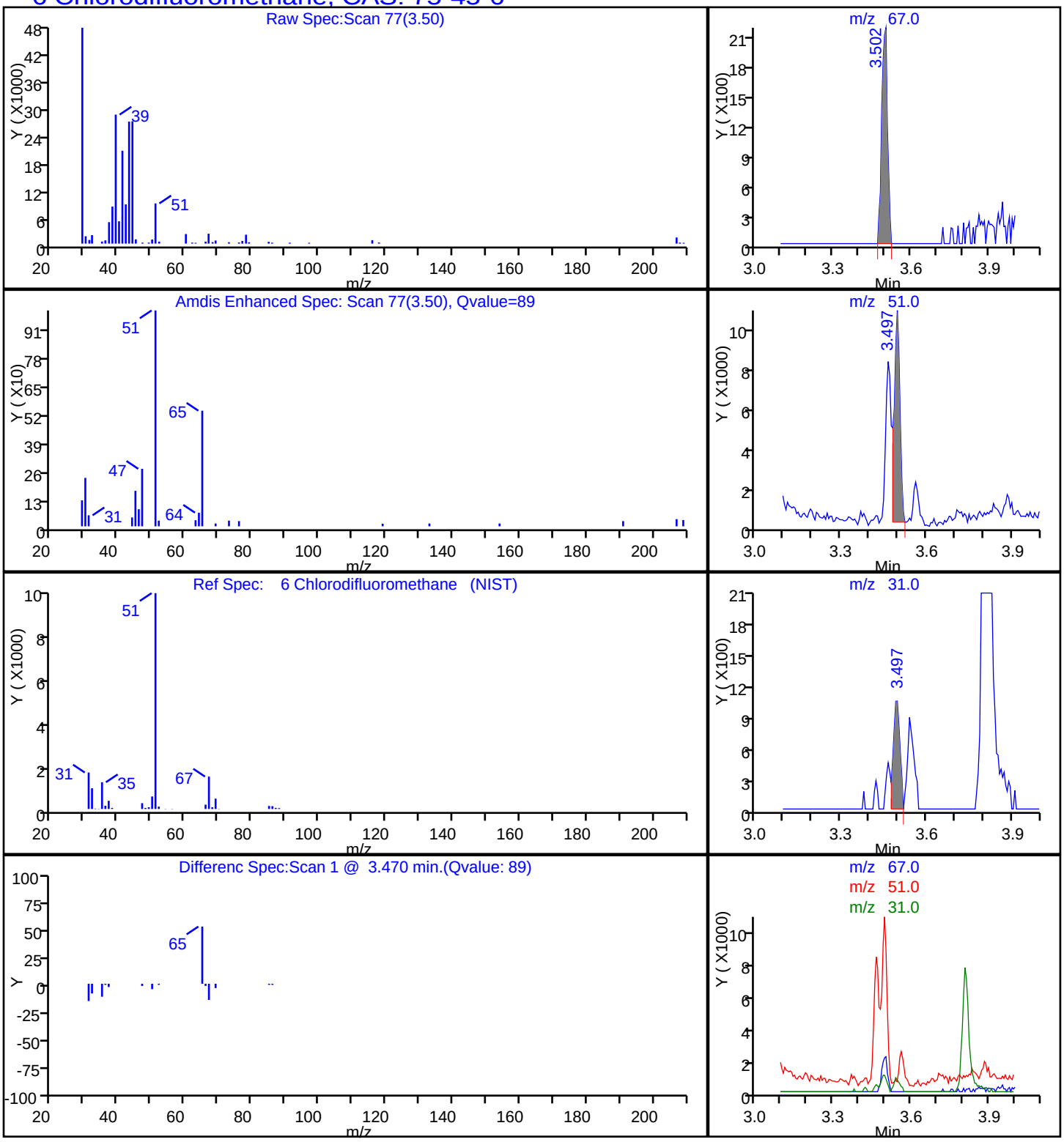
51 Carbon tetrachloride, CAS: 56-23-5



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P104.D				
Injection Date:	11-Jan-2018 17:44:30	Instrument ID:	MR		
Lims ID:	140-10405-A-6	Lab Sample ID:	140-10405-6		
Client ID:	A-EFFLUENT				
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

6 Chlorodifluoromethane, CAS: 75-45-6

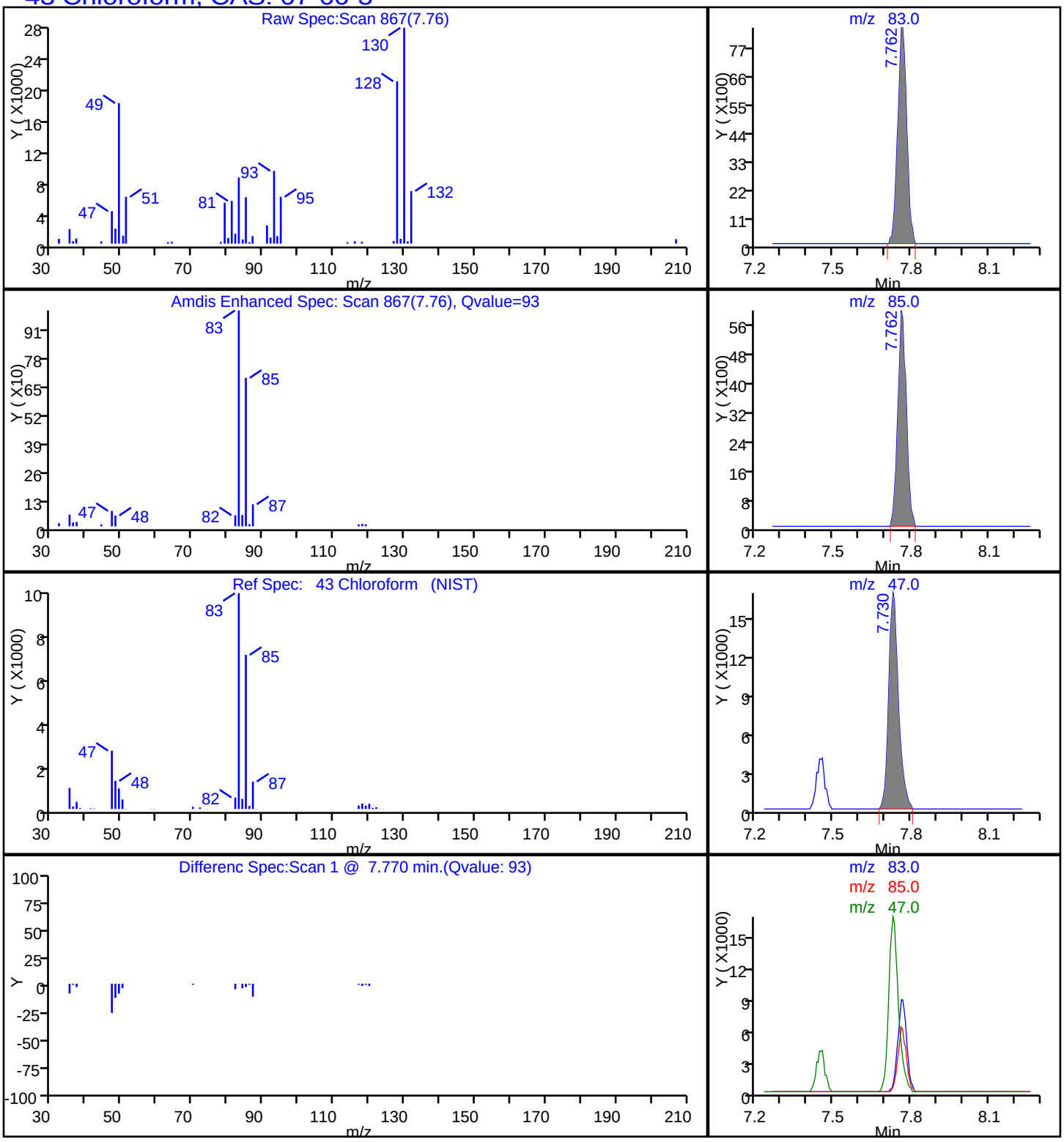


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P104.D

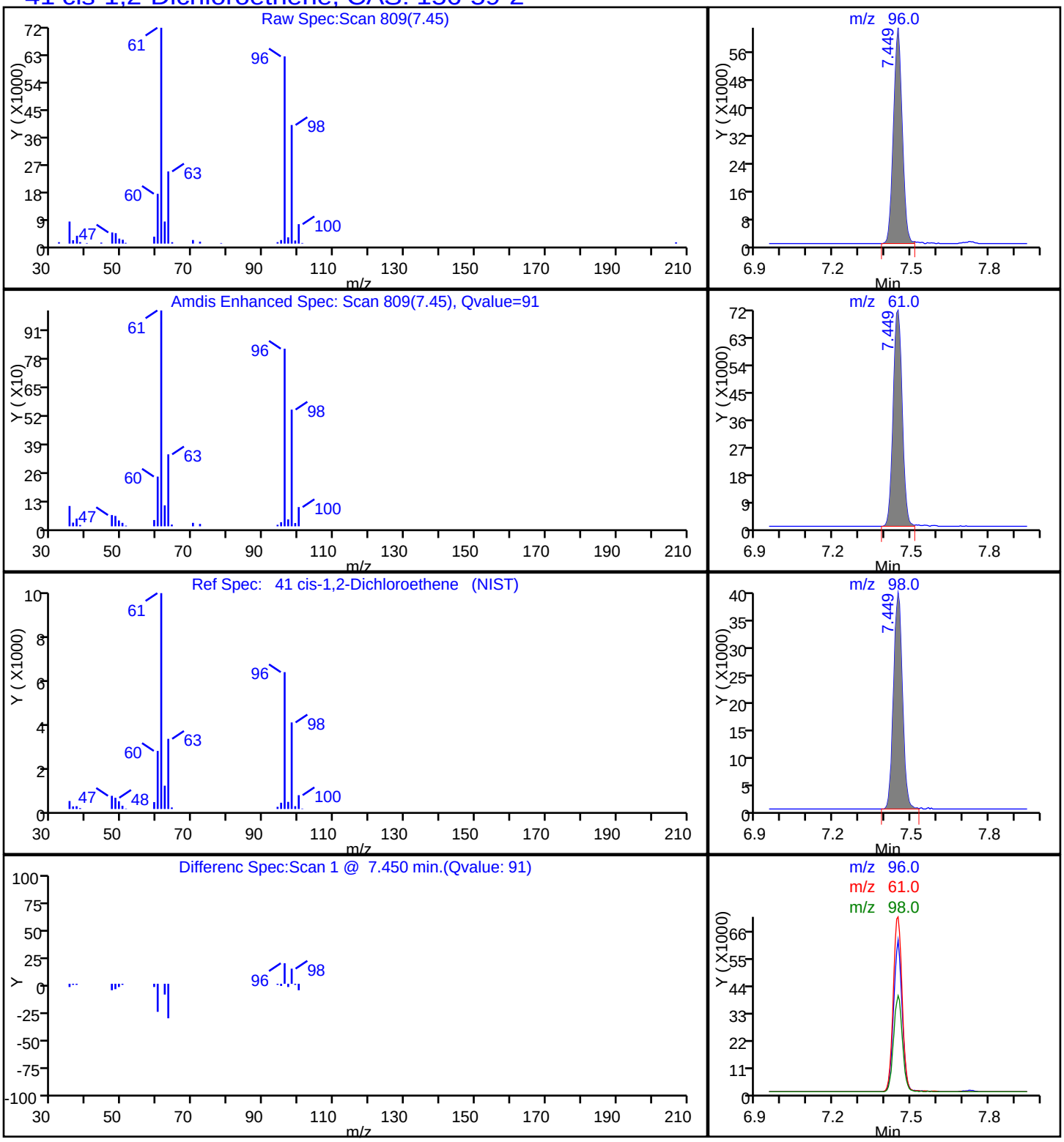
Injection Date:	11-Jan-2018 17:44:30	Instrument ID:	MR
Lims ID:	140-10405-A-6	Lab Sample ID:	140-10405-6
Client ID:	A-EFFLUENT		
Operator ID:		ALS Bottle#:	4 Worklist Smp#: 10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

43 Chloroform, CAS: 67-66-3



Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P104.D
Injection Date: 11-Jan-2018 17:44:30 Instrument ID: MR
Lims ID: 140-10405-A-6 Lab Sample ID: 140-10405-6
Client ID: A-EFFLUENT
Operator ID: ALS Bottle#: 4 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

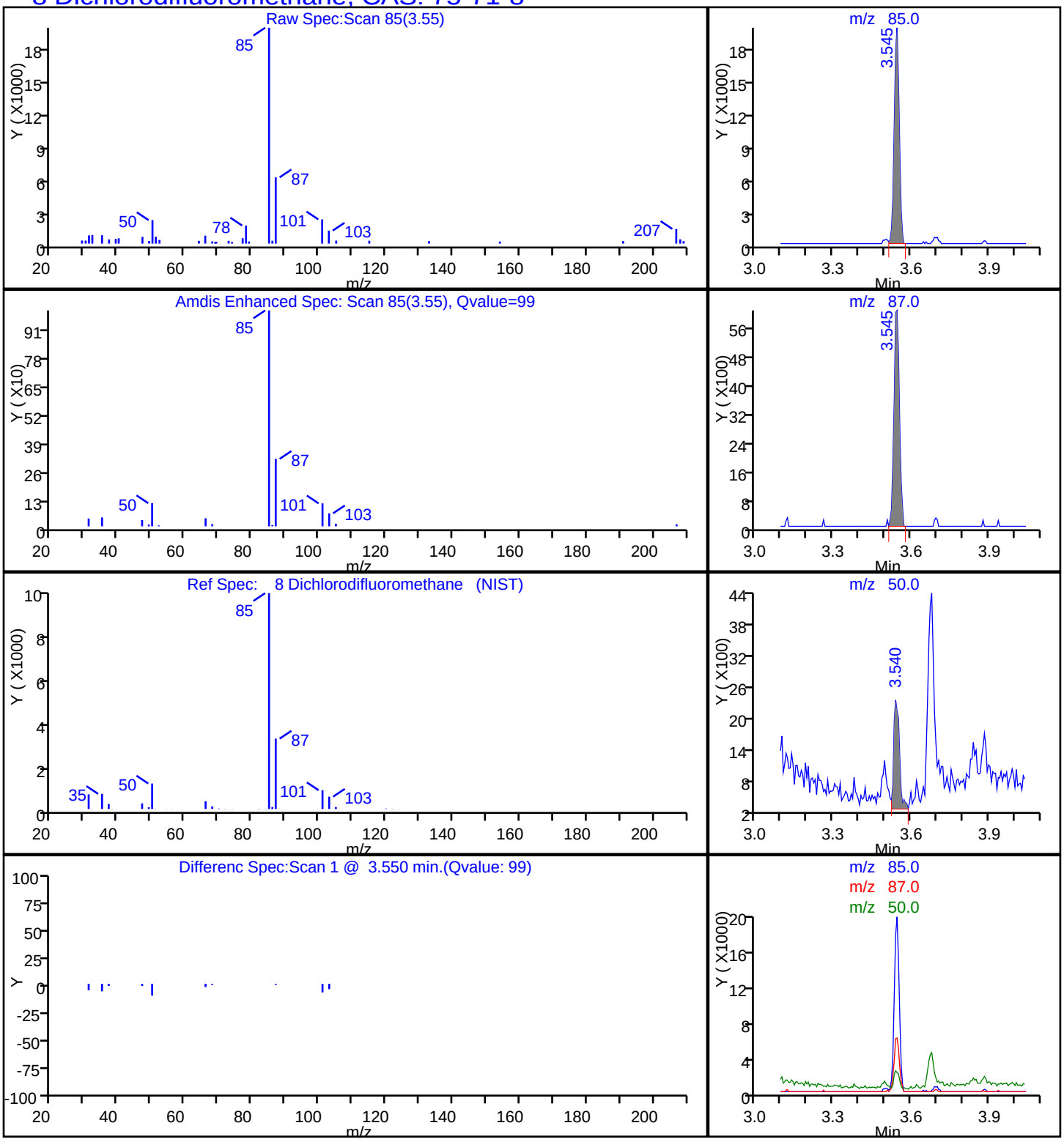
41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P104.D				
Injection Date:	11-Jan-2018 17:44:30	Instrument ID:	MR		
Lims ID:	140-10405-A-6	Lab Sample ID:	140-10405-6		
Client ID:	A-EFFLUENT				
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

8 Dichlorodifluoromethane, CAS: 75-71-8

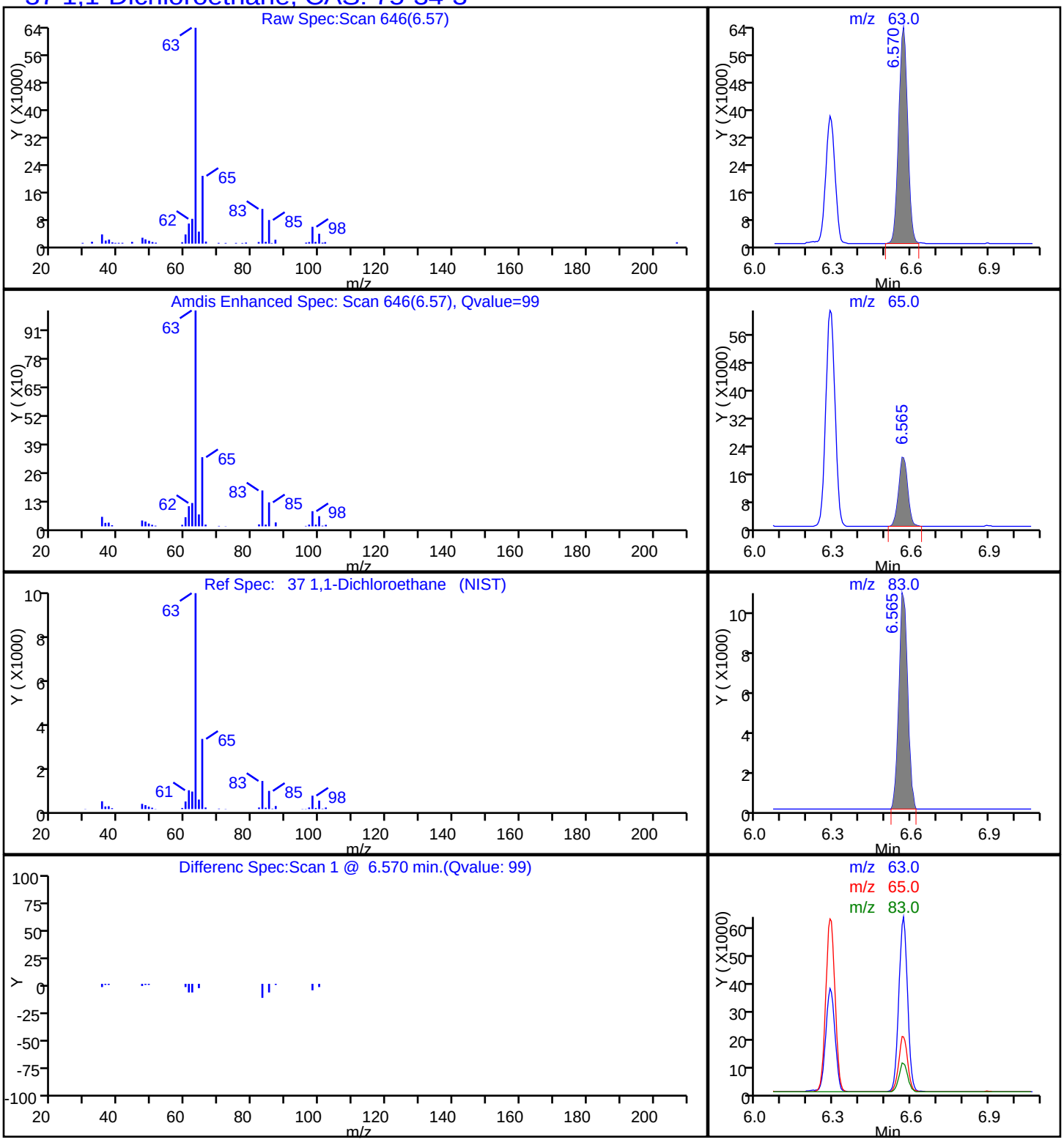


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P104.D

Injection Date:	11-Jan-2018 17:44:30	Instrument ID:	MR		
Lims ID:	140-10405-A-6	Lab Sample ID:	140-10405-6		
Client ID:	A-EFFLUENT				
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

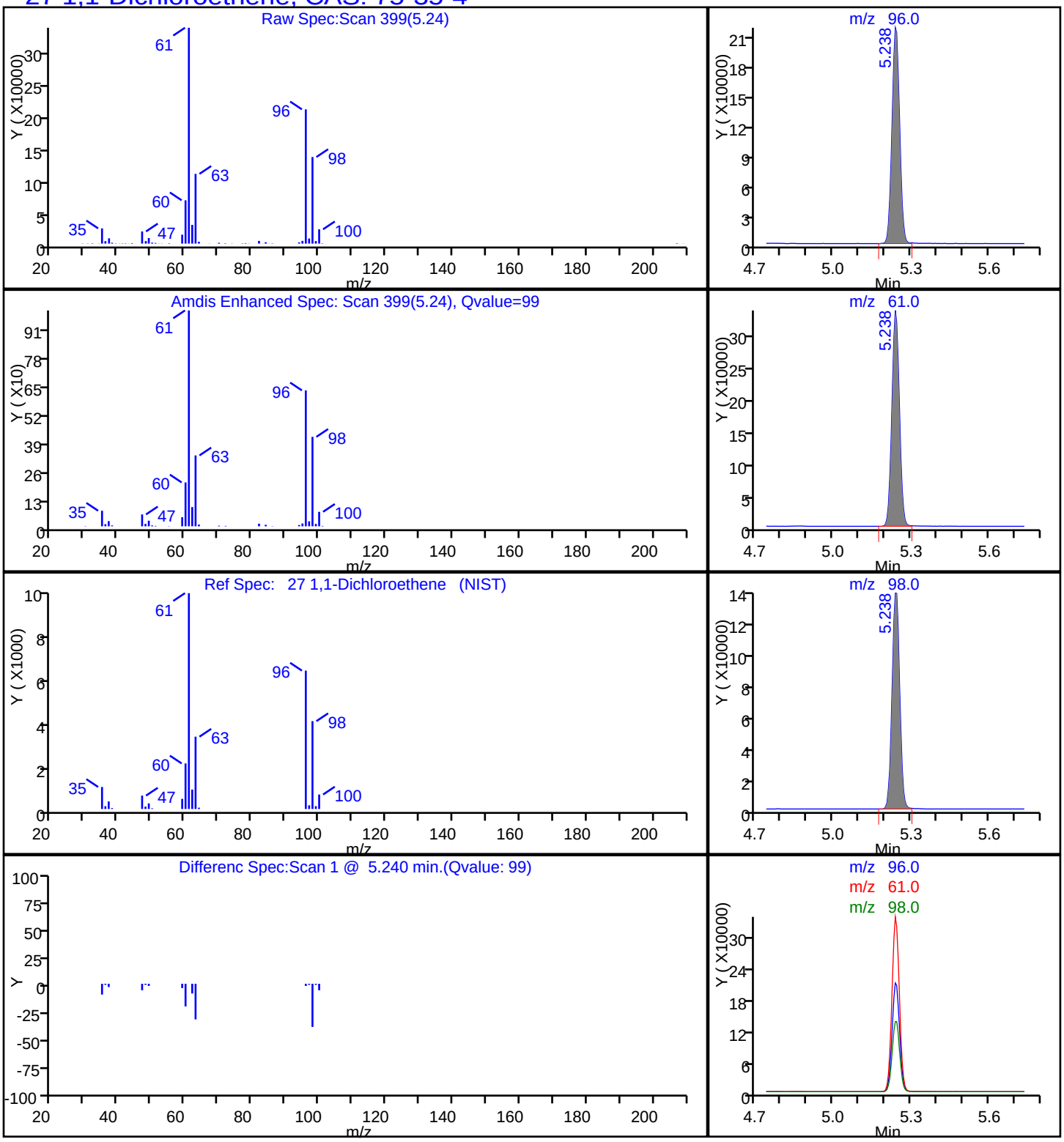
37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P104.D
Injection Date: 11-Jan-2018 17:44:30 Instrument ID: MR
Lims ID: 140-10405-A-6 Lab Sample ID: 140-10405-6
Client ID: A-EFFLUENT
Operator ID: ALS Bottle#: 4 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

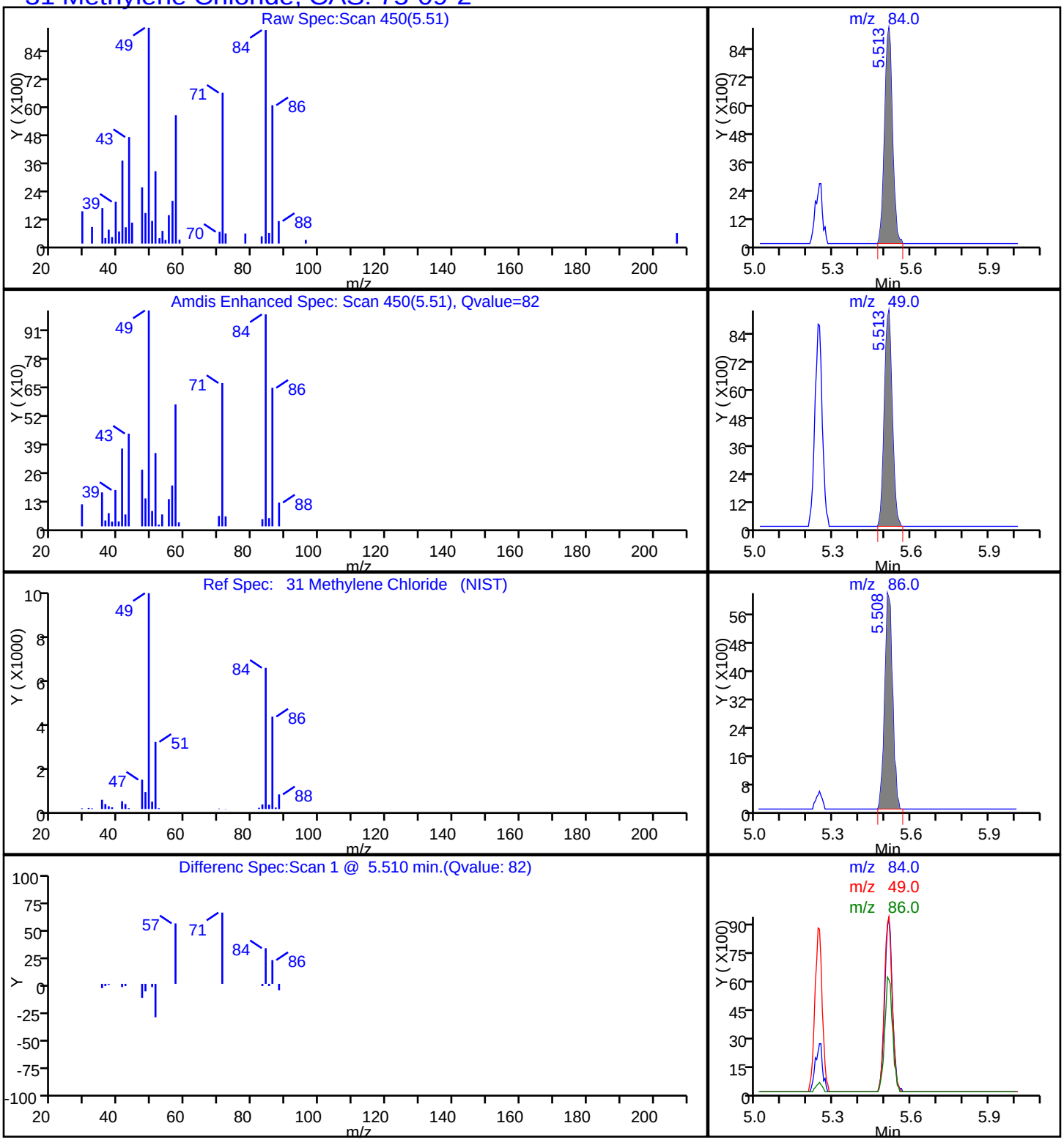
27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P104.D
Injection Date: 11-Jan-2018 17:44:30 Instrument ID: MR
Lims ID: 140-10405-A-6 Lab Sample ID: 140-10405-6
Client ID: A-EFFLUENT
Operator ID: ALS Bottle#: 4 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

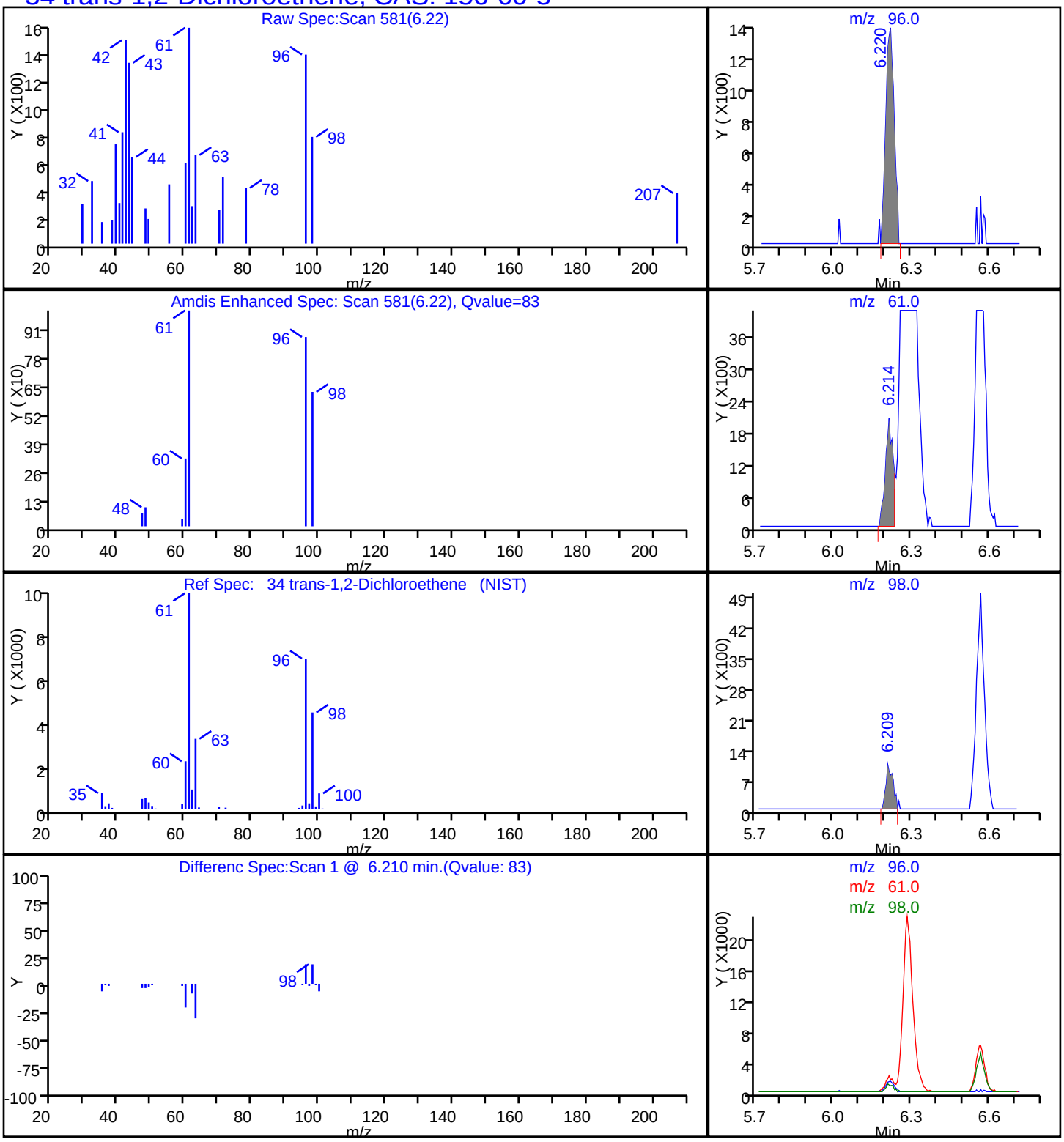
31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P104.D		
Injection Date:	11-Jan-2018 17:44:30	Instrument ID:	MR
Lims ID:	140-10405-A-6	Lab Sample ID:	140-10405-6
Client ID:	A-EFFLUENT		
Operator ID:		ALS Bottle#:	4 Worklist Smp#: 10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

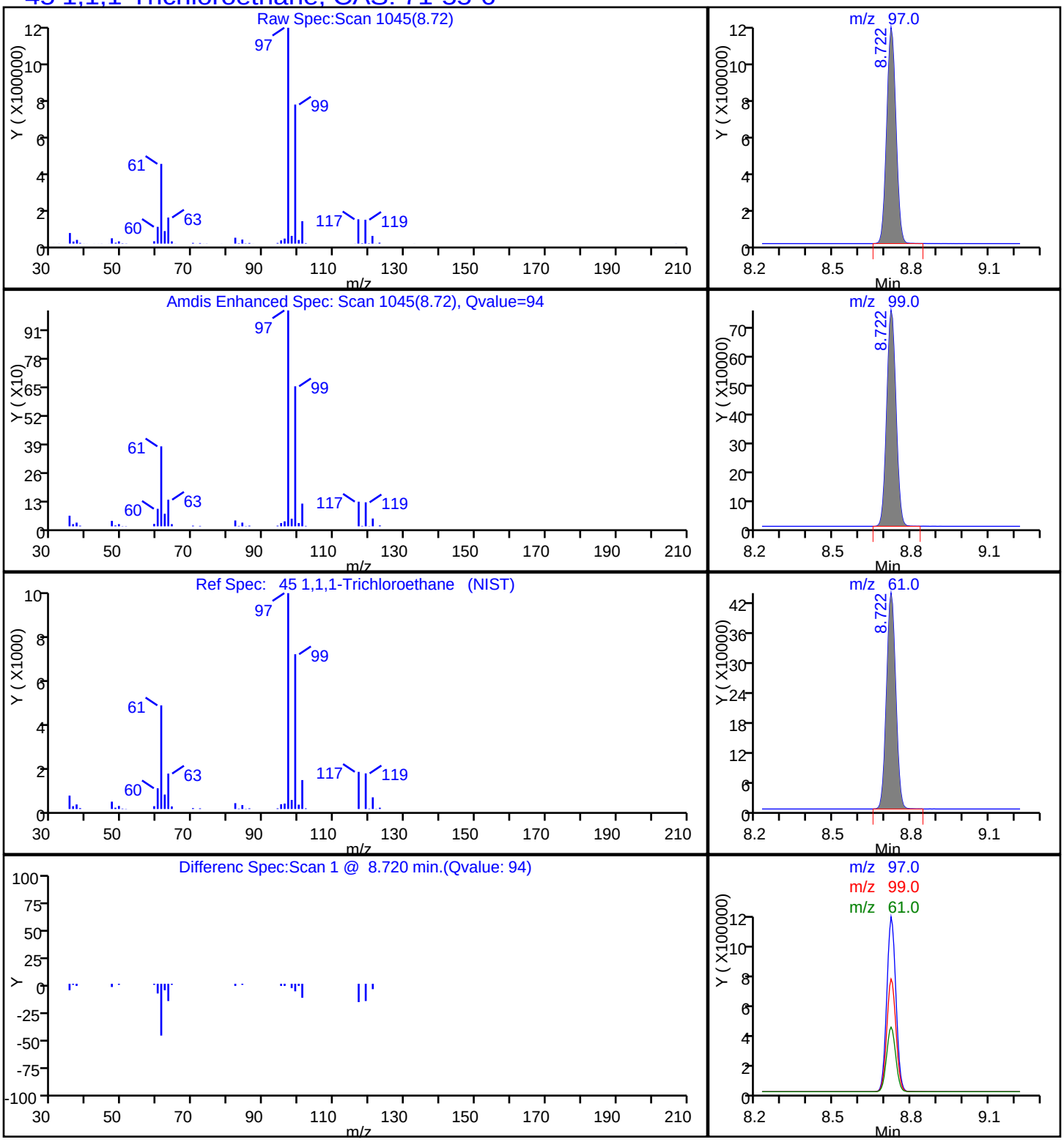
34 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P104.D				
Injection Date:	11-Jan-2018 17:44:30	Instrument ID:	MR		
Lims ID:	140-10405-A-6	Lab Sample ID:	140-10405-6		
Client ID:	A-EFFLUENT				
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

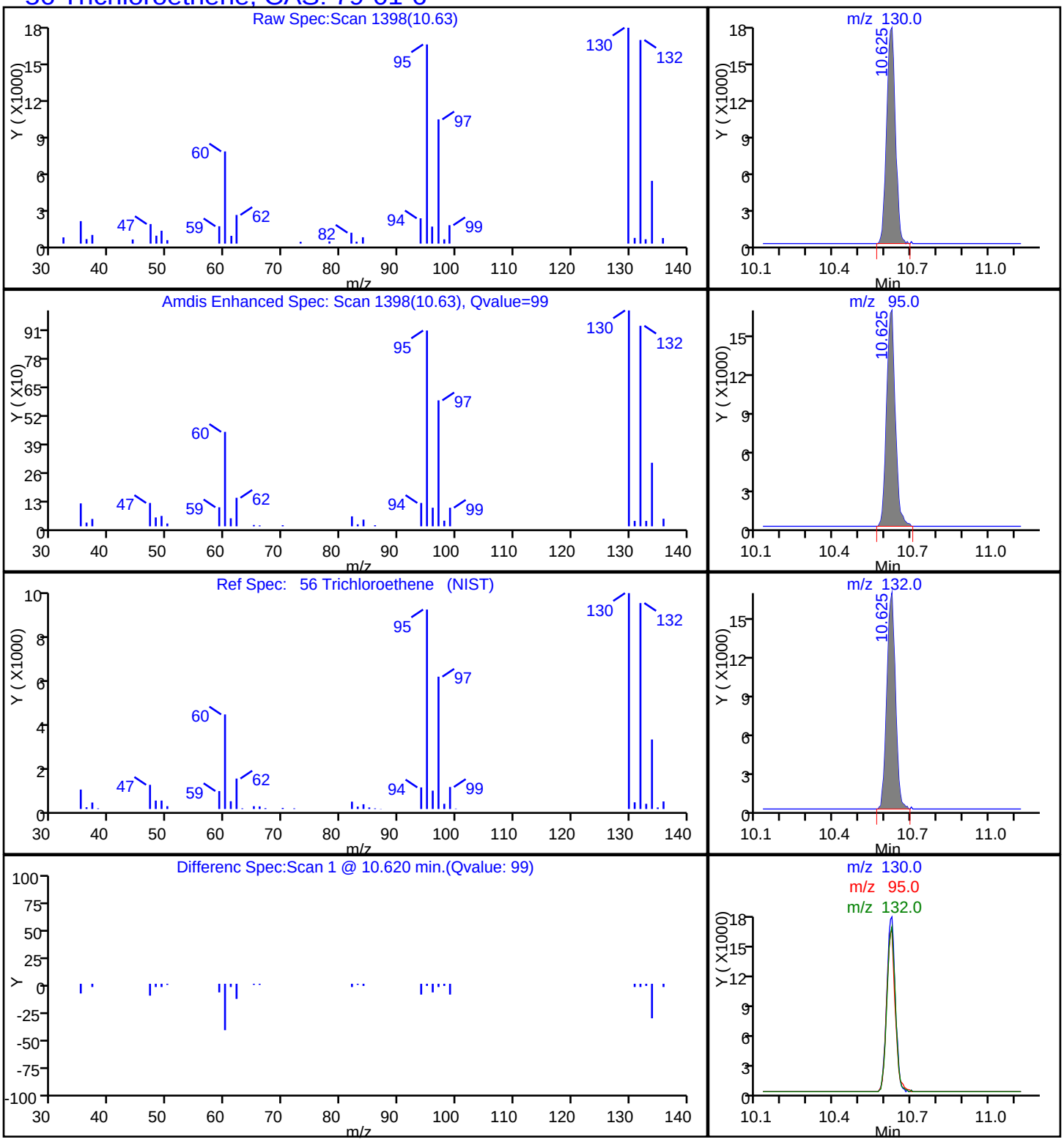
45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P104.D		
Injection Date:	11-Jan-2018 17:44:30	Instrument ID:	MR
Lims ID:	140-10405-A-6	Lab Sample ID:	140-10405-6
Client ID:	A-EFFLUENT		
Operator ID:		ALS Bottle#:	4 Worklist Smp#: 10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

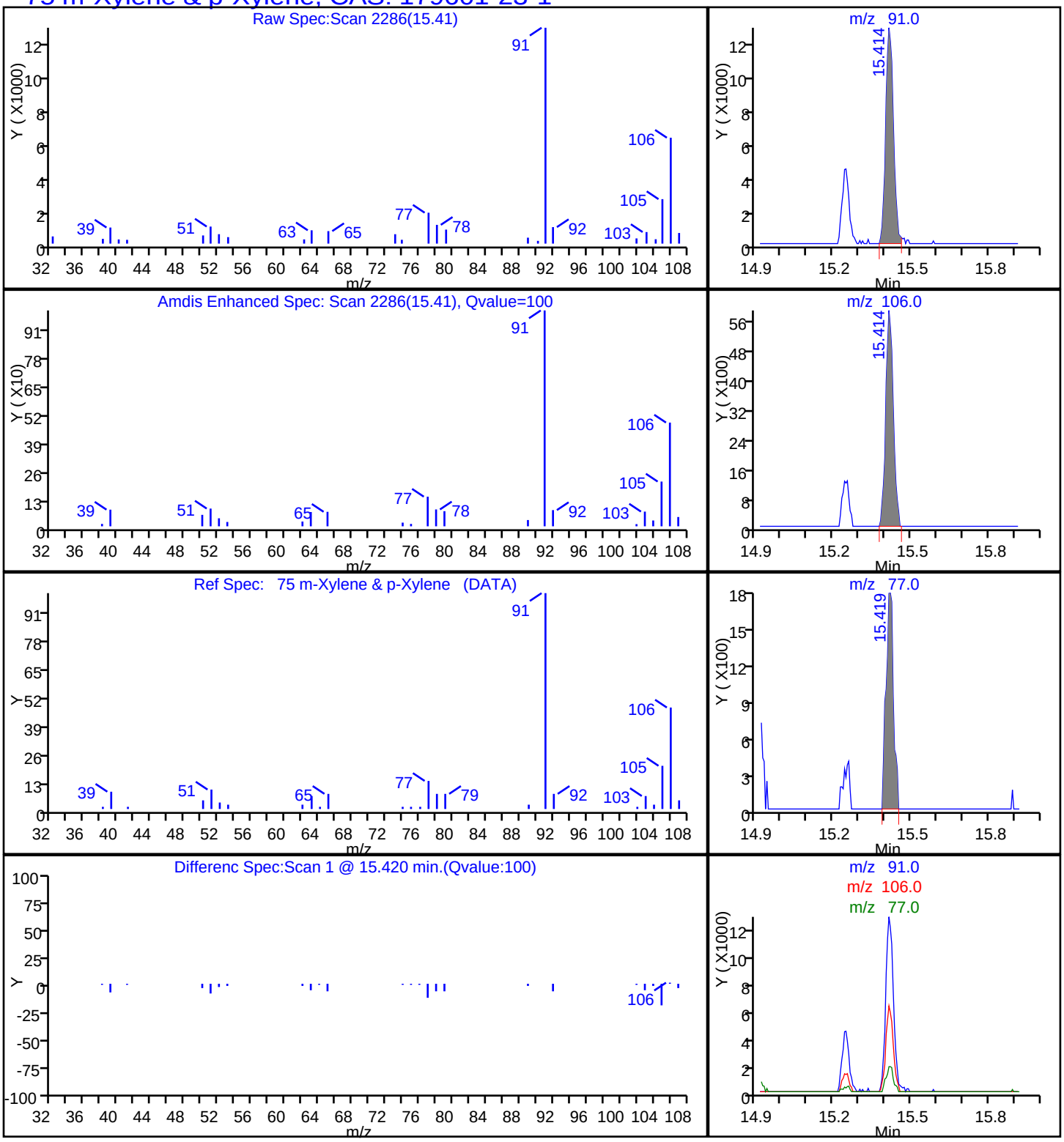
56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P104.D		
Injection Date:	11-Jan-2018 17:44:30	Instrument ID:	MR
Lims ID:	140-10405-A-6	Lab Sample ID:	140-10405-6
Client ID:	A-EFFLUENT		
Operator ID:		ALS Bottle#:	4 Worklist Smp#: 10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

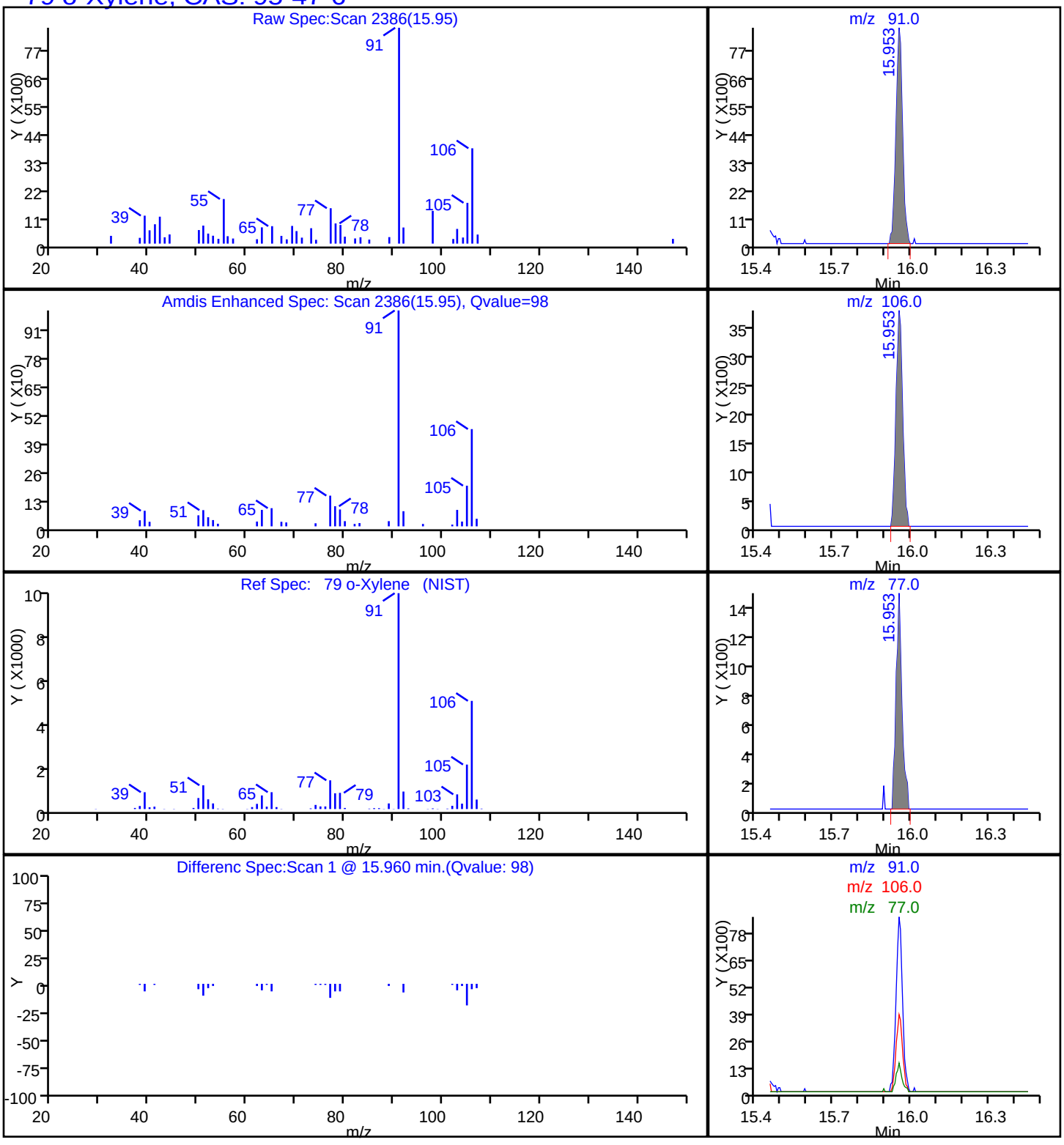
75 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P104.D		
Injection Date:	11-Jan-2018 17:44:30	Instrument ID:	MR
Lims ID:	140-10405-A-6	Lab Sample ID:	140-10405-6
Client ID:	A-EFFLUENT		
Operator ID:		ALS Bottle#:	4 Worklist Smp#: 10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

79 o-Xylene, CAS: 95-47-6



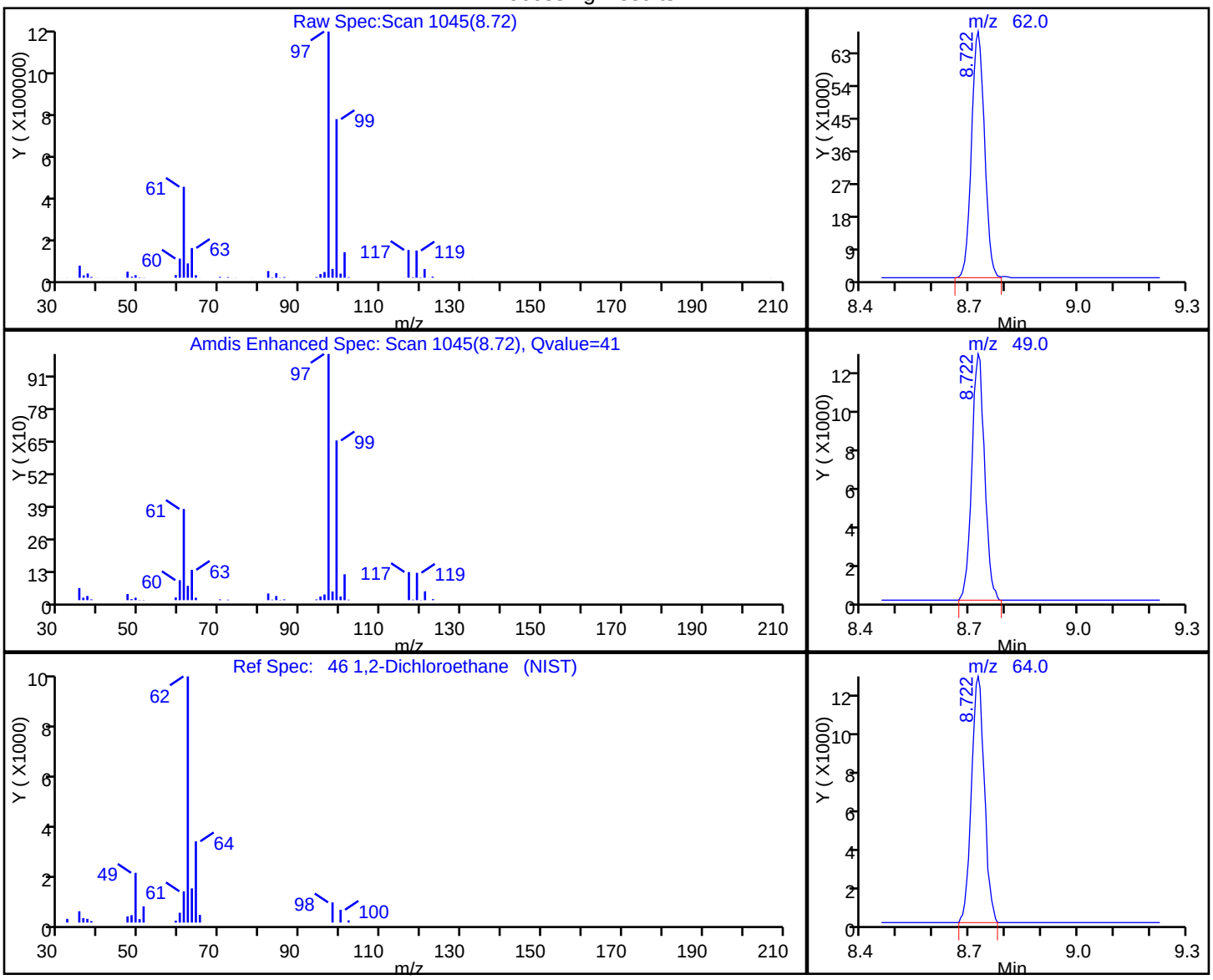
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P104.D				
Injection Date:	11-Jan-2018 17:44:30	Instrument ID:	MR		
Lims ID:	140-10405-A-6	Lab Sample ID:	140-10405-6		
Client ID:	A-EFFLUENT				
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

46 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
8.72	62.00	171573	1.057675
8.72	49.00	30100	
8.72	64.00	30126	

Reviewer: tajh, 12-Jan-2018 10:10:33

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

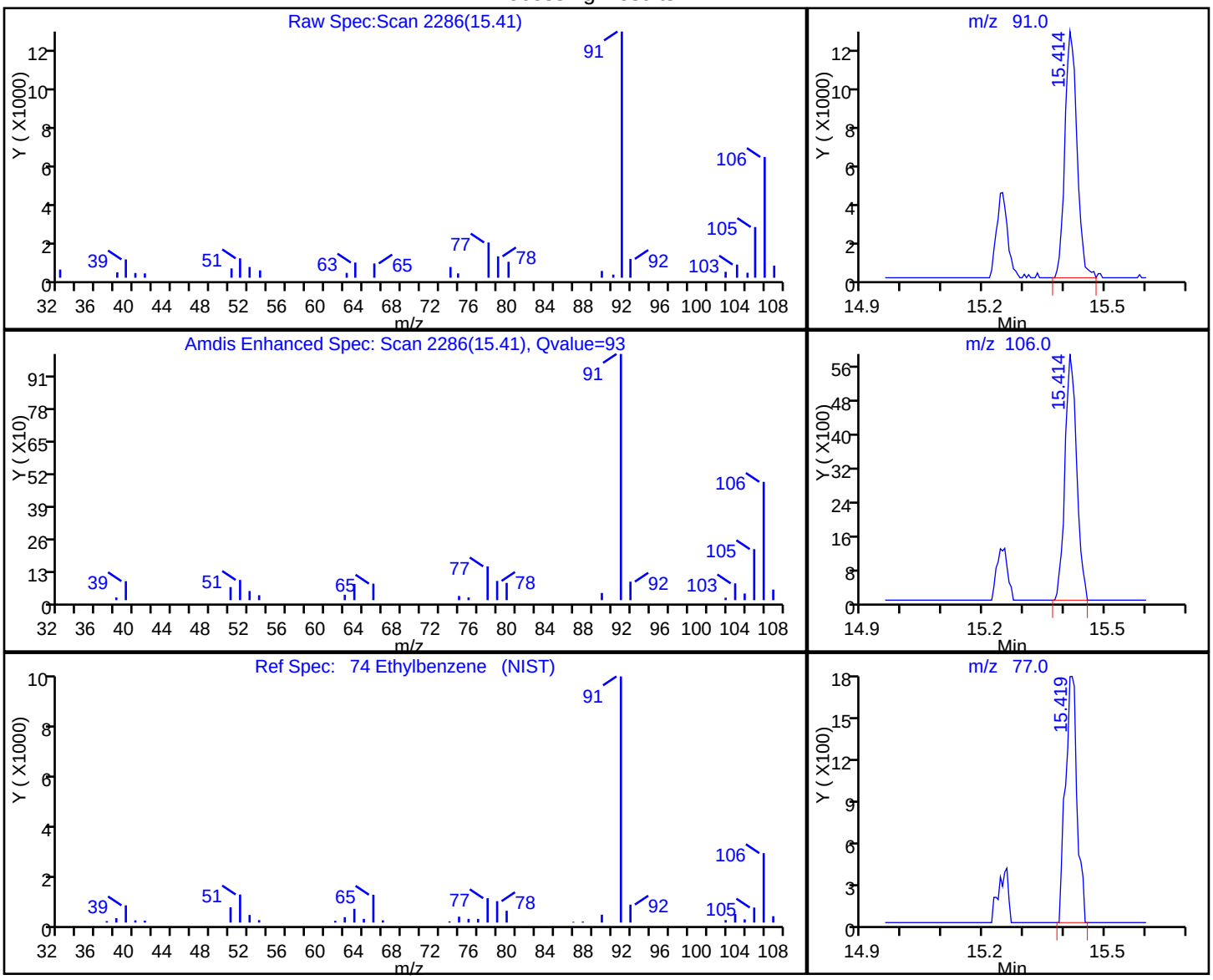
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RA11P104.D		
Injection Date:	11-Jan-2018 17:44:30	Instrument ID:	MR
Lims ID:	140-10405-A-6	Lab Sample ID:	140-10405-6
Client ID:	A-EFFLUENT		
Operator ID:		ALS Bottle#:	4 Worklist Smp#: 10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

74 Ethylbenzene, CAS: 100-41-4

Processing Results



RT	Mass	Response	Amount
15.41	91.00	25041	0.053492
15.41	106.00	11812	
15.42	77.00	3442	

Reviewer: tajh, 12-Jan-2018 10:10:33

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-15542/3	RJ25IC01.D
Level 2	IC 140-15542/4	RJ25IC02.D
Level 3	IC 140-15542/5	RJ25IC03.D
Level 4	IC 140-15542/6	RJ25IC04.D
Level 5	IC 140-15542/7	RJ25IC05.D
Level 6	IC 140-15542/8	RJ25IC06.D
Level 7	ICIS 140-15542/9	RJ25IC07.D
Level 8	IC 140-15542/10	RJ25IC08.D
Level 9	IC 140-15542/11	RJ25IC09.D
Level 10	IC 140-15542/12	RJ25IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Chlorodifluoromethane	+++++ 0.5284	0.5498 0.4869	0.5388 0.4776	0.5514 0.4437	0.5122 0.4332	Ave		0.5024				8.9		30.0			
Propene	+++++ 1.2081	+++++ 1.1108	1.2646 1.0852	1.2728 0.9817	1.1663 0.9148	Ave		1.1255				11.5		30.0			
Dichlorodifluoromethane	+++++ 3.9909	+++++ 3.8141	4.5987 3.9931	4.0497 3.6894	4.0128 3.2171	Ave		3.9207				9.9		30.0			
Chloromethane	+++++ 0.4116	+++++ 0.3616	+++++ 0.3895	0.4111 0.3351	0.4051 0.3187	Ave		0.3761				10.1		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++ 3.0515	+++++ 2.8159	3.0416 2.9081	3.0050 2.6689	2.9047 2.5575	Ave		2.8691				6.2		30.0			
Vinyl chloride	1.3671 1.1454	1.3059 1.0931	1.1656 1.0562	1.1683 0.9864	1.1298 0.9446	Ave		1.1362				11.4		30.0			
1,3-Butadiene	+++++ 0.7792	+++++ 0.7365	0.8596 0.7109	0.8017 0.6647	0.7534 0.6270	Ave		0.7416				10.1		30.0			
Butane	+++++ 1.3174	+++++ 1.2614	1.4036 1.2076	1.3738 1.1090	1.2919 1.0300	Ave		1.2493				10.3		30.0			
Bromomethane	+++++ 1.2347	+++++ 1.1667	1.2049 1.1542	1.2405 1.0697	1.1939 1.0402	Ave		1.1631				6.3		30.0			
Chloroethane	+++++ 0.5232	+++++ 0.5083	0.6044 0.5006	0.5876 0.4680	0.5358 0.4487	Ave		0.5221				10.3		30.0			
Ethanol	+++++ 0.3806	+++++ 0.3657	0.4194 0.3594	0.4087 0.3240	0.3758 0.2895	Ave		0.3654				11.6		30.0			
Vinyl bromide	+++++ 1.2472	+++++ 1.1823	1.3997 1.1573	1.3081 1.0917	1.2478 1.0557	Ave		1.2112				9.3		30.0			
2-Methylbutane	+++++ 0.8799	+++++ 0.8645	0.9173 0.8285	0.9723 0.7731	0.8592 0.7294	Ave		0.8530				9.0		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Acrolein	+++++ 0.3247	+++++ 0.3251	+++++ 0.3096	0.4515 0.2725	0.3179 0.2686	Ave		0.3243				18.8		30.0			
Trichlorofluoromethane	+++++ 4.2099	+++++ 3.9483	4.3466 3.8229	4.2598 3.5155	4.1478 3.2490	Ave		3.9375				9.9		30.0			
Acetonitrile	+++++ 0.2877	+++++ 0.2707	+++++ 0.2631	0.2664 0.2836	0.2659 0.2681	Ave		0.2722				3.5		30.0			
Acetone	+++++ 0.4388	+++++ 0.4317	+++++ 0.4039	0.5941 0.3861	0.4720 0.3595	Ave		0.4409				17.5		30.0			
Pentane	+++++ 0.2794	+++++ 0.2839	+++++ 0.2643	0.2943 0.2603	0.2820 0.2474	Ave		0.2731				6.0		30.0			
Isopropyl alcohol	+++++ 1.7956	+++++ 1.7656	1.8207 1.6884	1.8180 1.5825	1.7570 1.4204	Ave		1.7060				8.2		30.0			
Ethyl ether	+++++ 1.2446	+++++ 1.1803	1.2561 1.1394	1.2411 1.0701	1.2076 1.0311	Ave		1.1713				7.2		30.0			
1,1-Dichloroethene	1.8089 1.6087	1.7207 1.5302	1.6111 1.5478	1.5863 1.4839	1.5436 1.4952	Ave		1.5936				6.4		30.0			
Acrylonitrile	+++++ 1.0563	+++++ 0.9844	0.9679 0.9980	1.0591 0.9662	0.9578 0.9584	Ave		0.9935				4.2		30.0			
tert-Butyl alcohol	+++++ 3.1960	+++++ 3.0657	2.9798 3.0580	3.0771 2.9311	2.9858 2.7796	Ave		3.0091				4.1		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++ 3.5686	3.7467 3.3630	3.5432 3.3638	3.5431 3.1737	3.4737 3.0611	Ave		3.4263				6.2		30.0			
Methylene Chloride	+++++ 1.6389	+++++ 1.4623	+++++ 1.4218	2.4173 1.3471	1.7931 1.3204	Ave		1.6287				23.7		30.0			
3-Chloropropene	+++++ 1.4043	+++++ 1.2922	1.2624 1.2868	1.3073 1.2170	1.3032 1.1720	Ave		1.2806				5.4		30.0			
Carbon disulfide	+++++ 4.5562	+++++ 4.2698	4.4603 4.3410	4.3596 4.1377	4.3768 4.0665	Ave		4.3210				3.7		30.0			
trans-1,2-Dichloroethene	1.8154 1.6726	1.7919 1.5890	1.6255 1.6145	1.5941 1.5669	1.5688 1.5630	Ave		1.6402				5.6		30.0			
Methyl tert-butyl ether	+++++ 4.8940	4.8207 4.6951	4.5643 4.7557	4.5992 4.5445	4.5994 4.4091	Ave		4.6535				3.3		30.0			
1,1-Dichloroethane	3.1254 2.9871	3.1325 2.8151	2.9741 2.8056	3.0246 2.6622	2.8860 2.6015	Ave		2.9014				6.2		30.0			
Vinyl acetate	+++++ 3.3745	+++++ 3.3132	2.6662 3.4378	2.8636 3.3276	2.9765 3.3006	Ave		3.1575				9.0		30.0			
2-Butanone (MEK)	+++++ 0.7408	+++++ 0.7222	0.6292 0.7386	0.7368 0.7192	0.6927 0.7157	Ave		0.7119				5.2		30.0			
Hexane	+++++ 1.1962	+++++ 1.1320	1.1952 1.1397	1.1913 1.0739	1.1475 1.0325	Ave		1.1385				5.2		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
cis-1,2-Dichloroethene	1.7777 1.7143	1.7900 1.6382	1.6687 1.6819	1.6562 1.6167	1.6070 1.6130	Ave		1.6764				3.9		30.0			
Ethyl acetate	+++++ 2.9873	+++++ 2.8362	2.7319 2.9106	2.7331 2.7482	2.6995 2.6863	Ave		2.7916				3.9		30.0			
Chloroform	4.2002 3.8862	4.1393 3.6677	3.7970 3.6669	3.8508 3.4657	3.7285 3.3729	Ave		3.7775				6.9		30.0			
Tetrahydrofuran	1.5974 1.3952	1.4904 1.3613	1.3532 1.3696	1.3431 1.3057	1.3117 1.2739	Ave		1.3802				7.0		30.0			
1,1,1-Trichloroethane	4.1022 4.1028	4.1446 3.9110	3.8572 3.9680	3.9403 3.7653	3.8814 3.6726	Ave		3.9345				3.9		30.0			
1,2-Dichloroethane	0.4376 0.4545	0.4586 0.4265	0.4367 0.4301	0.4298 0.4022	0.4313 0.4027	Ave		0.4310				4.3		30.0			
Benzene	0.8874 0.8377	0.8387 0.7949	0.8005 0.8129	0.8016 0.7541	0.7867 0.7073	Ave		0.8022				6.1		30.0			
1-Butanol	+++++ 0.0669	+++++ 0.0692	+++++ 0.0721	+++++ 0.0712	0.0540 0.0656	Ave		0.0665				9.9		30.0			
Cyclohexane	+++++ 0.1326	+++++ 0.1266	0.1107 0.1275	0.1162 0.1174	0.1216 0.1097	Ave		0.1203				6.8		30.0			
Carbon tetrachloride	0.6796 0.7358	0.6730 0.7073	0.6550 0.7210	0.6741 0.6748	0.6693 0.6573	Ave		0.6847				4.0		30.0			
2,2,4-Trimethylpentane	+++++ 1.2439	+++++ 1.1739	1.1169 1.1877	1.1465 1.0995	1.1539 1.0350	Ave		1.1447				5.5		30.0			
1,2-Dichloropropane	+++++ 0.2956	0.2944 0.2783	0.2863 0.2811	0.2784 0.2589	0.2796 0.2451	Ave		0.2775				5.8		30.0			
Heptane	+++++ 0.2917	+++++ 0.2811	0.2463 0.2865	0.2614 0.2666	0.2679 0.2521	Ave		0.2692				6.0		30.0			
Trichloroethene	0.3868 0.4089	0.3833 0.3915	0.3714 0.4007	0.3792 0.3827	0.3806 0.3815	Ave		0.3866				2.9		30.0			
Dibromomethane	+++++ 0.3485	0.3979 0.3352	0.3510 0.3421	0.3356 0.3252	0.3268 0.3238	Ave		0.3429				6.7		30.0			
Bromodichloromethane	+++++ 0.6564	0.5743 0.6406	0.5553 0.6635	0.5717 0.6328	0.5804 0.6202	Ave		0.6106				6.6		30.0			
1,4-Dioxane	+++++ 0.1342	+++++ 0.1284	+++++ 0.1314	0.1128 0.1227	0.1208 0.1144	Ave		0.1235				6.7		30.0			
Methyl methacrylate	+++++ 0.2930	+++++ 0.2991	0.1956 0.3136	0.2214 0.3010	0.2473 0.2988	Ave		0.2712				16.2		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.5139	+++++ 0.5046	+++++ 0.5184	0.4085 0.4915	0.4384 0.4709	Ave		0.4780				8.7		30.0			
cis-1,3-Dichloropropene	0.3917 0.4936	0.3928 0.4868	0.3807 0.5057	0.4204 0.4814	0.4360 0.4785	Ave		0.4468				10.7		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
trans-1,3-Dichloropropene	0.3882 0.5309	0.4202 0.5238	0.4155 0.5568	0.4506 0.5354	0.4726 0.5456	Ave		0.4839				12.8		30.0			
Toluene	1.1241 1.2084	1.0868 1.1506	1.0517 1.1907	1.0960 1.1068	1.1100 1.0717	Ave		1.1197				4.5		30.0			
1,1,2-Trichloroethane	0.3102 0.3473	0.3229 0.3300	0.3082 0.3361	0.3193 0.3146	0.3197 0.3103	Ave		0.3219				3.9		30.0			
2-Hexanone	+++++ 0.3134	+++++ 0.3241	0.1763 0.3399	0.2213 0.3226	0.2561 0.3137	Ave		0.2834				20.8		30.0			
Dibromochloromethane	0.5587 0.7291	0.5598 0.7381	0.5475 0.7922	0.5886 0.7537	0.6237 0.7415	Ave		0.6633				14.5		30.0			
Octane	+++++ 0.3937	+++++ 0.3800	0.3096 0.3881	0.3400 0.3585	0.3548 0.3431	Ave		0.3585				7.9		30.0			
1,2-Dibromoethane (EDB)	+++++ 0.6389	+++++ 0.6187	0.5190 0.6466	0.5500 0.6149	0.5703 0.6122	Ave		0.5963				7.6		30.0			
Tetrachloroethene	0.4304 0.4653	0.4501 0.4431	0.4223 0.4543	0.4370 0.4282	0.4336 0.4230	Ave		0.4387				3.2		30.0			
Chlorobenzene	0.9992 0.9864	0.9718 0.9345	0.9281 0.9494	0.9398 0.8849	0.9365 0.8618	Ave		0.9392				4.5		30.0			
Ethylbenzene	1.4401 1.6275	1.3993 1.5401	1.3903 1.5662	1.4540 1.4291	1.4862 1.3231	Ave		1.4656				6.2		30.0			
m-Xylene & p-Xylene	1.0711 1.2823	1.0649 1.2091	1.0702 1.2012	1.1449 1.0714	1.1823 0.9448	Ave		1.1242				8.7		30.0			
Bromoform	0.4674 0.6394	0.4865 0.6797	0.4696 0.7422	0.4946 0.7185	0.5232 0.7222	Ave		0.5943				19.5		30.0			
Styrene	+++++ 0.8867	+++++ 0.8831	0.5643 0.9141	0.6456 0.8567	0.7237 0.8325	Ave		0.7883				16.3		30.0			
Nonane	+++++ 0.7206	+++++ 0.6652	0.5507 0.6497	0.6229 0.5720	0.6636 0.5123	Ave		0.6196				11.2		30.0			
o-Xylene	1.1302 1.3545	1.1569 1.2573	1.1624 1.2520	1.2472 1.1358	1.2666 1.0500	Ave		1.2013				7.4		30.0			
1,1,2,2-Tetrachloroethane	+++++ 0.8957	0.7355 0.8362	0.7299 0.8372	0.7901 0.7630	0.8060 0.7191	Ave		0.7903				7.5		30.0			
1,2,3-Trichloropropane	+++++ 0.3061	+++++ 0.2848	0.2659 0.2816	0.2880 0.2587	0.2822 0.2535	Ave		0.2776				6.2		30.0			
Isopropylbenzene	+++++ 1.8916	1.8696 1.7566	1.7791 1.7343	1.8252 1.5487	1.8101 1.3945	Ave		1.7344				9.3		30.0			
Propylbenzene	+++++ 0.5358	0.4255 0.5029	0.4062 0.4998	0.4593 0.4505	0.4832 0.4206	Ave		0.4649				9.4		30.0			
2-Chlorotoluene	+++++ 0.4797	0.4156 0.4462	0.4109 0.4420	0.4537 0.3971	0.4522 0.3770	Ave		0.4305				7.5		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
4-Ethyltoluene	+++++ 2.0232	1.5384 1.8873	1.5441 1.8623	1.7128 1.6421	1.8142 1.4584	Ave		1.7203				11.0		30.0			
1,3,5-Trimethylbenzene	0.6131 0.8251	0.6256 0.7732	0.6275 0.7713	0.7130 0.6963	0.7475 0.6549	Ave		0.7048				10.4		30.0			
Alpha Methyl Styrene	+++++ 0.7234	+++++ 0.7310	+++++ 0.7573	0.4842 0.7002	0.5590 0.6628	Ave		0.6597				15.3		30.0			
Decane	+++++ 1.0382	+++++ 0.9664	0.7218 0.9491	0.8677 0.8185	0.9184 0.6960	Ave		0.8720				13.8		30.0			
tert-Butylbenzene	+++++ 1.9116	1.5250 1.7775	1.5052 1.7572	1.7050 1.5403	1.7410 1.3578	Ave		1.6467				10.5		30.0			
1,2,4-Trimethylbenzene	1.2958 1.7741	1.3547 1.6220	1.3822 1.5674	1.5708 1.3511	1.6211 1.1658	Ave		1.4705				12.7		30.0			
1,3-Dichlorobenzene	0.9501 1.1491	0.9755 1.0709	0.9435 1.0555	1.0461 0.9334	1.0454 0.8545	Ave		1.0024				8.6		30.0			
sec-Butylbenzene	+++++ 2.5239	1.9242 2.3507	1.9211 2.2918	2.1731 1.9258	2.2800 1.5928	Ave		2.1093				13.7		30.0			
Benzyl chloride	+++++ 1.4749	+++++ 1.4399	+++++ 1.4370	1.1324 1.2503	1.2318 1.0883	Ave		1.2935				12.2		30.0			
1,4-Dichlorobenzene	0.9723 1.1642	0.9722 1.0795	0.9703 1.0577	1.0618 0.9359	1.0514 0.8577	Ave		1.0123				8.6		30.0			
4-Isopropyltoluene	+++++ 2.2611	1.6211 2.1503	1.6490 2.1293	1.9267 1.8090	2.0038 1.4958	Ave		1.8940				14.1		30.0			
1,2,3-Trimethylbenzene	1.4171 1.9595	1.5428 1.8127	1.5222 1.7708	1.7559 1.5408	1.7871 1.3448	Ave		1.6454				12.0		30.0			
1,2-Dichlorobenzene	0.9674 1.1266	0.9741 1.0457	0.9121 1.0282	1.0300 0.9062	1.0081 0.8238	Ave		0.9822				8.7		30.0			
Butylbenzene	+++++ 2.1055	1.4970 1.9952	1.4408 1.9800	1.7130 1.6753	1.8234 1.3513	Ave		1.7313				15.4		30.0			
Undecane	+++++ 1.2182	+++++ 1.1654	0.7698 1.1579	0.9546 1.0014	1.0143 0.8324	Ave		1.0142				15.9		30.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.8502	+++++ 0.8663	0.4966 0.9051	0.6087 0.7949	0.6550 0.7083	Ave		0.7356				19.4		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 2.9309	+++++ 2.7917	1.9390 2.7937	2.3411 2.3234	2.4353 +++++	Ave		2.5079				13.9		30.0			
Dodecane	+++++ 1.2500	+++++ 1.1858	0.7480 1.2104	0.9446 1.0380	0.8935 0.8562	Ave		1.0158				18.2		30.0			
1,2,4-Trichlorobenzene	0.6124 0.9441	0.6407 0.9438	0.6398 1.0228	0.7850 0.9588	0.7135 0.9088	Ave		0.8170				19.1		30.0			
Naphthalene	1.4478 2.2892	1.4742 2.2339	1.5283 2.3428	1.9081 2.0982	1.6880 +++++	Ave		1.8900				19.3		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Hexachlorobutadiene	0.7935 0.9253	0.7986 0.8965	0.7203 0.9510	0.8263 0.8975	0.7528 0.8453	Ave		0.8407				9.1		30.0			
1,2,3-Trichlorobenzene	0.6537 0.9130	0.6742 0.8952	0.6874 0.9642	0.8226 0.9021	0.6708 0.8908	Ave		0.8074				15.1		30.0			
2-Methylnaphthalene	+++++ 0.5736	+++++ 0.5700	0.2460 0.6969	0.4439 0.6255	0.2461 0.5637	Ave		0.4957				34.2		50.0			
1-Methylnaphthalene	+++++ 0.4999	+++++ 0.4680	0.2664 0.5744	0.4502 0.5052	0.2201 0.4656	Ave		0.4312				28.4		50.0			
4-Bromofluorobenzene (Surr)	0.7461 0.7392	0.7608 0.7333	0.7634 0.7106	0.7613 0.6920	0.7646 0.6584	Ave		0.7330				4.9		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-15542/3	RJ25IC01.D
Level 2	IC 140-15542/4	RJ25IC02.D
Level 3	IC 140-15542/5	RJ25IC03.D
Level 4	IC 140-15542/6	RJ25IC04.D
Level 5	IC 140-15542/7	RJ25IC05.D
Level 6	IC 140-15542/8	RJ25IC06.D
Level 7	ICIS 140-15542/9	RJ25IC07.D
Level 8	IC 140-15542/10	RJ25IC08.D
Level 9	IC 140-15542/11	RJ25IC09.D
Level 10	IC 140-15542/12	RJ25IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorodifluoromethane	CBM	Ave	+++++ 52665	2085 101769	4125 202279	8460 399853	20097 803086	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Propene	CBM	Ave	+++++ 120415	+++++ 232191	9681 459626	19529 884721	45765 1695857	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	+++++ 397784	+++++ 797253	35205 1691282	62139 3324893	157459 5963801	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Chloromethane	CBM	Ave	+++++ 41021	+++++ 75586	+++++ 164958	6308 301993	15895 590896	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	+++++ 304153	+++++ 588597	23285 1231703	46108 2405230	113975 4741073	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	2540 114161	4952 228480	8923 447334	17927 888956	44332 1751141	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	+++++ 77662	+++++ 153951	6581 301083	12301 599027	29563 1162419	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Butane	CBM	Ave	+++++ 131312	+++++ 263673	10745 511458	21079 999430	50692 1909389	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Bromomethane	CBM	Ave	+++++ 123066	+++++ 243878	9224 488872	19034 964057	46848 1928308	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Chloroethane	CBM	Ave	+++++ 52144	+++++ 106239	4627 212019	9016 421811	21026 831792	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Ethanol	CBM	Ave	+++++ 189667	+++++ 382186	16054 761181	31352 1460090	73720 2683051	+++++ 5.01	+++++ 9.99	0.397 20.0	0.793 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	+++++ 124308	+++++ 247129	10715 490166	20071 983817	48964 1957010	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	+++++ 87697	+++++ 180708	7022 350900	14919 696681	33713 1352243	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Acrolein	CBM	Ave	+++++ 32362	+++++ 67963	+++++ 131136	6928 245571	12474 497887	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Trichlorofluoromethane	CBM	Ave	+++++	+++++	33275	65362	162753	+++++	+++++	0.0793	0.159	0.400
			419611	825311	1619197	3168243	6022956	1.00	2.00	4.00	8.00	16.0
Acetonitrile	CBM	Ave	+++++	+++++	+++++	4087	10434	+++++	+++++	+++++	0.159	0.400
			28679	56588	111432	255539	496965	1.00	2.00	4.00	8.00	16.0
Acetone	CBM	Ave	+++++	+++++	+++++	27350	55570	+++++	+++++	+++++	0.476	1.20
			131209	270718	513231	1043967	1999735	3.01	5.99	12.0	24.0	48.0
Pentane	CBM	Ave	+++++	+++++	+++++	4515	11065	+++++	+++++	+++++	0.159	0.400
			27851	59347	111955	234577	458645	1.00	2.00	4.00	8.00	16.0
Isopropyl alcohol	CBM	Ave	+++++	+++++	41818	83694	206847	+++++	+++++	0.238	0.476	1.20
			536958	1107259	2145485	4278764	7900031	3.01	5.99	12.0	24.0	48.0
Ethyl ether	CBM	Ave	+++++	+++++	9616	19044	47384	+++++	+++++	0.0793	0.159	0.400
			124053	246725	482585	964411	1911537	1.00	2.00	4.00	8.00	16.0
1,1-Dichloroethene	CBM	Ave	3361	6525	12334	24340	60569	0.0196	0.0392	0.0793	0.159	0.400
			160338	319852	655584	1337323	2771817	1.00	2.00	4.00	8.00	16.0
Acrylonitrile	CBM	Ave	+++++	+++++	7410	16250	37581	+++++	+++++	0.0793	0.159	0.400
			105280	205776	422684	870731	1776662	1.00	2.00	4.00	8.00	16.0
tert-Butyl alcohol	CBM	Ave	+++++	+++++	22812	47215	117160	+++++	+++++	0.0793	0.159	0.400
			318549	640820	1295192	2641518	5152924	1.00	2.00	4.00	8.00	16.0
1,1,2-Trichloro-1,2,2-trifluoroetha ne	CBM	Ave	+++++	14208	27125	54365	136304	+++++	0.0392	0.0793	0.159	0.400
			355686	702951	1424722	2860127	5674605	1.00	2.00	4.00	8.00	16.0
Methylene Chloride	CBM	Ave	+++++	+++++	+++++	37091	70360	+++++	+++++	+++++	0.159	0.400
			163357	305658	602192	1214064	2447809	1.00	2.00	4.00	8.00	16.0
3-Chloropropene	CBM	Ave	+++++	+++++	9664	20059	51135	+++++	+++++	0.0793	0.159	0.400
			139966	270102	545029	1096804	2172614	1.00	2.00	4.00	8.00	16.0
Carbon disulfide	CBM	Ave	+++++	+++++	34146	66894	171741	+++++	+++++	0.0793	0.159	0.400
			454130	892511	1838624	3728924	7538407	1.00	2.00	4.00	8.00	16.0
trans-1,2-Dichloroethene	CBM	Ave	3373	6795	12444	24460	61556	0.0196	0.0392	0.0793	0.159	0.400
			166711	332139	683800	1412134	2897432	1.00	2.00	4.00	8.00	16.0
Methyl tert-butyl ether	CBM	Ave	+++++	18281	34942	70570	180474	+++++	0.0392	0.0793	0.159	0.400
			487791	981395	2014267	4095585	8173520	1.00	2.00	4.00	8.00	16.0
1,1-Dichloroethane	CBM	Ave	5807	11879	22768	46409	113245	0.0196	0.0392	0.0793	0.159	0.400
			297732	588426	1188290	2399193	4822750	1.00	2.00	4.00	8.00	16.0
Vinyl acetate	CBM	Ave	+++++	+++++	20411	43939	116793	+++++	+++++	0.0793	0.159	0.400
			336347	692559	1456065	2998874	6118655	1.00	2.00	4.00	8.00	16.0
2-Butanone (MEK)	CBM	Ave	+++++	+++++	4817	11306	27179	+++++	+++++	0.0793	0.159	0.400
			73837	150957	312840	648132	1326766	1.00	2.00	4.00	8.00	16.0
Hexane	CBM	Ave	+++++	+++++	9150	18279	45026	+++++	+++++	0.0793	0.159	0.400
			119227	236625	482705	967848	1914109	1.00	2.00	4.00	8.00	16.0
cis-1,2-Dichloroethene	CBM	Ave	3303	6788	12775	25412	63056	0.0196	0.0392	0.0793	0.159	0.400
			170867	342438	712388	1456970	2990205	1.00	2.00	4.00	8.00	16.0
Ethyl acetate	CBM	Ave	+++++	+++++	20914	41937	105925	+++++	+++++	0.0793	0.159	0.400
			297748	592846	1232791	2476675	4979960	1.00	2.00	4.00	8.00	16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chloroform	CBM	Ave	7804 387346	15697 766644	29068 1553122	59087 3123300	146303 6252680	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	2968 139063	5652 284558	10359 580107	20608 1176753	51471 2361471	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	7622 408931	15717 817496	29529 1680641	60460 3393282	152300 6808210	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	4708 261684	10148 517134	19447 1044848	38556 2085161	98892 4238188	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Benzene	DFBZ	Ave	9547 482364	18558 963873	35648 1974761	71904 3909074	180361 7444515	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	+++++ 38505	+++++ 83873	+++++ 175085	+++++ 369245	12391 690517	+++++ 1.00	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	+++++ 76338	+++++ 153538	4928 309783	10422 608419	27883 1155065	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	7312 423680	14892 857647	29168 1751616	60470 3498240	153437 6918118	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	+++++ 716205	+++++ 1423496	49738 2885411	102839 5699452	264556 10894189	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	+++++ 170193	6514 337441	12751 682983	24970 1342220	64112 2579606	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Heptane	DFBZ	Ave	+++++ 167936	+++++ 340822	10970 695938	23448 1381937	61428 2653569	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	4162 235437	8482 474722	16538 973448	34011 1983769	87248 4015133	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	+++++ 200653	8804 406474	15629 831073	30101 1685672	74912 3407808	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	+++++ 377939	12709 776763	24729 1611990	51286 3280388	133067 6527638	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	+++++ 77269	+++++ 155698	+++++ 319197	10114 635939	27703 1204443	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	+++++ 168681	+++++ 362703	8710 761754	19860 1560531	56707 3144744	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	+++++ 295912	+++++ 611907	+++++ 1259401	36640 2547644	100514 4956312	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0
cis-1,3-Dichloropropene	DFBZ	Ave	4214 284232	8692 590333	16952 1228466	37708 2495678	99963 5036601	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	3642 264230	8127 550671	16117 1169692	34823 2418731	92653 4954997	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Toluene	CBZd 5	Ave	10546 601460	21020 1209692	40799 2501333	84708 5000244	217615 9732782	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	2910 172853	6246 346900	11956 705972	24681 1421474	62680 2818197	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Hexanone	CBZd 5	Ave	+++++ 155983	+++++ 340754	6841 714062	17103 1457582	50215 2849200	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Dibromochloromethane	CBZd 5	Ave	5242 362871	10827 776008	21241 1664137	45494 3404955	122286 6733481	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Octane	CBZd 5	Ave	+++++ 195933	+++++ 399529	12011 815331	26281 1619656	69565 3115693	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	+++++ 317987	+++++ 650482	20134 1358421	42511 2777984	111812 5559926	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Tetrachloroethene	CBZd 5	Ave	4038 231568	8705 465829	16381 954469	33774 1934461	85007 3841103	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Chlorobenzene	CBZd 5	Ave	9374 490951	18796 982434	36005 1994464	72632 3997886	183593 7825995	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Ethylbenzene	CBZd 5	Ave	13511 810050	27063 1619183	53935 3290297	112376 6456253	291382 12015013	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd 5	Ave	20098 1276477	41194 2542321	83030 5046733	176975 9680607	463595 17160895	0.0392 2.00	0.0784 3.99	0.159 8.00	0.317 16.0	0.800 32.0
Bromoform	CBZd 5	Ave	4385 318253	9410 714603	18219 1559205	38228 3245877	102577 6558869	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Styrene	CBZd 5	Ave	+++++ 441338	+++++ 928423	21890 1920288	49897 3870267	141877 7560228	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Nonane	CBZd 5	Ave	+++++ 358631	+++++ 699319	21365 1364959	48143 2584312	130104 4652330	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
o-Xylene	CBZd 5	Ave	10603 674160	22375 1321857	45094 2630168	96395 5131084	248316 9535161	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	+++++ 445782	14226 879160	28316 1758724	61062 3446997	158018 6530374	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd 5	Ave	+++++ 152327	+++++ 299434	10316 591665	22255 1168938	55328 2302436	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Isopropylbenzene	CBZd 5	Ave	+++++ 941474	36160 1846740	69017 3643421	141062 6996543	354883 12663589	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Propylbenzene	CBZd 5	Ave	+++++ 266687	8230 528723	15756 1049883	35494 2035261	94728 3819742	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
2-Chlorotoluene	CBZd 5	Ave	+++++ 238746	8038 469063	15941 928581	35064 1794004	88647 3423413	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	+++++ 1006964	29754 1984214	59901 3912288	132375 7418547	355685 13244430	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	5752 410670	12100 812865	24343 1620384	55107 3145506	146542 5947640	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	+++++ 360064	+++++ 768512	+++++ 1590809	37420 3163348	109602 6018724	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0
Decane	CBZd 5	Ave	+++++ 516714	+++++ 1015986	28000 1993844	67062 3697959	180060 6320845	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
tert-Butylbenzene	CBZd 5	Ave	+++++ 951442	29495 1868713	58391 3691545	131776 6958642	341330 12330820	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	12157 883002	26201 1705234	53619 3292671	121401 6104034	317818 10587367	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	8914 571936	18867 1125927	36601 2217431	80846 4216783	204946 7759848	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	+++++ 1256189	37216 2471421	74524 4814563	167950 8700337	446997 14464983	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	+++++ 734076	+++++ 1513870	+++++ 3018732	87519 5648570	241503 9882812	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	9122 579460	18804 1134967	37641 2222060	82059 4227916	206120 7788742	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	+++++ 1125379	31354 2260739	63969 4473245	148906 8172682	392846 13583476	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	13295 975263	29839 1905721	59053 3720027	135710 6961070	350369 12212729	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	9076 560747	18839 1099439	35383 2160064	79606 4093958	197633 7481468	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	+++++ 1047935	28954 2097682	55892 4159498	132390 7568750	357490 12271794	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Undecane	CBZd 5	Ave	+++++ 606307	+++++ 1225234	29862 2432418	73775 4523930	198846 7559425	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	+++++ 423136	+++++ 910820	19265 1901418	47048 3591223	128407 6432249	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 1458763	+++++ 2935017	75221 5868924	180933 10496588	477440 +++++	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 +++++
Dodecane	CBZd 5	Ave	+++++ 622152	+++++ 1246644	29017 2542680	73006 4689410	175178 7775809	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2,4-Trichlorobenzene	CBZd 5	Ave	5745 469912	12391 992300	24821 2148606	60667 4331499	139886 8252878	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	13583 1139353	28513 2348566	59288 4921580	147471 9478899	330933 +++++	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 +++++
Hexachlorobutadiene	CBZd 5	Ave	7444 460520	15446 942489	27942 1997835	63860 4054563	147591 7676608	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	6133 454418	13039 941154	26665 2025469	63574 4075342	131520 8089214	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	+++++ 656625	+++++ 1378404	21947 3367217	78912 6499587	110967 11773396	+++++ 2.30	+++++ 4.59	0.182 9.20	0.365 18.4	0.920 36.8
1-Methylnaphthalene	CBZd 5	Ave	+++++ 572233	+++++ 1131655	23773 2775316	80019 5249732	99268 9724344	+++++ 2.30	+++++ 4.59	0.182 9.20	0.365 18.4	0.920 36.8
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1428582 1469194	1501404 1544010	1493098 1492736	1483356 1563108	1499096 1494682	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

Curve Type Legend:
Ave = Average ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-15542/3	RJ25IC01.D
Level 2	IC 140-15542/4	RJ25IC02.D
Level 3	IC 140-15542/5	RJ25IC03.D
Level 4	IC 140-15542/6	RJ25IC04.D
Level 5	IC 140-15542/7	RJ25IC05.D
Level 6	IC 140-15542/8	RJ25IC06.D
Level 7	ICIS 140-15542/9	RJ25IC07.D
Level 8	IC 140-15542/10	RJ25IC08.D
Level 9	IC 140-15542/11	RJ25IC09.D
Level 10	IC 140-15542/12	RJ25IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	9.4						50				
Propene	+++++	+++++	12.4						50			
Dichlorodifluoromethane	+++++	+++++	17.3						50			
Chloromethane	+++++	+++++	+++++	9.3						50		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	+++++	6.0						50			
Vinyl chloride	20.3						50					
1,3-Butadiene	+++++	+++++	15.9						50			
Butane	+++++	+++++	12.3						50			
Bromomethane	+++++	+++++	3.6						50			
Chloroethane	+++++	+++++	15.8						50			
Ethanol	+++++	+++++	14.8						50			
Vinyl bromide	+++++	+++++	15.6						50			
2-Methylbutane	+++++	+++++	7.5						50			
Acrolein	+++++	+++++	+++++	39.2						50		

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Trichlorofluoromethane	+++++	+++++	10.4						50			
Acetonitrile	+++++	+++++	+++++	-2.1						50		
Acetone	+++++	+++++	+++++	34.8						80		
Pentane	+++++	+++++	+++++	7.8						50		
Isopropyl alcohol	+++++	+++++	6.7						50			
Ethyl ether	+++++	+++++	7.2						50			
1,1-Dichloroethene	13.5						50					
Acrylonitrile	+++++	+++++	-2.6						50			
tert-Butyl alcohol	+++++	+++++	-1.0						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	9.4						50				
Methylene Chloride	+++++	+++++	+++++	48.4						80		
3-Chloropropene	+++++	+++++	-1.4						50			
Carbon disulfide	+++++	+++++	3.2						50			
trans-1,2-Dichloroethene	10.7						50					
Methyl tert-butyl ether	+++++	3.6						50				
1,1-Dichloroethane	7.7						50					
Vinyl acetate	+++++	+++++	-15.6						50			
2-Butanone (MEK)	+++++	+++++	-11.6						50			
Hexane	+++++	+++++	5.0						50			
cis-1,2-Dichloroethene	6.0						50					
Ethyl acetate	+++++	+++++	-2.1						50			

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chloroform	11.2						50					
Tetrahydrofuran	15.7						50					
1,1,1-Trichloroethane	4.3						50					
1,2-Dichloroethane	1.5						50					
Benzene	10.6						50					
1-Butanol	+++++	+++++	+++++	+++++	-18.7						50	
Cyclohexane	+++++	+++++	-8.0						50			
Carbon tetrachloride	-0.7						50					
2,2,4-Trimethylpentane	+++++	+++++	-2.4						50			
1,2-Dichloropropane	+++++	6.1						50				
Heptane	+++++	+++++	-8.5						50			
Trichloroethene	0.1						50					
Dibromomethane	+++++	16.0						50				
Bromodichloromethane	+++++	-5.9						50				
1,4-Dioxane	+++++	+++++	+++++	-8.7						50		
Methyl methacrylate	+++++	+++++	-27.9						50			
4-Methyl-2-pentanone (MIBK)	+++++	+++++	+++++	-14.6						50		
cis-1,3-Dichloropropene	-12.3						50					
trans-1,3-Dichloropropene	-19.8						50					
Toluene	0.4						50					
1,1,2-Trichloroethane	-3.6						50					

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
2-Hexanone	+++++	+++++	-37.8						50			
Dibromochloromethane	-15.8						50					
Octane	+++++	+++++	-13.6						50			
1,2-Dibromoethane (EDB)	+++++	+++++	-13.0						50			
Tetrachloroethene	-1.9						50					
Chlorobenzene	6.4						50					
Ethylbenzene	-1.7						50					
m-Xylene & p-Xylene	-4.7						50					
Bromoform	-21.4						50					
Styrene	+++++	+++++	-28.4						50			
Nonane	+++++	+++++	-11.1						50			
o-Xylene	-5.9						50					
1,1,2,2-Tetrachloroethane	+++++	-6.9						50				
1,2,3-Trichloropropane	+++++	+++++	-4.2						50			
Isopropylbenzene	+++++	7.8						50				
Propylbenzene	+++++	-8.5						50				
2-Chlorotoluene	+++++	-3.5						50				
4-Ethyltoluene	+++++	-10.6						50				
1,3,5-Trimethylbenzene	-13.0						50					
Alpha Methyl Styrene	+++++	+++++	+++++	-26.6						50		
Decane	+++++	+++++	-17.2						50			

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1 Analy Batch No.: 15542

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2017 13:00 Calibration End Date: 10/25/2017 20:06 Calibration ID: 1314

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
tert-Butylbenzene	+++++	-7.4						50				
1,2,4-Trimethylbenzene	-11.9						50					
1,3-Dichlorobenzene	-5.2						50					
sec-Butylbenzene	+++++	-8.8						50				
Benzyl chloride	+++++	+++++	+++++	-12.5						50		
1,4-Dichlorobenzene	-3.9						50					
4-Isopropyltoluene	+++++	-14.4						50				
1,2,3-Trimethylbenzene	-13.9						50					
1,2-Dichlorobenzene	-1.5						50					
Butylbenzene	+++++	-13.5						50				
Undecane	+++++	+++++	-24.1						50			
1,2-Dibromo-3-Chloropropane	+++++	+++++	-32.5						50			
1,2,4,5-Tetramethylbenzene	+++++	+++++	-22.7	+++++					50			
Dodecane	+++++	+++++	-26.4						50			
1,2,4-Trichlorobenzene	-25.0						50					
Naphthalene	-23.4			+++++			80					
Hexachlorobutadiene	-5.6						50					
1,2,3-Trichlorobenzene	-19.0						50					
2-Methylnaphthalene	+++++	+++++	-50.4						80			
1-Methylnaphthalene	+++++	+++++	-38.2						80			

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC01.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 25-Oct-2017 13:00:30 ALS Bottle#: 1 Worklist Smp#: 3
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-003
Misc. Info.: 123609
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 11:55:51 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 25-Oct-2017 14:08:18

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.767	7.779	-0.012	82	379185	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.914	9.918	-0.004	94	2195698	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.902	14.903	-0.001	88	1914633	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.611	16.610	0.001	89	1428582	4.00	4.07	
6 Chlorodifluoromethane	67	3.507	3.505	0.002	95	1198	0.0196	0.0252	
7 Propene	41	3.507	3.509	-0.002	65	3765	0.0196	0.0353	
8 Dichlorodifluoromethane	85	3.556	3.554	0.002	98	10141	0.0196	0.0273	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.712	3.713	-0.001	91	6176	0.0196	0.0227	
11 Vinyl chloride	62	3.826	3.827	-0.001	58	2540	0.0196	0.0236	
13 Butadiene	54	3.896	3.900	-0.004	70	1998	0.0196	0.0284	
12 Butane	43	3.901	3.904	-0.003	84	3278	0.0196	0.0277	
14 Bromomethane	94	4.138	4.140	-0.002	97	3331	0.0196	0.0302	
15 Chloroethane	64	4.257	4.254	0.003	90	1503	0.0196	0.0304	
16 Ethanol	31	4.365	4.368	-0.003	93	4622	0.0980	0.1334	
17 Vinyl bromide	106	4.483	4.488	-0.005	95	2969	0.0196	0.0259	
18 2-Methylbutane	43	4.543	4.546	-0.003	82	2059	0.0196	0.0255	
19 Acrolein	56	4.710	4.709	0.001	32	1264	0.0196	0.0411	
20 Trichlorofluoromethane	101	4.705	4.710	-0.005	97	8594	0.0196	0.0230	
21 Acetonitrile	40	4.882	4.793	0.089	76	690	0.0196	0.0267	
22 Acetone	58	4.807	4.807	0.000	97	4780	0.0588	0.1144	
24 Pentane	72	4.893	4.899	-0.006	97	672	0.0196	0.0260	
23 Isopropyl alcohol	45	4.909	4.906	0.003	93	11844	0.0588	0.0732	
25 Ethyl ether	31	5.050	5.033	0.017	84	2423	0.0196	0.0218	
26 1,1-Dichloroethene	96	5.271	5.274	-0.003	95	3361	0.0196	0.0222	
27 Acrylonitrile	53	5.341	5.349	-0.008	91	2366	0.0196	0.0251	
28 2-Methyl-2-propanol	59	5.406	5.393	0.013	94	5480	0.0196	0.0192	
29 1,1,2-Trichloro-1,2,2-trif	101	5.438	5.446	-0.008	95	7324	0.0196	0.0225	
30 Methylene Chloride	84	5.546	5.552	-0.006	91	17345	0.0196	0.1123	
31 3-Chloro-1-propene	39	5.567	5.572	-0.005	98	4234	0.0196	0.0349	
32 Carbon disulfide	76	5.675	5.683	-0.008	99	9161	0.0196	0.0224	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 trans-1,2-Dichloroethene	96	6.241	6.253	-0.012	96	3373	0.0196	0.0217	
34 Methyl tert-butyl ether	73	6.414	6.392	0.022	96	9211	0.0196	0.0209	
36 1,1-Dichloroethane	63	6.597	6.609	-0.012	99	5807	0.0196	0.0211	
37 Vinyl acetate	43	6.727	6.727	0.000	98	5384	0.0196	0.0180	
38 2-Butanone (MEK)	72	7.131	7.107	0.024	97	1036	0.0196	0.0154	
39 Hexane	56	7.174	7.179	-0.005	82	2301	0.0196	0.0213	
40 cis-1,2-Dichloroethene	96	7.482	7.492	-0.010	89	3303	0.0196	0.0208	
41 Ethyl acetate	43	7.703	7.688	0.015	97	5375	0.0196	0.0203	
42 Chloroform	83	7.800	7.811	-0.011	90	7804	0.0196	0.0218	
43 Tetrahydrofuran	42	8.204	8.178	0.026	80	2968	0.0196	0.0227	
44 1,1,1-Trichloroethane	97	8.760	8.769	-0.009	95	7622	0.0196	0.0204	
45 1,2-Dichloroethane	62	8.835	8.840	-0.005	96	4708	0.0196	0.0199	
47 Benzene	78	9.331	9.341	-0.010	97	9547	0.0196	0.0217	
48 Cyclohexane	69	9.353	9.362	-0.009	92	1227	0.0196	0.0186	
50 Carbon tetrachloride	117	9.374	9.378	-0.004	89	7312	0.0196	0.0195	
52 Isooctane	57	10.205	10.206	-0.001	97	12771	0.0196	0.0203	
53 1,2-Dichloropropane	63	10.598	10.602	-0.004	85	3370	0.0196	0.0221	
54 n-Heptane	71	10.615	10.617	-0.002	79	2765	0.0196	0.0187	
55 Trichloroethene	130	10.663	10.667	-0.004	93	4162	0.0196	0.0196	
56 Dibromomethane	93	10.706	10.711	-0.005	95	4973	0.0196	0.0264	
57 Dichlorobromomethane	83	10.879	10.886	-0.007	99	6206	0.0196	0.0185	
58 1,4-Dioxane	88	10.933	10.912	0.021	62	1025	0.0196	0.0151	
59 Methyl methacrylate	41	11.051	11.045	0.006	19	1257	0.0196	0.008443	
61 4-Methyl-2-pentanone (MIBK	43	11.952	11.931	0.021	94	3969	0.0196	0.0151	
62 cis-1,3-Dichloropropene	75	11.968	11.968	0.000	95	4214	0.0196	0.0172	
63 trans-1,3-Dichloropropene	75	12.712	12.709	0.003	96	3642	0.0196	0.0157	
64 Toluene	91	12.847	12.845	0.002	94	10546	0.0196	0.0197	
65 1,1,2-Trichloroethane	83	12.906	12.904	0.002	94	2910	0.0196	0.0189	
66 2-Hexanone	58	13.381	13.355	0.026	87	663	0.0196	0.004887	
67 Chlorodibromomethane	129	13.624	13.628	-0.004	96	5242	0.0196	0.0165	
68 n-Octane	85	13.656	13.658	-0.002	83	2664	0.0196	0.0155	
69 Ethylene Dibromide	107	13.920	13.923	-0.003	98	4839	0.0196	0.0170	
70 Tetrachloroethene	129	14.044	14.048	-0.004	94	4038	0.0196	0.0192	
71 Chlorobenzene	112	14.950	14.952	-0.002	95	9374	0.0196	0.0209	
72 Ethylbenzene	91	15.279	15.278	0.001	98	13511	0.0196	0.0193	
73 m-Xylene & p-Xylene	91	15.452	15.452	0.000	0	20098	0.0392	0.0373	
74 Bromoform	173	15.856	15.854	0.002	94	4385	0.0196	0.0154	
75 Styrene	104	15.926	15.923	0.003	98	5160	0.0196	0.0137	
76 n-Nonane	57	15.964	15.961	0.003	83	5092	0.0196	0.0172	
77 o-Xylene	91	15.991	15.986	0.005	99	10603	0.0196	0.0184	
78 1,1,2,2-Tetrachloroethane	83	16.309	16.308	0.001	95	7069	0.0196	0.0187	
79 1,2,3-Trichloropropane	110	16.465	16.464	0.001	95	2509	0.0196	0.0189	
80 Isopropylbenzene	105	16.605	16.605	0.000	46	19278	0.0196	0.0232	
81 N-Propylbenzene	120	17.182	17.182	0.000	99	3895	0.0196	0.0175	
82 2-Chlorotoluene	126	17.204	17.203	0.001	95	3954	0.0196	0.0192	
83 4-Ethyltoluene	105	17.355	17.351	0.004	98	14130	0.0196	0.0172	
84 1,3,5-Trimethylbenzene	120	17.436	17.436	0.000	93	5752	0.0196	0.0171	
85 Alpha Methyl Styrene	118	17.695	17.691	0.004	88	3853	0.0196	0.0122	
86 n-Decane	57	17.824	17.826	-0.002	94	6182	0.0196	0.0148	
87 tert-Butylbenzene	119	17.905	17.906	-0.001	93	14100	0.0196	0.0179	
88 1,2,4-Trimethylbenzene	105	17.921	17.921	0.000	95	12157	0.0196	0.0173	
89 1,3-Dichlorobenzene	146	18.185	18.189	-0.004	96	8914	0.0196	0.0186	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
90 sec-Butylbenzene	105	18.207	18.206	0.001	98	18076	0.0196	0.0179	
91 Benzyl chloride	91	18.277	18.273	0.004	97	9621	0.0196	0.0155	
92 1,4-Dichlorobenzene	146	18.288	18.287	0.001	93	9122	0.0196	0.0188	
93 4-Isopropyltoluene	119	18.390	18.391	-0.001	96	15276	0.0196	0.0169	
94 1,2,3-Trimethylbenzene	105	18.428	18.429	-0.001	96	13295	0.0196	0.0169	
95 1,2-Dichlorobenzene	146	18.671	18.672	-0.001	94	9076	0.0196	0.0193	
98 n-Butylbenzene	91	18.865	18.865	0.000	98	13421	0.0196	0.0162	
99 Undecane	57	19.259	19.259	0.000	93	6979	0.0196	0.0144	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	90	4714	0.0196	0.0134	
101 1,2,4,5-Tetramethylbenzene	119	19.674	19.674	0.000	96	18980	0.0196	0.0158	
104 Dodecane	57	20.369	20.366	0.003	96	5984	0.0196	0.0123	
105 1,2,4-Trichlorobenzene	180	20.477	20.474	0.003	93	5745	0.0196	0.0147	
106 Naphthalene	128	20.601	20.603	-0.002	99	13583	0.0196	0.0150	
107 Hexachlorobutadiene	225	20.860	20.859	0.001	93	7444	0.0196	0.0185	
108 1,2,3-Trichlorobenzene	180	20.898	20.897	0.001	93	6133	0.0196	0.0159	
109 2-Methylnaphthalene	142	21.701	21.702	-0.001	93	1424	0.0451	0.006001	
110 1-Methylnaphthalene	142	21.847	21.847	0.000	97	2144	0.0451	0.0104	
S 111 Xylenes, Total	100				0		0.0588	0.0558	
S 112 1,2-Dichloroethene, Total	1				0		0.0392	0.0425	

Reagents:

40L12DNP_00015	Amount Added: 50.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

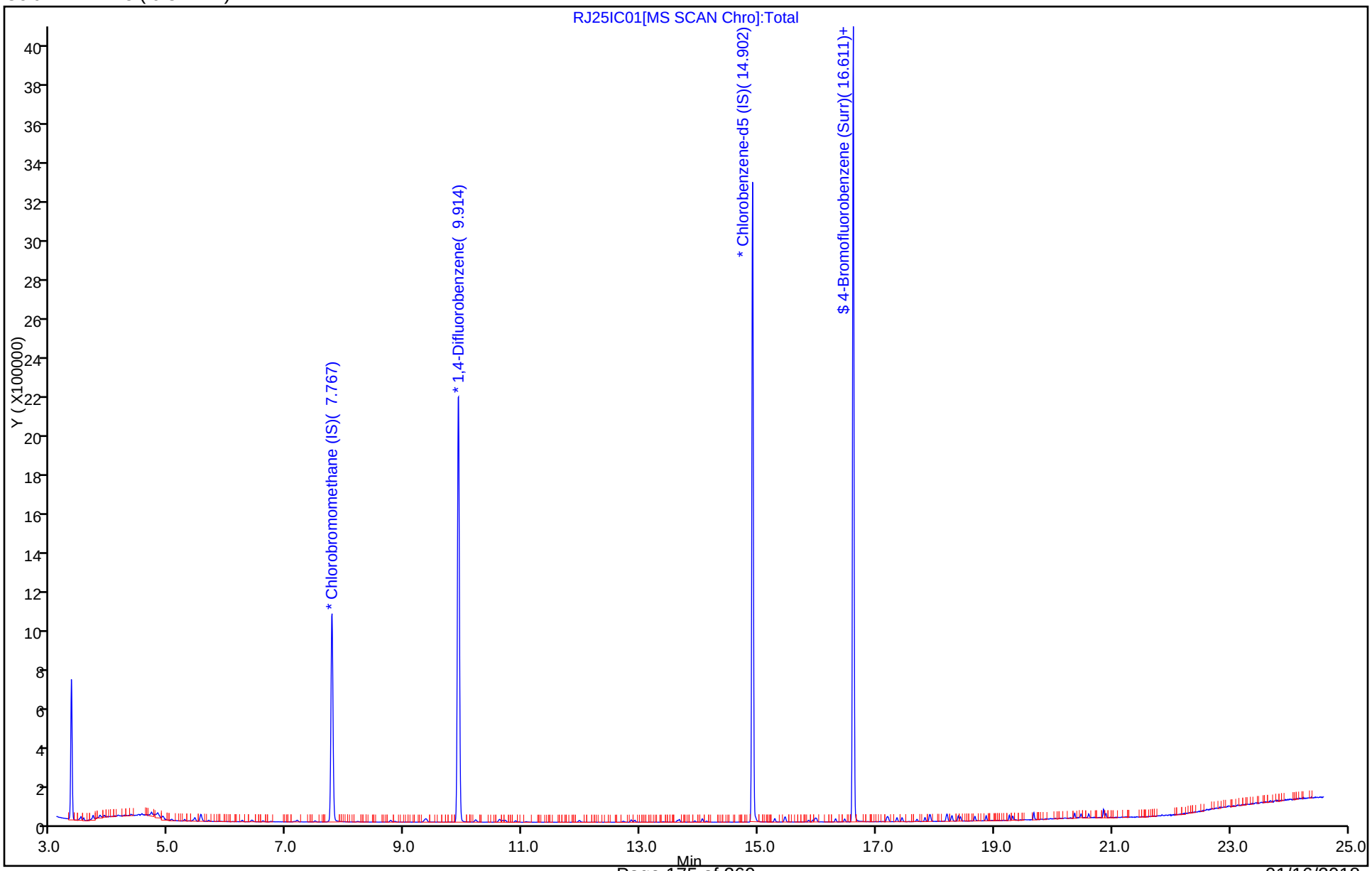
Report Date: 27-Oct-2017 11:55:53 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC01.D

Injection Date:	25-Oct-2017 13:00:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L1			Worklist Smp#:	3
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC02.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 25-Oct-2017 13:46:30 ALS Bottle#: 1 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-004
Misc. Info.: 123609
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 11:55:54 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 25-Oct-2017 15:07:47

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.767	7.779	-0.012	83	386955	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.914	9.918	-0.004	94	2257959	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.902	14.903	-0.001	88	1973559	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.611	16.610	0.001	88	1501404	4.00	4.15	
6 Chlorodifluoromethane	67	3.518	3.505	0.013	97	2085	0.0392	0.0429	
7 Propene	41	3.518	3.509	0.009	78	5687	0.0392	0.0522	
8 Dichlorodifluoromethane	85	3.561	3.554	0.007	99	19272	0.0392	0.0508	
9 Chloromethane	52	3.696	3.690	0.006	99	2219	0.0392	0.0610	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.723	3.713	0.010	90	12064	0.0392	0.0435	
11 Vinyl chloride	62	3.836	3.827	0.009	74	4952	0.0392	0.0451	
13 Butadiene	54	3.907	3.900	0.007	72	3559	0.0392	0.0496	
12 Butane	43	3.912	3.904	0.008	81	5368	0.0392	0.0444	
14 Bromomethane	94	4.149	4.140	0.009	97	5122	0.0392	0.0455	
15 Chloroethane	64	4.262	4.254	0.008	96	2104	0.0392	0.0417	
16 Ethanol	31	4.359	4.368	-0.009	95	8149	0.1960	0.2305	
17 Vinyl bromide	106	4.494	4.488	0.006	97	5939	0.0392	0.0507	
18 2-Methylbutane	43	4.548	4.546	0.002	90	4418	0.0392	0.0535	
19 Acrolein	56	4.710	4.709	0.001	34	3362	0.0392	0.1072	
20 Trichlorofluoromethane	101	4.715	4.710	0.005	99	16836	0.0392	0.0442	
21 Acetonitrile	40	4.753	4.785	-0.032	88	1032	0.0392	0.0392	
22 Acetone	58	4.812	4.807	0.005	99	7719	0.1176	0.1810	
24 Pentane	72	4.899	4.899	0.000	76	1154	0.0392	0.0437	
23 Isopropyl alcohol	45	4.904	4.906	-0.002	84	20814	0.1176	0.1261	
25 Ethyl ether	31	5.044	5.033	0.011	85	4965	0.0392	0.0438	
26 1,1-Dichloroethene	96	5.271	5.274	-0.003	98	6525	0.0392	0.0423	
27 Acrylonitrile	53	5.346	5.349	-0.003	90	4454	0.0392	0.0463	
28 2-Methyl-2-propanol	59	5.400	5.393	0.007	93	11747	0.0392	0.0404	
29 1,1,2-Trichloro-1,2,2-trif	101	5.443	5.446	-0.003	96	14208	0.0392	0.0429	
30 Methylene Chloride	84	5.546	5.552	-0.006	90	20826	0.0392	0.1322	
31 3-Chloro-1-propene	39	5.567	5.572	-0.005	96	7272	0.0392	0.0587	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.686	5.683	0.003	98	18402	0.0392	0.0440	
33 trans-1,2-Dichloroethene	96	6.247	6.253	-0.006	97	6795	0.0392	0.0428	
34 Methyl tert-butyl ether	73	6.403	6.392	0.011	95	18281	0.0392	0.0406	
36 1,1-Dichloroethane	63	6.597	6.609	-0.012	99	11879	0.0392	0.0423	
37 Vinyl acetate	43	6.732	6.727	0.005	98	11113	0.0392	0.0364	
38 2-Butanone (MEK)	72	7.120	7.107	0.013	96	2274	0.0392	0.0330	
39 Hexane	56	7.180	7.179	0.001	83	4707	0.0392	0.0427	
40 cis-1,2-Dichloroethene	96	7.482	7.492	-0.010	93	6788	0.0392	0.0419	
41 Ethyl acetate	43	7.703	7.688	0.015	97	10101	0.0392	0.0374	
42 Chloroform	83	7.805	7.811	-0.006	88	15697	0.0392	0.0430	
43 Tetrahydrofuran	42	8.193	8.178	0.015	86	5652	0.0392	0.0423	
44 1,1,1-Trichloroethane	97	8.770	8.769	0.001	95	15717	0.0392	0.0413	
45 1,2-Dichloroethane	62	8.835	8.840	-0.005	97	10148	0.0392	0.0417	
47 Benzene	78	9.342	9.341	0.001	97	18558	0.0392	0.0410	
48 Cyclohexane	69	9.353	9.362	-0.009	88	2574	0.0392	0.0379	
46 n-Butanol	31	9.428	9.365	0.063	1	209	0.0392	0.005568	
50 Carbon tetrachloride	117	9.369	9.378	-0.009	94	14892	0.0392	0.0385	
52 Isooctane	57	10.205	10.206	-0.001	97	25184	0.0392	0.0390	
53 1,2-Dichloropropane	63	10.593	10.602	-0.009	70	6514	0.0392	0.0416	
54 n-Heptane	71	10.615	10.617	-0.002	83	5361	0.0392	0.0353	
55 Trichloroethene	130	10.663	10.667	-0.004	91	8482	0.0392	0.0389	
56 Dibromomethane	93	10.706	10.711	-0.005	93	8804	0.0392	0.0455	
57 Dichlorobromomethane	83	10.879	10.886	-0.007	99	12709	0.0392	0.0369	
58 1,4-Dioxane	88	10.933	10.912	0.021	77	2410	0.0392	0.0346	
59 Methyl methacrylate	41	11.051	11.045	0.006	44	2355	0.0392	0.0154	
61 4-Methyl-2-pentanone (MIBK	43	11.947	11.931	0.016	91	8126	0.0392	0.0301	
62 cis-1,3-Dichloropropene	75	11.968	11.968	0.000	96	8692	0.0392	0.0345	
63 trans-1,3-Dichloropropene	75	12.707	12.709	-0.002	97	8127	0.0392	0.0340	
64 Toluene	91	12.842	12.845	-0.003	93	21020	0.0392	0.0380	
65 1,1,2-Trichloroethane	83	12.901	12.904	-0.003	98	6246	0.0392	0.0393	
66 2-Hexanone	58	13.370	13.355	0.015	94	1660	0.0392	0.0119	
67 Chlorodibromomethane	129	13.624	13.628	-0.004	97	10827	0.0392	0.0331	
68 n-Octane	85	13.656	13.658	-0.002	86	5883	0.0392	0.0333	
69 Ethylene Dibromide	107	13.920	13.923	-0.003	98	9997	0.0392	0.0340	
70 Tetrachloroethene	129	14.044	14.048	-0.004	95	8705	0.0392	0.0402	
71 Chlorobenzene	112	14.956	14.952	0.004	94	18796	0.0392	0.0406	
72 Ethylbenzene	91	15.279	15.278	0.001	99	27063	0.0392	0.0374	
73 m-Xylene & p-Xylene	91	15.452	15.452	0.000	0	41194	0.0784	0.0743	
74 Bromoform	173	15.851	15.854	-0.003	94	9410	0.0392	0.0321	
75 Styrene	104	15.921	15.923	-0.002	98	10882	0.0392	0.0280	
76 n-Nonane	57	15.958	15.961	-0.003	84	10244	0.0392	0.0335	
77 o-Xylene	91	15.985	15.986	-0.001	98	22375	0.0392	0.0378	
78 1,1,2,2-Tetrachloroethane	83	16.309	16.308	0.001	96	14226	0.0392	0.0365	
79 1,2,3-Trichloropropane	110	16.465	16.464	0.001	97	5493	0.0392	0.0401	
80 Isopropylbenzene	105	16.606	16.605	0.001	74	36160	0.0392	0.0423	
81 N-Propylbenzene	120	17.188	17.182	0.006	98	8230	0.0392	0.0359	
82 2-Chlorotoluene	126	17.204	17.203	0.001	89	8038	0.0392	0.0378	
83 4-Ethyltoluene	105	17.350	17.351	-0.001	98	29754	0.0392	0.0351	
84 1,3,5-Trimethylbenzene	120	17.436	17.436	0.000	93	12100	0.0392	0.0348	
85 Alpha Methyl Styrene	118	17.695	17.691	0.004	86	7847	0.0392	0.0241	
86 n-Decane	57	17.824	17.826	-0.002	94	13108	0.0392	0.0305	
87 tert-Butylbenzene	119	17.905	17.906	-0.001	93	29495	0.0392	0.0363	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.921	17.921	0.000	96	26201	0.0392	0.0361	
89 1,3-Dichlorobenzene	146	18.191	18.189	0.002	98	18867	0.0392	0.0381	
90 sec-Butylbenzene	105	18.207	18.206	0.001	98	37216	0.0392	0.0358	
91 Benzyl chloride	91	18.272	18.273	-0.001	98	18994	0.0392	0.0298	
92 1,4-Dichlorobenzene	146	18.288	18.287	0.001	92	18804	0.0392	0.0376	
93 4-Isopropyltoluene	119	18.390	18.391	-0.001	97	31354	0.0392	0.0336	
94 1,2,3-Trimethylbenzene	105	18.428	18.429	-0.001	97	29839	0.0392	0.0368	
95 1,2-Dichlorobenzene	146	18.671	18.672	-0.001	93	18839	0.0392	0.0389	
98 n-Butylbenzene	91	18.865	18.865	0.000	98	28954	0.0392	0.0339	
99 Undecane	57	19.259	19.259	0.000	92	14443	0.0392	0.0289	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	91	10022	0.0392	0.0276	
101 1,2,4,5-Tetramethylbenzene	119	19.674	19.674	0.000	97	37837	0.0392	0.0306	
104 Dodecane	57	20.364	20.366	-0.002	95	13461	0.0392	0.0269	
105 1,2,4-Trichlorobenzene	180	20.477	20.474	0.003	94	12391	0.0392	0.0307	
106 Naphthalene	128	20.607	20.603	0.004	99	28513	0.0392	0.0306	
107 Hexachlorobutadiene	225	20.855	20.859	-0.004	93	15446	0.0392	0.0372	
108 1,2,3-Trichlorobenzene	180	20.898	20.897	0.001	94	13039	0.0392	0.0327	
109 2-Methylnaphthalene	142	21.701	21.702	-0.001	99	7137	0.0902	0.0292	
110 1-Methylnaphthalene	142	21.847	21.847	0.000	98	8889	0.0902	0.0418	
S 111 Xylenes, Total	100				0		0.1176	0.1120	
S 112 1,2-Dichloroethene, Total	1				0		0.0784	0.0847	

Reagents:

40L12DNP_00015	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

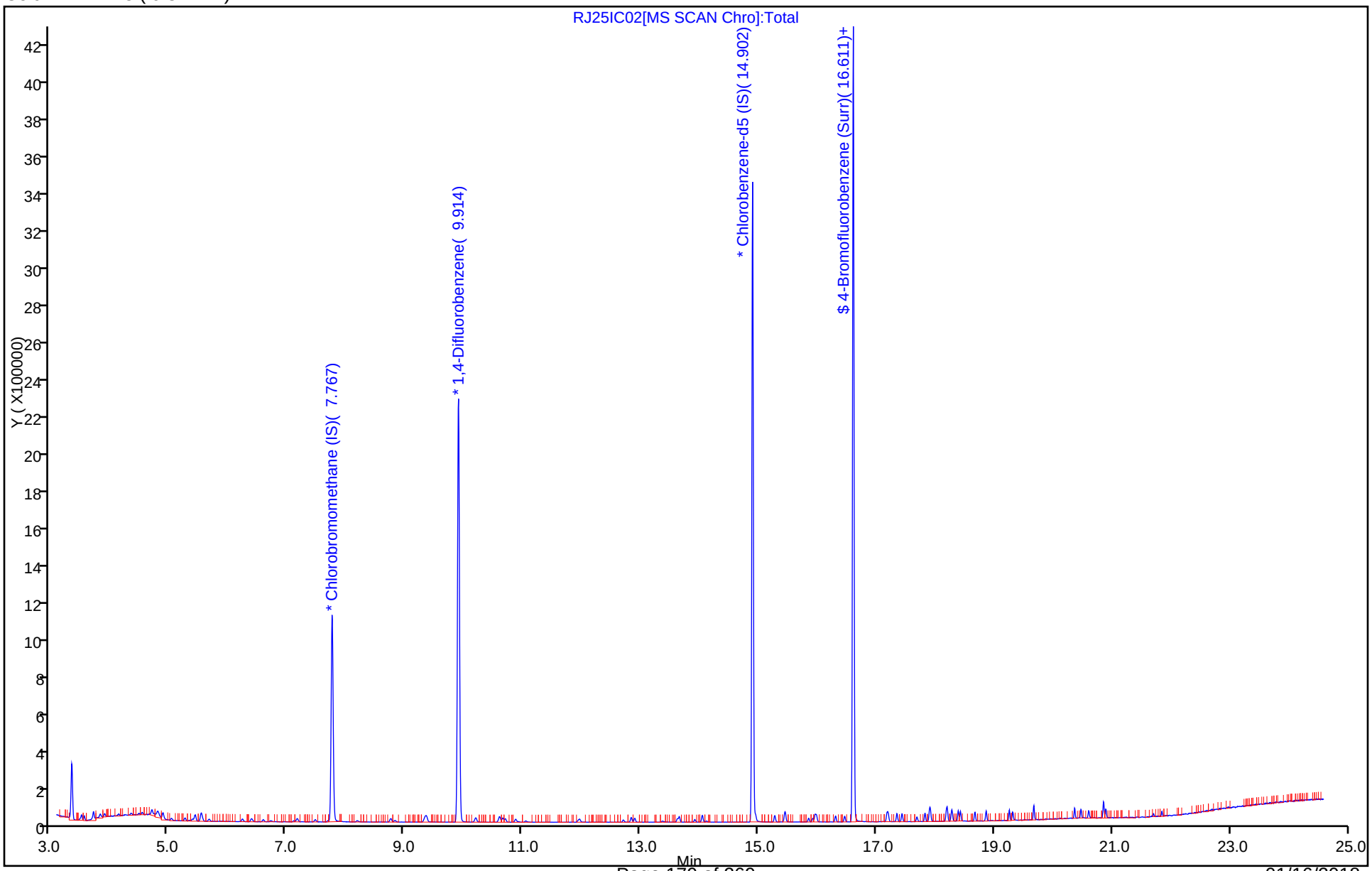
Report Date: 27-Oct-2017 11:55:55 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC02.D

Injection Date:	25-Oct-2017 13:46:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L2			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC03.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 25-Oct-2017 14:33:30 ALS Bottle#: 2 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-005
Misc. Info.: 123608
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 11:55:58 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 25-Oct-2017 15:13:17

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.778	7.779	-0.001	82	385990	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.919	9.918	0.001	94	2245350	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.901	14.903	-0.002	88	1955968	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.611	16.610	0.001	92	1493098	4.00	4.17	
6 Chlorodifluoromethane	67	3.523	3.505	0.018	97	4125	0.0793	0.0851	
7 Propene	41	3.529	3.509	0.020	83	9681	0.0793	0.0891	
8 Dichlorodifluoromethane	85	3.572	3.554	0.018	100	35205	0.0793	0.0931	
9 Chloromethane	52	3.707	3.690	0.017	98	3924	0.0793	0.1081	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.728	3.713	0.015	91	23285	0.0793	0.0841	
11 Vinyl chloride	62	3.842	3.827	0.015	90	8923	0.0793	0.0814	
13 Butadiene	54	3.917	3.900	0.017	71	6581	0.0793	0.0920	
12 Butane	43	3.917	3.904	0.013	82	10745	0.0793	0.0891	
14 Bromomethane	94	4.154	4.140	0.014	96	9224	0.0793	0.0822	
15 Chloroethane	64	4.268	4.254	0.014	96	4627	0.0793	0.0918	
16 Ethanol	31	4.365	4.368	-0.003	92	16054	0.3967	0.4553	
17 Vinyl bromide	106	4.500	4.488	0.012	98	10715	0.0793	0.0917	
18 2-Methylbutane	43	4.559	4.546	0.013	83	7022	0.0793	0.0853	
19 Acrolein	56	4.721	4.709	0.012	31	3432	0.0793	0.1097	
20 Trichlorofluoromethane	101	4.721	4.710	0.011	99	33275	0.0793	0.0876	
21 Acetonitrile	40	4.764	4.782	-0.018	93	2611	0.0793	0.0994	
22 Acetone	58	4.818	4.807	0.011	99	15256	0.2380	0.3586	
24 Pentane	72	4.909	4.899	0.010	75	2509	0.0793	0.0952	
23 Isopropyl alcohol	45	4.904	4.906	-0.002	83	41818	0.2380	0.2540	
25 Ethyl ether	31	5.044	5.033	0.011	90	9616	0.0793	0.0851	
26 1,1-Dichloroethene	96	5.281	5.274	0.007	97	12334	0.0793	0.0802	
27 Acrylonitrile	53	5.352	5.349	0.003	92	7410	0.0793	0.0773	
28 2-Methyl-2-propanol	59	5.400	5.393	0.007	92	22812	0.0793	0.0786	
29 1,1,2-Trichloro-1,2,2-trif	101	5.454	5.446	0.008	96	27125	0.0793	0.0820	
30 Methylene Chloride	84	5.556	5.552	0.004	90	25644	0.0793	0.1632	
31 3-Chloro-1-propene	39	5.578	5.572	0.006	98	9664	0.0793	0.0782	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.691	5.683	0.008	98	34146	0.0793	0.0819	
33 trans-1,2-Dichloroethene	96	6.257	6.253	0.004	98	12444	0.0793	0.0786	
34 Methyl tert-butyl ether	73	6.403	6.392	0.011	95	34942	0.0793	0.0778	
36 1,1-Dichloroethane	63	6.608	6.609	-0.001	99	22768	0.0793	0.0813	
37 Vinyl acetate	43	6.732	6.727	0.005	99	20411	0.0793	0.0670	
38 2-Butanone (MEK)	72	7.120	7.107	0.013	98	4817	0.0793	0.0701	
39 Hexane	56	7.180	7.179	0.001	84	9150	0.0793	0.0833	
40 cis-1,2-Dichloroethene	96	7.492	7.492	0.000	94	12775	0.0793	0.0790	
41 Ethyl acetate	43	7.697	7.688	0.009	99	20914	0.0793	0.0776	
42 Chloroform	83	7.805	7.811	-0.006	93	29068	0.0793	0.0797	
43 Tetrahydrofuran	42	8.199	8.178	0.021	87	10359	0.0793	0.0778	
44 1,1,1-Trichloroethane	97	8.770	8.769	0.001	95	29529	0.0793	0.0778	
45 1,2-Dichloroethane	62	8.840	8.840	0.000	99	19447	0.0793	0.0804	
47 Benzene	78	9.342	9.341	0.001	97	35648	0.0793	0.0792	
48 Cyclohexane	69	9.369	9.362	0.007	92	4928	0.0793	0.0730	
46 n-Butanol	31	9.412	9.365	0.047	58	1291	0.0793	0.0346	
50 Carbon tetrachloride	117	9.374	9.378	-0.004	99	29168	0.0793	0.0759	
52 Isooctane	57	10.210	10.206	0.004	98	49738	0.0793	0.0774	
53 1,2-Dichloropropane	63	10.604	10.602	0.002	85	12751	0.0793	0.0819	
54 n-Heptane	71	10.620	10.617	0.003	84	10970	0.0793	0.0726	
55 Trichloroethene	130	10.668	10.667	0.001	93	16538	0.0793	0.0762	
56 Dibromomethane	93	10.712	10.711	0.001	85	15629	0.0793	0.0812	
57 Dichlorobromomethane	83	10.889	10.886	0.003	98	24729	0.0793	0.0721	
58 1,4-Dioxane	88	10.922	10.912	0.010	87	5002	0.0793	0.0721	
59 Methyl methacrylate	41	11.051	11.045	0.006	97	8710	0.0793	0.0572	
61 4-Methyl-2-pentanone (MIBK	43	11.941	11.931	0.010	93	17085	0.0793	0.0637	
62 cis-1,3-Dichloropropene	75	11.968	11.968	0.000	96	16952	0.0793	0.0676	
63 trans-1,3-Dichloropropene	75	12.712	12.709	0.003	97	16117	0.0793	0.0681	
64 Toluene	91	12.842	12.845	-0.003	93	40799	0.0793	0.0745	
65 1,1,2-Trichloroethane	83	12.901	12.904	-0.003	98	11956	0.0793	0.0760	
66 2-Hexanone	58	13.365	13.355	0.010	95	6841	0.0793	0.0494	
67 Chlorodibromomethane	129	13.629	13.628	0.001	97	21241	0.0793	0.0655	
68 n-Octane	85	13.656	13.658	-0.002	86	12011	0.0793	0.0685	
69 Ethylene Dibromide	107	13.920	13.923	-0.003	97	20134	0.0793	0.0690	
70 Tetrachloroethene	129	14.049	14.048	0.001	96	16381	0.0793	0.0764	
71 Chlorobenzene	112	14.950	14.952	-0.002	94	36005	0.0793	0.0784	
72 Ethylbenzene	91	15.279	15.278	0.001	99	53935	0.0793	0.0753	
73 m-Xylene & p-Xylene	91	15.451	15.452	-0.001	0	83030	0.1587	0.1510	
74 Bromoform	173	15.856	15.854	0.002	95	18219	0.0793	0.0627	
75 Styrene	104	15.926	15.923	0.003	98	21890	0.0793	0.0568	
76 n-Nonane	57	15.964	15.961	0.003	82	21365	0.0793	0.0705	
77 o-Xylene	91	15.985	15.986	-0.001	98	45094	0.0793	0.0768	
78 1,1,2,2-Tetrachloroethane	83	16.309	16.308	0.001	97	28316	0.0793	0.0733	
79 1,2,3-Trichloropropane	110	16.460	16.464	-0.004	97	10316	0.0793	0.0760	
80 Isopropylbenzene	105	16.605	16.605	0.000	91	69017	0.0793	0.0814	
81 N-Propylbenzene	120	17.182	17.182	0.000	99	15756	0.0793	0.0693	
82 2-Chlorotoluene	126	17.204	17.203	0.001	94	15941	0.0793	0.0757	
83 4-Ethyltoluene	105	17.350	17.351	-0.001	99	59901	0.0793	0.0712	
84 1,3,5-Trimethylbenzene	120	17.436	17.436	0.000	92	24343	0.0793	0.0706	
85 Alpha Methyl Styrene	118	17.689	17.691	-0.002	87	15980	0.0793	0.0495	
86 n-Decane	57	17.829	17.826	0.003	94	28000	0.0793	0.0657	
87 tert-Butylbenzene	119	17.905	17.906	-0.001	93	58391	0.0793	0.0725	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.921	17.921	0.000	96	53619	0.0793	0.0746	
89 1,3-Dichlorobenzene	146	18.185	18.189	-0.004	99	36601	0.0793	0.0747	
90 sec-Butylbenzene	105	18.207	18.206	0.001	98	74524	0.0793	0.0723	
91 Benzyl chloride	91	18.272	18.273	-0.001	98	36422	0.0793	0.0576	
92 1,4-Dichlorobenzene	146	18.288	18.287	0.001	93	37641	0.0793	0.0760	
93 4-Isopropyltoluene	119	18.390	18.391	-0.001	97	63969	0.0793	0.0691	
94 1,2,3-Trimethylbenzene	105	18.428	18.429	-0.001	97	59053	0.0793	0.0734	
95 1,2-Dichlorobenzene	146	18.671	18.672	-0.001	93	35383	0.0793	0.0737	
98 n-Butylbenzene	91	18.865	18.865	0.000	98	55892	0.0793	0.0660	
99 Undecane	57	19.258	19.259	-0.001	93	29862	0.0793	0.0602	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	90	19265	0.0793	0.0536	
101 1,2,4,5-Tetramethylbenzene	119	19.674	19.674	0.000	96	75221	0.0793	0.0613	
104 Dodecane	57	20.364	20.366	-0.002	97	29017	0.0793	0.0584	
105 1,2,4-Trichlorobenzene	180	20.472	20.474	-0.002	93	24821	0.0793	0.0621	
106 Naphthalene	128	20.601	20.603	-0.002	99	59288	0.0793	0.0641	
107 Hexachlorobutadiene	225	20.860	20.859	0.001	94	27942	0.0793	0.0680	
108 1,2,3-Trichlorobenzene	180	20.898	20.897	0.001	96	26665	0.0793	0.0675	
109 2-Methylnaphthalene	142	21.701	21.702	-0.001	100	21947	0.1825	0.0905	
110 1-Methylnaphthalene	142	21.847	21.847	0.000	98	23773	0.1825	0.1127	
S 111 Xylenes, Total	100				0		0.2380	0.2278	
S 112 1,2-Dichloroethene, Total	1				0		0.1587	0.1576	

Reagents:

40L3DNP_00016	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

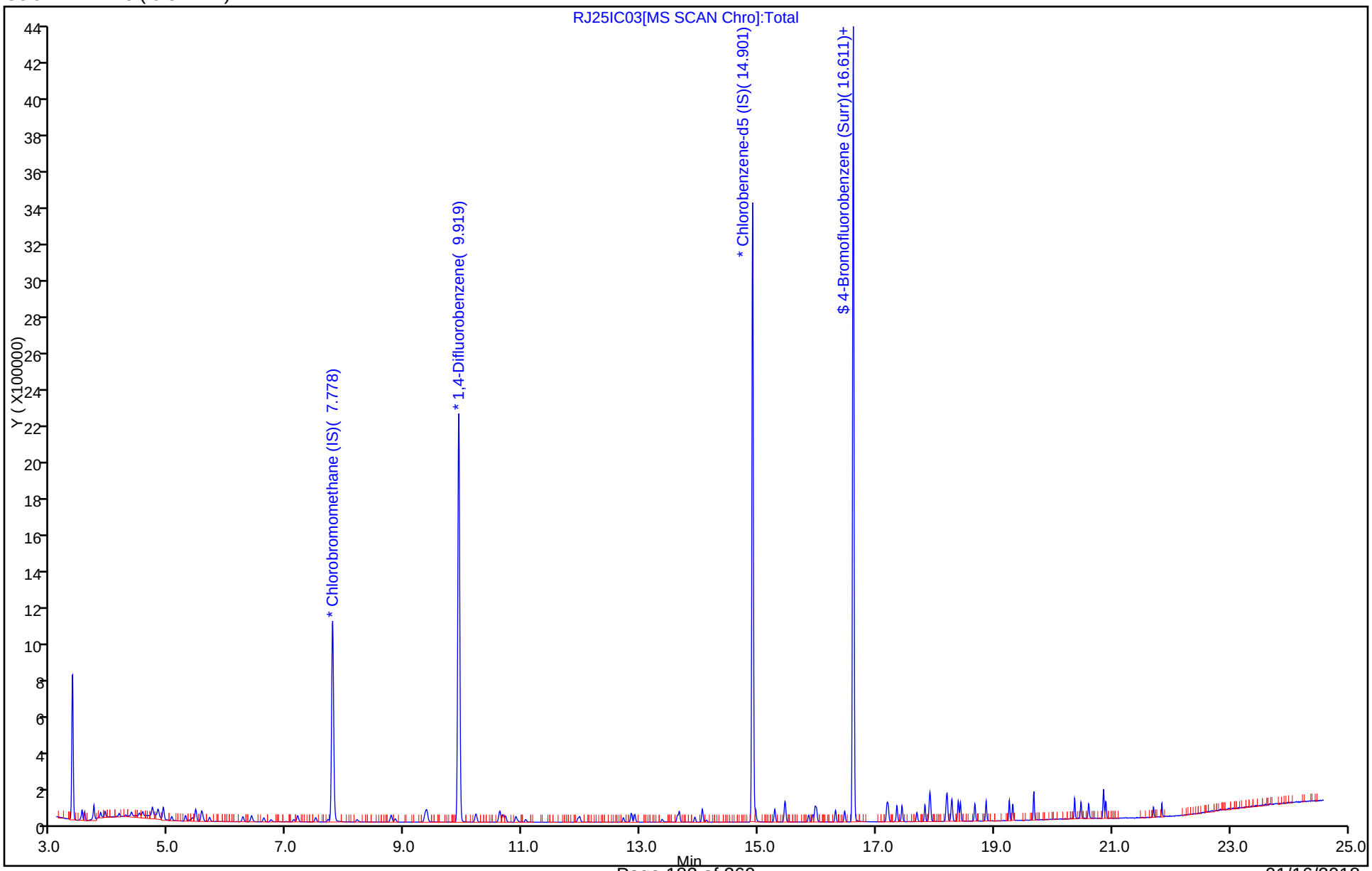
Report Date: 27-Oct-2017 11:55:59 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC03.D

Injection Date:	25-Oct-2017 14:33:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L3			Worklist Smp#:	5
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC04.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 25-Oct-2017 15:20:30 ALS Bottle#: 2 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-006
Misc. Info.: 123608
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 11:56:01 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 25-Oct-2017 16:00:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.773	7.779	-0.006	83	386822	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.914	9.918	-0.004	94	2261393	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.901	14.903	-0.002	88	1948400	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.611	16.610	0.001	92	1483356	4.00	4.15	
6 Chlorodifluoromethane	67	3.507	3.505	0.002	97	8460	0.1587	0.1741	
7 Propene	41	3.507	3.509	-0.002	97	19529	0.1587	0.1794	
8 Dichlorodifluoromethane	85	3.556	3.554	0.002	100	62139	0.1587	0.1639	
9 Chloromethane	52	3.691	3.690	0.001	100	6308	0.1587	0.1734	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.712	3.713	-0.001	92	46108	0.1587	0.1662	
11 Vinyl chloride	62	3.826	3.827	-0.001	99	17927	0.1587	0.1632	
13 Butadiene	54	3.901	3.900	0.001	73	12301	0.1587	0.1715	
12 Butane	43	3.901	3.904	-0.003	82	21079	0.1587	0.1745	
14 Bromomethane	94	4.138	4.140	-0.002	98	19034	0.1587	0.1692	
15 Chloroethane	64	4.246	4.254	-0.008	98	9016	0.1587	0.1786	
16 Ethanol	31	4.359	4.368	-0.009	94	31352	0.7933	0.8873	
17 Vinyl bromide	106	4.483	4.488	-0.005	97	20071	0.1587	0.1714	
18 2-Methylbutane	43	4.543	4.546	-0.003	85	14919	0.1587	0.1809	
19 Acrolein	56	4.710	4.709	0.001	30	6928	0.1587	0.2209	
20 Trichlorofluoromethane	101	4.704	4.710	-0.006	99	65362	0.1587	0.1717	
21 Acetonitrile	40	4.753	4.778	-0.025	98	4087	0.1587	0.1553	
22 Acetone	58	4.802	4.807	-0.005	99	27350	0.4760	0.6415	
24 Pentane	72	4.893	4.899	-0.006	92	4515	0.1587	0.1710	
23 Isopropyl alcohol	45	4.899	4.906	-0.007	92	83694	0.4760	0.5073	
25 Ethyl ether	31	5.033	5.033	0.000	87	19044	0.1587	0.1681	
26 1,1-Dichloroethene	96	5.265	5.274	-0.009	97	24340	0.1587	0.1579	
27 Acrylonitrile	53	5.346	5.349	-0.003	97	16250	0.1587	0.1691	
28 2-Methyl-2-propanol	59	5.389	5.393	-0.004	94	47215	0.1587	0.1623	
29 1,1,2-Trichloro-1,2,2-trif	101	5.443	5.446	-0.003	97	54365	0.1587	0.1641	
30 Methylene Chloride	84	5.540	5.552	-0.012	92	37091	0.1587	0.2355	
31 3-Chloro-1-propene	39	5.567	5.572	-0.005	98	20059	0.1587	0.1620	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.675	5.683	-0.008	98	66894	0.1587	0.1601	
33 trans-1,2-Dichloroethene	96	6.241	6.253	-0.012	99	24460	0.1587	0.1542	
34 Methyl tert-butyl ether	73	6.392	6.392	0.000	96	70570	0.1587	0.1568	
36 1,1-Dichloroethane	63	6.603	6.609	-0.006	100	46409	0.1587	0.1654	
37 Vinyl acetate	43	6.727	6.727	0.000	99	43939	0.1587	0.1439	
38 2-Butanone (MEK)	72	7.109	7.107	0.002	98	11306	0.1587	0.1642	
39 Hexane	56	7.180	7.179	0.001	85	18279	0.1587	0.1660	
40 cis-1,2-Dichloroethene	96	7.487	7.492	-0.005	94	25412	0.1587	0.1568	
41 Ethyl acetate	43	7.686	7.688	-0.002	99	41937	0.1587	0.1553	
42 Chloroform	83	7.805	7.811	-0.006	94	59087	0.1587	0.1617	
43 Tetrahydrofuran	42	8.183	8.178	0.005	87	20608	0.1587	0.1544	
44 1,1,1-Trichloroethane	97	8.765	8.769	-0.004	95	60460	0.1587	0.1589	
45 1,2-Dichloroethane	62	8.835	8.840	-0.005	98	38556	0.1587	0.1582	
47 Benzene	78	9.337	9.341	-0.004	97	71904	0.1587	0.1586	
48 Cyclohexane	69	9.363	9.362	0.001	93	10422	0.1587	0.1533	
46 n-Butanol	31	9.380	9.365	0.015	57	3605	0.1587	0.0959	
50 Carbon tetrachloride	117	9.374	9.378	-0.004	97	60470	0.1587	0.1562	
52 Isooctane	57	10.205	10.206	-0.001	98	102839	0.1587	0.1589	
53 1,2-Dichloropropane	63	10.604	10.602	0.002	80	24970	0.1587	0.1591	
54 n-Heptane	71	10.615	10.617	-0.002	81	23448	0.1587	0.1541	
55 Trichloroethene	130	10.663	10.667	-0.004	94	34011	0.1587	0.1556	
56 Dibromomethane	93	10.706	10.711	-0.005	95	30101	0.1587	0.1553	
57 Dichlorobromomethane	83	10.884	10.886	-0.002	98	51286	0.1587	0.1486	
58 1,4-Dioxane	88	10.917	10.912	0.004	86	10114	0.1587	0.1448	
59 Methyl methacrylate	41	11.051	11.045	0.006	96	19860	0.1587	0.1295	
61 4-Methyl-2-pentanone (MIBK	43	11.936	11.931	0.005	93	36640	0.1587	0.1356	
62 cis-1,3-Dichloropropene	75	11.968	11.968	0.000	93	37708	0.1587	0.1493	
63 trans-1,3-Dichloropropene	75	12.707	12.709	-0.002	96	34823	0.1587	0.1477	
64 Toluene	91	12.847	12.845	0.002	94	84708	0.1587	0.1553	
65 1,1,2-Trichloroethane	83	12.901	12.904	-0.003	99	24681	0.1587	0.1574	
66 2-Hexanone	58	13.359	13.355	0.004	95	17103	0.1587	0.1239	
67 Chlorodibromomethane	129	13.629	13.628	0.001	98	45494	0.1587	0.1408	
68 n-Octane	85	13.661	13.658	0.003	85	26281	0.1587	0.1505	
69 Ethylene Dibromide	107	13.925	13.923	0.002	98	42511	0.1587	0.1463	
70 Tetrachloroethene	129	14.049	14.048	0.001	95	33774	0.1587	0.1580	
71 Chlorobenzene	112	14.950	14.952	-0.002	94	72632	0.1587	0.1588	
72 Ethylbenzene	91	15.279	15.278	0.001	99	112376	0.1587	0.1574	
73 m-Xylene & p-Xylene	91	15.451	15.452	-0.001	0	176975	0.3173	0.3232	
74 Bromoform	173	15.851	15.854	-0.003	95	38228	0.1587	0.1320	
75 Styrene	104	15.926	15.923	0.003	98	49897	0.1587	0.1299	
76 n-Nonane	57	15.964	15.961	0.003	85	48143	0.1587	0.1595	
77 o-Xylene	91	15.985	15.986	-0.001	98	96395	0.1587	0.1647	
78 1,1,2,2-Tetrachloroethane	83	16.309	16.308	0.001	98	61062	0.1587	0.1586	
79 1,2,3-Trichloropropane	110	16.465	16.464	0.001	97	22255	0.1587	0.1646	
80 Isopropylbenzene	105	16.605	16.605	0.000	96	141062	0.1587	0.1670	
81 N-Propylbenzene	120	17.182	17.182	0.000	99	35494	0.1587	0.1568	
82 2-Chlorotoluene	126	17.204	17.203	0.001	97	35064	0.1587	0.1672	
83 4-Ethyltoluene	105	17.350	17.351	-0.001	99	132375	0.1587	0.1580	
84 1,3,5-Trimethylbenzene	120	17.436	17.436	0.000	92	55107	0.1587	0.1605	
85 Alpha Methyl Styrene	118	17.689	17.691	-0.002	89	37420	0.1587	0.1165	
86 n-Decane	57	17.824	17.826	-0.002	93	67062	0.1587	0.1579	
87 tert-Butylbenzene	119	17.905	17.906	-0.001	91	131776	0.1587	0.1643	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.921	17.921	0.000	96	121401	0.1587	0.1695	
89 1,3-Dichlorobenzene	146	18.191	18.189	0.002	99	80846	0.1587	0.1656	
90 sec-Butylbenzene	105	18.202	18.206	-0.004	98	167950	0.1587	0.1635	
91 Benzyl chloride	91	18.272	18.273	-0.001	98	87519	0.1587	0.1389	
92 1,4-Dichlorobenzene	146	18.288	18.287	0.001	93	82059	0.1587	0.1664	
93 4-Isopropyltoluene	119	18.390	18.391	-0.001	96	148906	0.1587	0.1614	
94 1,2,3-Trimethylbenzene	105	18.428	18.429	-0.001	98	135710	0.1587	0.1693	
95 1,2-Dichlorobenzene	146	18.671	18.672	-0.001	94	79606	0.1587	0.1664	
98 n-Butylbenzene	91	18.865	18.865	0.000	99	132390	0.1587	0.1570	
99 Undecane	57	19.259	19.259	-0.001	93	73775	0.1587	0.1493	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	94	47048	0.1587	0.1313	
101 1,2,4,5-Tetramethylbenzene	119	19.674	19.674	0.000	96	180933	0.1587	0.1481	
104 Dodecane	57	20.364	20.366	-0.002	96	73006	0.1587	0.1475	
105 1,2,4-Trichlorobenzene	180	20.472	20.474	-0.002	94	60667	0.1587	0.1525	
106 Naphthalene	128	20.601	20.603	-0.002	99	147471	0.1587	0.1602	
107 Hexachlorobutadiene	225	20.855	20.859	-0.004	94	63860	0.1587	0.1559	
108 1,2,3-Trichlorobenzene	180	20.898	20.897	0.001	95	63574	0.1587	0.1617	
109 2-Methylnaphthalene	142	21.701	21.702	-0.001	100	78912	0.3649	0.3268	
110 1-Methylnaphthalene	142	21.847	21.847	0.000	99	80019	0.3649	0.3810	
S 111 Xylenes, Total	100				0		0.4760	0.4879	
S 112 1,2-Dichloroethene, Total	1				0		0.3173	0.3110	

Reagents:

40L3DNP_00016	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

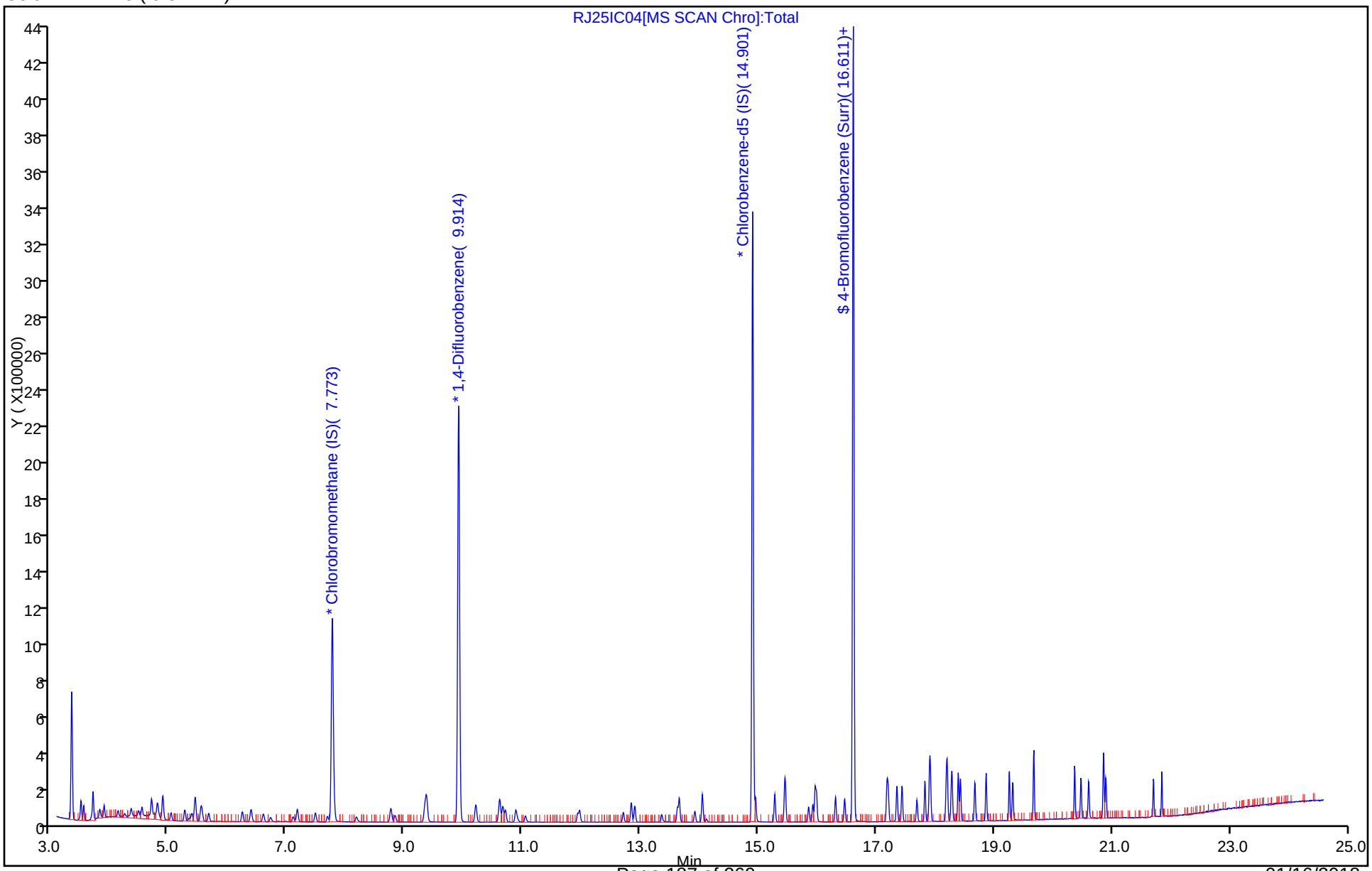
Report Date: 27-Oct-2017 11:56:02 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC04.D

Injection Date:	25-Oct-2017 15:20:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L4			Worklist Smp#:	6
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC05.D
Lims ID: IC L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 25-Oct-2017 16:08:30 ALS Bottle#: 3 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-007
Misc. Info.: 123607
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 11:56:05 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 26-Oct-2017 12:07:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.768	7.779	-0.011	84	392388	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.914	9.918	-0.004	94	2292620	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.902	14.903	-0.001	88	1960520	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.606	16.610	-0.004	91	1499096	4.00	4.17	
6 Chlorodifluoromethane	67	3.497	3.505	-0.008	96	20097	0.4000	0.4078	
7 Propene	41	3.502	3.509	-0.007	99	45765	0.4000	0.4145	
8 Dichlorodifluoromethane	85	3.545	3.554	-0.009	100	157459	0.4000	0.4094	
9 Chloromethane	52	3.680	3.690	-0.010	99	15895	0.4000	0.4308	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.707	3.713	-0.006	92	113975	0.4000	0.4050	
11 Vinyl chloride	62	3.820	3.827	-0.007	99	44332	0.4000	0.3977	
13 Butadiene	54	3.890	3.900	-0.010	90	29563	0.4000	0.4064	
12 Butane	43	3.896	3.904	-0.008	90	50692	0.4000	0.4136	
14 Bromomethane	94	4.128	4.140	-0.012	98	46848	0.4000	0.4106	
15 Chloroethane	64	4.241	4.254	-0.013	98	21026	0.4000	0.4106	
16 Ethanol	31	4.354	4.368	-0.014	96	73720	2.00	2.06	
17 Vinyl bromide	106	4.478	4.488	-0.010	98	48964	0.4000	0.4121	
18 2-Methylbutane	43	4.537	4.546	-0.009	84	33713	0.4000	0.4029	
19 Acrolein	56	4.694	4.709	-0.015	30	12474	0.4000	0.3921	
20 Trichlorofluoromethane	101	4.699	4.710	-0.011	99	162753	0.4000	0.4214	
21 Acetonitrile	40	4.748	4.774	-0.026	98	10434	0.4000	0.3907	
22 Acetone	58	4.802	4.807	-0.005	99	55570	1.20	1.28	
24 Pentane	72	4.893	4.899	-0.006	95	11065	0.4000	0.4130	
23 Isopropyl alcohol	45	4.893	4.906	-0.013	97	206847	1.20	1.24	
25 Ethyl ether	31	5.023	5.033	-0.010	86	47384	0.4000	0.4124	
26 1,1-Dichloroethene	96	5.265	5.274	-0.009	97	60569	0.4000	0.3874	
27 Acrylonitrile	53	5.341	5.349	-0.008	95	37581	0.4000	0.3856	
28 2-Methyl-2-propanol	59	5.379	5.393	-0.014	95	117160	0.4000	0.3969	
29 1,1,2-Trichloro-1,2,2-trif	101	5.438	5.446	-0.008	97	136304	0.4000	0.4055	
30 Methylene Chloride	84	5.535	5.552	-0.017	90	70360	0.4000	0.4404	
31 3-Chloro-1-propene	39	5.562	5.572	-0.010	98	51135	0.4000	0.4070	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.670	5.683	-0.013	98	171741	0.4000	0.4052	
33 trans-1,2-Dichloroethene	96	6.241	6.253	-0.012	99	61556	0.4000	0.3826	
34 Methyl tert-butyl ether	73	6.382	6.392	-0.010	95	180474	0.4000	0.3953	
36 1,1-Dichloroethane	63	6.597	6.609	-0.012	100	113245	0.4000	0.3979	
37 Vinyl acetate	43	6.716	6.727	-0.011	99	116793	0.4000	0.3771	
38 2-Butanone (MEK)	72	7.093	7.107	-0.014	99	27179	0.4000	0.3892	
39 Hexane	56	7.174	7.179	-0.005	85	45026	0.4000	0.4031	
40 cis-1,2-Dichloroethene	96	7.482	7.492	-0.010	94	63056	0.4000	0.3834	
41 Ethyl acetate	43	7.676	7.688	-0.012	99	105925	0.4000	0.3868	
42 Chloroform	83	7.805	7.811	-0.006	95	146303	0.4000	0.3948	
43 Tetrahydrofuran	42	8.172	8.178	-0.006	87	51471	0.4000	0.3802	
44 1,1,1-Trichloroethane	97	8.765	8.769	-0.004	95	152300	0.4000	0.3946	
45 1,2-Dichloroethane	62	8.835	8.840	-0.005	99	98892	0.4000	0.4003	
47 Benzene	78	9.337	9.341	-0.004	97	180361	0.4000	0.3923	
48 Cyclohexane	69	9.358	9.362	-0.004	94	27883	0.4000	0.4044	
46 n-Butanol	31	9.353	9.365	-0.012	63	12391	0.4000	0.3251	
50 Carbon tetrachloride	117	9.369	9.378	-0.009	96	153437	0.4000	0.3910	
52 Isooctane	57	10.199	10.206	-0.007	98	264556	0.4000	0.4032	
53 1,2-Dichloropropane	63	10.599	10.602	-0.004	84	64112	0.4000	0.4031	
54 n-Heptane	71	10.609	10.617	-0.008	84	61428	0.4000	0.3981	
55 Trichloroethene	130	10.663	10.667	-0.004	94	87248	0.4000	0.3937	
56 Dibromomethane	93	10.706	10.711	-0.005	95	74912	0.4000	0.3812	
57 Dichlorobromomethane	83	10.879	10.886	-0.007	99	133067	0.4000	0.3802	
58 1,4-Dioxane	88	10.906	10.912	-0.006	85	27703	0.4000	0.3913	
59 Methyl methacrylate	41	11.041	11.045	-0.004	97	56707	0.4000	0.3648	
61 4-Methyl-2-pentanone (MIBK	43	11.925	11.931	-0.006	95	100514	0.4000	0.3669	
62 cis-1,3-Dichloropropene	75	11.963	11.968	-0.005	92	99963	0.4000	0.3904	
63 trans-1,3-Dichloropropene	75	12.707	12.709	-0.002	96	92653	0.4000	0.3906	
64 Toluene	91	12.842	12.845	-0.003	93	217615	0.4000	0.3965	
65 1,1,2-Trichloroethane	83	12.901	12.904	-0.003	98	62680	0.4000	0.3973	
66 2-Hexanone	58	13.349	13.355	-0.006	96	50215	0.4000	0.3615	
67 Chlorodibromomethane	129	13.629	13.628	0.001	98	122286	0.4000	0.3761	
68 n-Octane	85	13.656	13.658	-0.002	88	69565	0.4000	0.3959	
69 Ethylene Dibromide	107	13.920	13.923	-0.003	98	111812	0.4000	0.3825	
70 Tetrachloroethene	129	14.044	14.048	-0.004	96	85007	0.4000	0.3953	
71 Chlorobenzene	112	14.950	14.952	-0.002	93	183593	0.4000	0.3988	
72 Ethylbenzene	91	15.279	15.278	0.001	98	291382	0.4000	0.4056	
73 m-Xylene & p-Xylene	91	15.452	15.452	0.000	0	463595	0.8000	0.8413	
74 Bromoform	173	15.851	15.854	-0.003	95	102577	0.4000	0.3521	
75 Styrene	104	15.921	15.923	-0.002	99	141877	0.4000	0.3672	
76 n-Nonane	57	15.959	15.961	-0.002	85	130104	0.4000	0.4284	
77 o-Xylene	91	15.985	15.986	-0.001	98	248316	0.4000	0.4217	
78 1,1,2,2-Tetrachloroethane	83	16.309	16.308	0.001	99	158018	0.4000	0.4079	
79 1,2,3-Trichloropropane	110	16.460	16.464	-0.004	98	55328	0.4000	0.4066	
80 Isopropylbenzene	105	16.606	16.605	0.001	97	354883	0.4000	0.4175	
81 N-Propylbenzene	120	17.177	17.182	-0.005	99	94728	0.4000	0.4158	
82 2-Chlorotoluene	126	17.199	17.203	-0.004	94	88647	0.4000	0.4201	
83 4-Ethyltoluene	105	17.350	17.351	-0.001	99	355685	0.4000	0.4218	
84 1,3,5-Trimethylbenzene	120	17.436	17.436	0.000	92	146542	0.4000	0.4242	
85 Alpha Methyl Styrene	118	17.689	17.691	-0.002	89	109602	0.4000	0.3390	
86 n-Decane	57	17.824	17.826	-0.002	93	180060	0.4000	0.4213	
87 tert-Butylbenzene	119	17.905	17.906	-0.001	92	341330	0.4000	0.4229	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.916	17.921	-0.005	96	317818	0.4000	0.4410	
89 1,3-Dichlorobenzene	146	18.186	18.189	-0.003	99	204946	0.4000	0.4171	
90 sec-Butylbenzene	105	18.202	18.206	-0.004	99	446997	0.4000	0.4324	
91 Benzyl chloride	91	18.272	18.273	-0.001	98	241503	0.4000	0.3809	
92 1,4-Dichlorobenzene	146	18.283	18.287	-0.004	93	206120	0.4000	0.4154	
93 4-Isopropyltoluene	119	18.390	18.391	-0.001	97	392846	0.4000	0.4232	
94 1,2,3-Trimethylbenzene	105	18.428	18.429	-0.001	97	350369	0.4000	0.4345	
95 1,2-Dichlorobenzene	146	18.671	18.672	-0.001	94	197633	0.4000	0.4105	
98 n-Butylbenzene	91	18.865	18.865	0.000	98	357490	0.4000	0.4213	
99 Undecane	57	19.259	19.259	0.000	94	198846	0.4000	0.4000	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	97	128407	0.4000	0.3561	
101 1,2,4,5-Tetramethylbenzene	119	19.674	19.674	0.000	97	477440	0.4000	0.3884	
104 Dodecane	57	20.364	20.366	-0.002	97	175178	0.4000	0.3518	
105 1,2,4-Trichlorobenzene	180	20.472	20.474	-0.002	94	139886	0.4000	0.3493	
106 Naphthalene	128	20.601	20.603	-0.002	99	330933	0.4000	0.3572	
107 Hexachlorobutadiene	225	20.860	20.859	0.001	95	147591	0.4000	0.3582	
108 1,2,3-Trichlorobenzene	180	20.898	20.897	0.001	95	131520	0.4000	0.3324	
109 2-Methylnaphthalene	142	21.701	21.702	-0.001	100	110967	0.9200	0.4567	
110 1-Methylnaphthalene	142	21.847	21.847	0.000	100	99268	0.9200	0.4697	
S 111 Xylenes, Total	100				0		1.20	1.26	
S 112 1,2-Dichloroethene, Total	1				0		0.8000	0.7660	

Reagents:

40L4DNP_00015	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

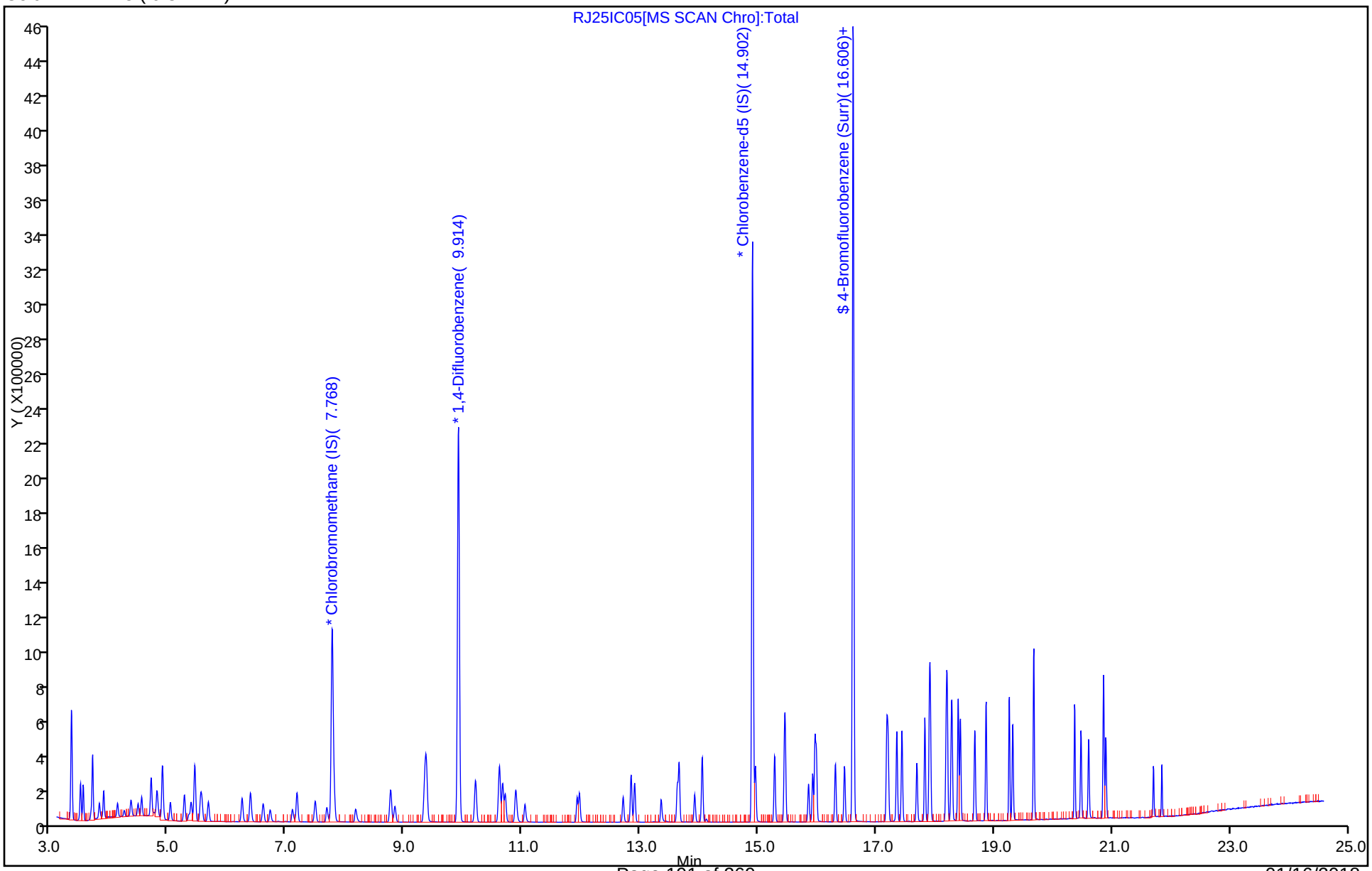
Report Date: 27-Oct-2017 11:56:06 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC05.D

Injection Date:	25-Oct-2017 16:08:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L5			Worklist Smp#:	7
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC06.D
Lims ID: IC L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 25-Oct-2017 16:56:30 ALS Bottle#: 4 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-008
Misc. Info.: 123606
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 11:56:09 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 26-Oct-2017 09:01:51

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.767	7.779	-0.012	82	398052	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.908	9.918	-0.010	94	2299462	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.902	14.903	-0.001	87	1987679	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.606	16.610	-0.004	92	1469194	4.00	4.03	
6 Chlorodifluoromethane	67	3.486	3.505	-0.019	96	52665	1.00	1.05	
7 Propene	41	3.491	3.509	-0.018	98	120415	1.00	1.08	
8 Dichlorodifluoromethane	85	3.534	3.554	-0.020	100	397784	1.00	1.02	
9 Chloromethane	52	3.669	3.690	-0.021	100	41021	1.00	1.10	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.691	3.713	-0.022	93	304153	1.00	1.07	
11 Vinyl chloride	62	3.804	3.827	-0.023	99	114161	1.00	1.01	
13 Butadiene	54	3.880	3.900	-0.020	94	77662	1.00	1.05	
12 Butane	43	3.885	3.904	-0.019	91	131312	1.00	1.06	
14 Bromomethane	94	4.117	4.140	-0.023	99	123066	1.00	1.06	
15 Chloroethane	64	4.230	4.254	-0.024	99	52144	1.00	1.00	
16 Ethanol	31	4.354	4.368	-0.014	94	189667	5.01	5.22	
17 Vinyl bromide	106	4.462	4.488	-0.026	98	124308	1.00	1.03	
18 2-Methylbutane	43	4.527	4.546	-0.019	84	87697	1.00	1.03	
19 Acrolein	56	4.688	4.709	-0.021	30	32362	1.00	1.00	
20 Trichlorofluoromethane	101	4.688	4.710	-0.022	99	419611	1.00	1.07	
21 Acetonitrile	40	4.737	4.770	-0.033	92	28679	1.00	1.06	
22 Acetone	58	4.785	4.807	-0.022	98	131209	3.01	2.99	
24 Pentane	72	4.877	4.899	-0.022	96	27851	1.00	1.02	
23 Isopropyl alcohol	45	4.888	4.906	-0.018	96	536958	3.01	3.16	
25 Ethyl ether	31	5.007	5.033	-0.026	86	124053	1.00	1.06	
26 1,1-Dichloroethene	96	5.255	5.274	-0.019	97	160338	1.00	1.01	
27 Acrylonitrile	53	5.330	5.349	-0.019	95	105280	1.00	1.06	
28 2-Methyl-2-propanol	59	5.373	5.393	-0.020	92	318549	1.00	1.06	
29 1,1,2-Trichloro-1,2,2-trif	101	5.427	5.446	-0.019	97	355686	1.00	1.04	
30 Methylene Chloride	84	5.530	5.552	-0.022	90	163357	1.00	1.01	
31 3-Chloro-1-propene	39	5.551	5.572	-0.021	98	139966	1.00	1.10	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.659	5.683	-0.024	98	454130	1.00	1.06	
33 trans-1,2-Dichloroethene	96	6.236	6.253	-0.017	99	166711	1.00	1.02	
34 Methyl tert-butyl ether	73	6.371	6.392	-0.021	95	487791	1.00	1.05	
36 1,1-Dichloroethane	63	6.597	6.609	-0.012	100	297732	1.00	1.03	
37 Vinyl acetate	43	6.711	6.727	-0.017	99	336347	1.00	1.07	
38 2-Butanone (MEK)	72	7.088	7.107	-0.019	98	73837	1.00	1.04	
39 Hexane	56	7.163	7.179	-0.016	86	119227	1.00	1.05	
40 cis-1,2-Dichloroethene	96	7.482	7.492	-0.010	94	170867	1.00	1.02	
41 Ethyl acetate	43	7.670	7.688	-0.018	99	297748	1.00	1.07	
42 Chloroform	83	7.800	7.811	-0.011	97	387346	1.00	1.03	
43 Tetrahydrofuran	42	8.156	8.178	-0.022	87	139063	1.00	1.01	
44 1,1,1-Trichloroethane	97	8.754	8.769	-0.015	95	408931	1.00	1.04	
45 1,2-Dichloroethane	62	8.830	8.840	-0.010	99	261684	1.00	1.06	
47 Benzene	78	9.331	9.341	-0.010	97	482364	1.00	1.05	
48 Cyclohexane	69	9.353	9.362	-0.009	95	76338	1.00	1.10	
46 n-Butanol	31	9.342	9.365	-0.023	69	38505	1.00	1.01	
50 Carbon tetrachloride	117	9.369	9.378	-0.009	96	423680	1.00	1.08	
52 Isooctane	57	10.194	10.206	-0.012	98	716205	1.00	1.09	
53 1,2-Dichloropropane	63	10.593	10.602	-0.009	86	170193	1.00	1.07	
54 n-Heptane	71	10.609	10.617	-0.008	86	167936	1.00	1.09	
55 Trichloroethene	130	10.658	10.667	-0.009	98	235437	1.00	1.06	
56 Dibromomethane	93	10.701	10.711	-0.010	95	200653	1.00	1.02	
57 Dichlorobromomethane	83	10.879	10.886	-0.007	99	377939	1.00	1.08	
58 1,4-Dioxane	88	10.895	10.912	-0.017	84	77269	1.00	1.09	
59 Methyl methacrylate	41	11.035	11.045	-0.010	98	168681	1.00	1.08	
61 4-Methyl-2-pentanone (MIBK	43	11.920	11.931	-0.011	95	295912	1.00	1.08	
62 cis-1,3-Dichloropropene	75	11.963	11.968	-0.005	92	284232	1.00	1.11	
63 trans-1,3-Dichloropropene	75	12.707	12.709	-0.002	96	264230	1.00	1.10	
64 Toluene	91	12.842	12.845	-0.003	94	601460	1.00	1.08	
65 1,1,2-Trichloroethane	83	12.901	12.904	-0.003	98	172853	1.00	1.08	
66 2-Hexanone	58	13.343	13.355	-0.012	96	155983	1.00	1.11	
67 Chlorodibromomethane	129	13.624	13.628	-0.004	98	362871	1.00	1.10	
68 n-Octane	85	13.656	13.658	-0.002	87	195933	1.00	1.10	
69 Ethylene Dibromide	107	13.920	13.923	-0.003	98	317987	1.00	1.07	
70 Tetrachloroethene	129	14.044	14.048	-0.004	96	231568	1.00	1.06	
71 Chlorobenzene	112	14.950	14.952	-0.002	94	490951	1.00	1.05	
72 Ethylbenzene	91	15.274	15.278	-0.004	99	810050	1.00	1.11	
73 m-Xylene & p-Xylene	91	15.452	15.452	0.000	0	1276477	2.00	2.28	
74 Bromoform	173	15.851	15.854	-0.003	96	318253	1.00	1.08	
75 Styrene	104	15.921	15.923	-0.002	98	441338	1.00	1.13	
76 n-Nonane	57	15.958	15.961	-0.003	85	358631	1.00	1.16	
77 o-Xylene	91	15.980	15.986	-0.006	98	674160	1.00	1.13	
78 1,1,2,2-Tetrachloroethane	83	16.304	16.308	-0.004	99	445782	1.00	1.14	
79 1,2,3-Trichloropropane	110	16.460	16.464	-0.004	98	152327	1.00	1.10	
80 Isopropylbenzene	105	16.600	16.605	-0.005	97	941474	1.00	1.09	
81 N-Propylbenzene	120	17.177	17.182	-0.005	99	266687	1.00	1.15	
82 2-Chlorotoluene	126	17.199	17.203	-0.004	94	238746	1.00	1.12	
83 4-Ethyltoluene	105	17.350	17.351	-0.001	99	1006964	1.00	1.18	
84 1,3,5-Trimethylbenzene	120	17.436	17.436	0.000	93	410670	1.00	1.17	
85 Alpha Methyl Styrene	118	17.689	17.691	-0.002	88	360064	1.00	1.10	
86 n-Decane	57	17.824	17.826	-0.002	93	516714	1.00	1.19	
87 tert-Butylbenzene	119	17.905	17.906	-0.001	93	951442	1.00	1.16	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.916	17.921	-0.005	96	883002	1.00	1.21	
89 1,3-Dichlorobenzene	146	18.185	18.189	-0.004	99	571936	1.00	1.15	
90 sec-Butylbenzene	105	18.202	18.206	-0.004	98	1256189	1.00	1.20	
91 Benzyl chloride	91	18.272	18.273	-0.001	98	734076	1.00	1.14	
92 1,4-Dichlorobenzene	146	18.283	18.287	-0.004	96	579460	1.00	1.15	
93 4-Isopropyltoluene	119	18.390	18.391	-0.001	97	1125379	1.00	1.20	
94 1,2,3-Trimethylbenzene	105	18.428	18.429	-0.001	97	975263	1.00	1.19	
95 1,2-Dichlorobenzene	146	18.671	18.672	-0.001	95	560747	1.00	1.15	
98 n-Butylbenzene	91	18.865	18.865	0.000	98	1047935	1.00	1.22	
99 Undecane	57	19.259	19.259	0.000	94	606307	1.00	1.20	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	99	423136	1.00	1.16	
101 1,2,4,5-Tetramethylbenzene	119	19.674	19.674	0.000	97	1458763	1.00	1.17	
104 Dodecane	57	20.364	20.366	-0.002	98	622152	1.00	1.23	
105 1,2,4-Trichlorobenzene	180	20.472	20.474	-0.002	94	469912	1.00	1.16	
106 Naphthalene	128	20.601	20.603	-0.002	99	1139353	1.00	1.21	
107 Hexachlorobutadiene	225	20.860	20.859	0.001	96	460520	1.00	1.10	
108 1,2,3-Trichlorobenzene	180	20.892	20.897	-0.005	95	454418	1.00	1.13	
109 2-Methylnaphthalene	142	21.701	21.702	-0.001	100	656625	2.30	2.67	
110 1-Methylnaphthalene	142	21.847	21.847	0.000	100	572233	2.30	2.67	
S 111 Xylenes, Total	100				0		3.00	3.41	
S 112 1,2-Dichloroethene, Total	1				0		2.00	2.05	

Reagents:

40L5DNP_00015	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

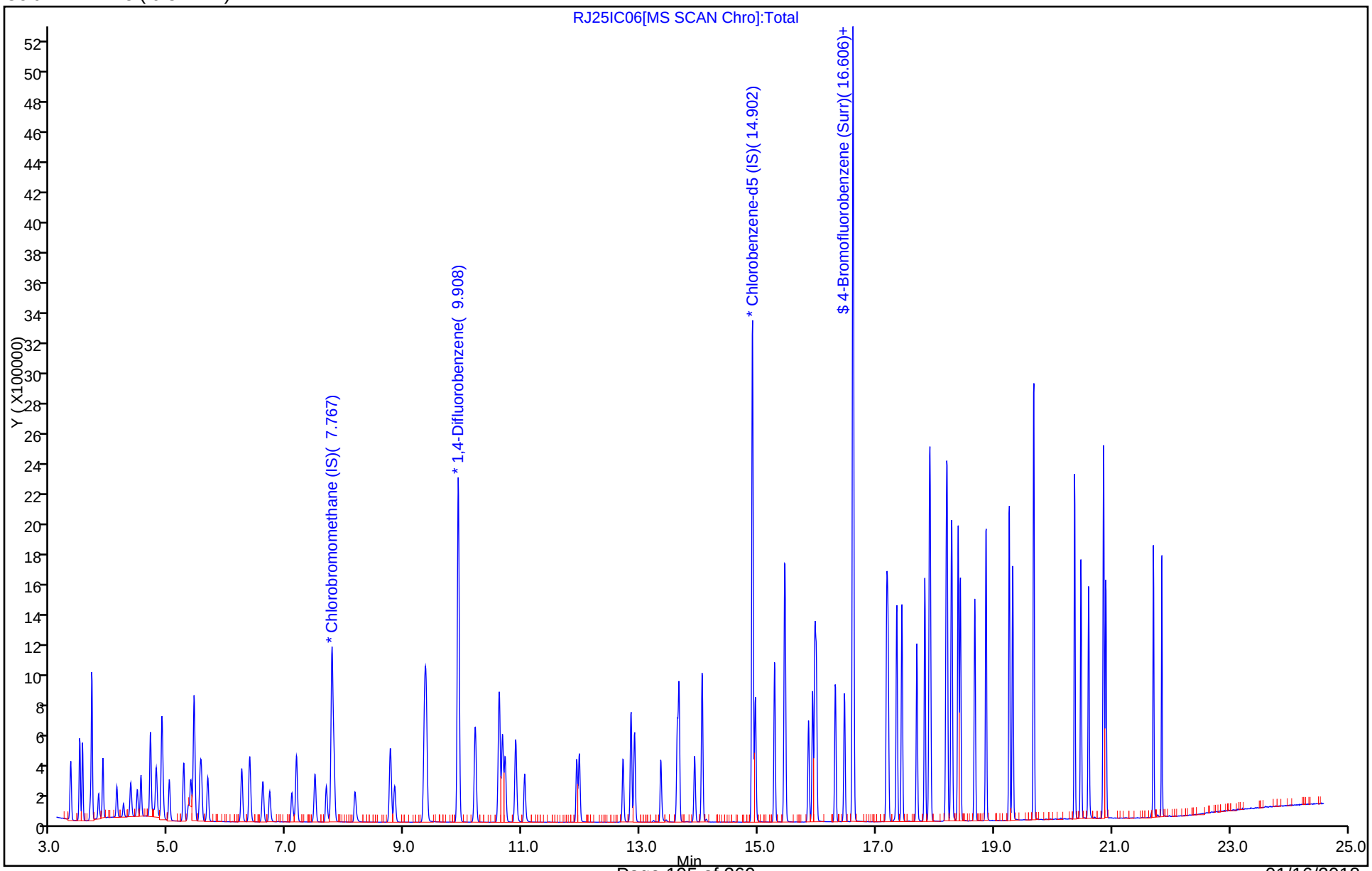
Report Date: 27-Oct-2017 11:56:10 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC06.D

Injection Date:	25-Oct-2017 16:56:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L6			Worklist Smp#:	8
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC07.D
Lims ID: ICIS L7
Client ID:
Sample Type: ICIS Calib Level: 7
Inject. Date: 25-Oct-2017 17:43:30 ALS Bottle#: 5 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-009
Misc. Info.: 123605
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 11:56:13 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 26-Oct-2017 08:58:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.789	7.779	0.010	85	418613	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.924	9.918	0.006	94	2428422	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.901	14.903	-0.002	87	2105490	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.611	16.610	0.001	90	1544010	4.00	4.00	
6 Chlorodifluoromethane	67	3.513	3.505	0.008	96	101769	2.00	1.94	
7 Propene	41	3.518	3.509	0.009	97	232191	2.00	1.97	
8 Dichlorodifluoromethane	85	3.567	3.554	0.013	100	797253	2.00	1.94	
9 Chloromethane	52	3.701	3.690	0.011	100	75586	2.00	1.92	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.723	3.713	0.010	92	588597	2.00	1.96	
11 Vinyl chloride	62	3.836	3.827	0.009	99	228480	2.00	1.92	
13 Butadiene	54	3.912	3.900	0.012	95	153951	2.00	1.98	
12 Butane	43	3.912	3.904	0.008	90	263673	2.00	2.02	
14 Bromomethane	94	4.149	4.140	0.009	99	243878	2.00	2.00	
15 Chloroethane	64	4.262	4.254	0.008	99	106239	2.00	1.94	
16 Ethanol	31	4.375	4.368	0.007	95	382186	9.99	10.0	
17 Vinyl bromide	106	4.499	4.488	0.011	98	247129	2.00	1.95	
18 2-Methylbutane	43	4.559	4.546	0.013	85	180708	2.00	2.02	
19 Acrolein	56	4.715	4.709	0.006	96	67963	2.00	2.00	
20 Trichlorofluoromethane	101	4.720	4.710	0.010	99	825311	2.00	2.00	
21 Acetonitrile	40	4.764	4.770	-0.006	96	56588	2.00	1.99	M
22 Acetone	58	4.812	4.807	0.005	99	270718	5.99	5.87	
24 Pentane	72	4.909	4.899	0.010	95	59347	2.00	2.08	
23 Isopropyl alcohol	45	4.909	4.906	0.003	93	1107259	5.99	6.20	
25 Ethyl ether	31	5.039	5.033	0.006	85	246725	2.00	2.01	
26 1,1-Dichloroethene	96	5.287	5.274	0.013	97	319852	2.00	1.92	
27 Acrylonitrile	53	5.357	5.349	0.008	94	205776	2.00	1.98	
28 2-Methyl-2-propanol	59	5.389	5.393	-0.004	94	640820	2.00	2.03	
29 1,1,2-Trichloro-1,2,2-trif	101	5.459	5.446	0.013	97	702951	2.00	1.96	
30 Methylene Chloride	84	5.567	5.552	0.015	90	305658	2.00	1.79	
31 3-Chloro-1-propene	39	5.583	5.572	0.011	98	270102	2.00	2.02	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.697	5.683	0.013	98	892511	2.00	1.97	
33 trans-1,2-Dichloroethene	96	6.268	6.253	0.015	99	332139	2.00	1.94	
34 Methyl tert-butyl ether	73	6.392	6.392	0.000	95	981395	2.00	2.02	
36 1,1-Dichloroethane	63	6.624	6.609	0.015	100	588426	2.00	1.94	
37 Vinyl acetate	43	6.732	6.727	0.005	99	692559	2.00	2.10	
38 2-Butanone (MEK)	72	7.104	7.107	-0.003	98	150957	2.00	2.03	
39 Hexane	56	7.185	7.179	0.006	86	236625	2.00	1.99	
40 cis-1,2-Dichloroethene	96	7.503	7.492	0.011	94	342438	2.00	1.95	
41 Ethyl acetate	43	7.686	7.688	-0.002	99	592846	2.00	2.03	
42 Chloroform	83	7.821	7.811	0.010	96	766644	2.00	1.94	
43 Tetrahydrofuran	42	8.172	8.178	-0.006	87	284558	2.00	1.97	
44 1,1,1-Trichloroethane	97	8.776	8.769	0.007	95	817496	2.00	1.99	
45 1,2-Dichloroethane	62	8.846	8.840	0.006	99	517134	2.00	1.98	
47 Benzene	78	9.347	9.341	0.006	96	963873	2.00	1.98	
48 Cyclohexane	69	9.369	9.362	0.007	95	153538	2.00	2.10	
46 n-Butanol	31	9.347	9.365	-0.018	61	83873	2.00	2.08	
50 Carbon tetrachloride	117	9.385	9.378	0.007	97	857647	2.00	2.06	
52 Isooctane	57	10.210	10.206	0.004	98	1423496	2.00	2.05	
53 1,2-Dichloropropane	63	10.604	10.602	0.002	86	337441	2.00	2.00	
54 n-Heptane	71	10.620	10.617	0.003	85	340822	2.00	2.09	
55 Trichloroethene	130	10.668	10.667	0.001	97	474722	2.00	2.02	
56 Dibromomethane	93	10.717	10.711	0.006	96	406474	2.00	1.95	
57 Dichlorobromomethane	83	10.889	10.886	0.003	98	776763	2.00	2.10	
58 1,4-Dioxane	88	10.906	10.912	-0.006	84	155698	2.00	2.08	
59 Methyl methacrylate	41	11.040	11.045	-0.005	98	362703	2.00	2.20	
61 4-Methyl-2-pentanone (MIBK	43	11.925	11.931	-0.006	94	611907	2.00	2.11	
62 cis-1,3-Dichloropropene	75	11.968	11.968	0.000	92	590333	2.00	2.18	
63 trans-1,3-Dichloropropene	75	12.712	12.709	0.003	96	550671	2.00	2.16	
64 Toluene	91	12.847	12.845	0.002	94	1209692	2.00	2.05	
65 1,1,2-Trichloroethane	83	12.906	12.904	0.002	98	346900	2.00	2.05	
66 2-Hexanone	58	13.348	13.355	-0.007	97	340754	2.00	2.28	
67 Chlorodibromomethane	129	13.629	13.628	0.001	98	776008	2.00	2.22	
68 n-Octane	85	13.661	13.658	0.003	86	399529	2.00	2.12	
69 Ethylene Dibromide	107	13.925	13.923	0.002	99	650482	2.00	2.07	
70 Tetrachloroethene	129	14.049	14.048	0.001	96	465829	2.00	2.02	
71 Chlorobenzene	112	14.950	14.952	-0.002	94	982434	2.00	1.99	
72 Ethylbenzene	91	15.279	15.278	0.001	98	1619183	2.00	2.10	
73 m-Xylene & p-Xylene	91	15.451	15.452	-0.001	0	2542321	3.99	4.30	
74 Bromoform	173	15.856	15.854	0.002	97	714603	2.00	2.28	
75 Styrene	104	15.920	15.923	-0.003	98	928423	2.00	2.24	
76 n-Nonane	57	15.958	15.961	-0.003	85	699319	2.00	2.14	
77 o-Xylene	91	15.985	15.986	-0.001	98	1321857	2.00	2.09	
78 1,1,2,2-Tetrachloroethane	83	16.309	16.308	0.001	100	879160	2.00	2.11	
79 1,2,3-Trichloropropane	110	16.465	16.464	0.001	97	299434	2.00	2.05	
80 Isopropylbenzene	105	16.605	16.605	0.000	97	1846740	2.00	2.02	
81 N-Propylbenzene	120	17.182	17.182	0.000	99	528723	2.00	2.16	
82 2-Chlorotoluene	126	17.204	17.203	0.001	95	469063	2.00	2.07	
83 4-Ethyltoluene	105	17.349	17.351	-0.002	99	1984214	2.00	2.19	
84 1,3,5-Trimethylbenzene	120	17.436	17.436	0.000	93	812865	2.00	2.19	
85 Alpha Methyl Styrene	118	17.689	17.691	-0.002	88	768512	2.00	2.21	
86 n-Decane	57	17.824	17.826	-0.002	93	1015986	2.00	2.21	
87 tert-Butylbenzene	119	17.905	17.906	-0.001	93	1868713	2.00	2.16	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.921	17.921	0.000	96	1705234	2.00	2.20	
89 1,3-Dichlorobenzene	146	18.191	18.189	0.002	99	1125927	2.00	2.13	
90 sec-Butylbenzene	105	18.207	18.206	0.001	98	2471421	2.00	2.23	
91 Benzyl chloride	91	18.272	18.273	-0.001	98	1513870	2.00	2.22	
92 1,4-Dichlorobenzene	146	18.288	18.287	0.001	93	1134967	2.00	2.13	
93 4-Isopropyltoluene	119	18.390	18.391	-0.001	97	2260739	2.00	2.27	
94 1,2,3-Trimethylbenzene	105	18.428	18.429	-0.001	98	1905721	2.00	2.20	
95 1,2-Dichlorobenzene	146	18.671	18.672	-0.001	95	1099439	2.00	2.13	
98 n-Butylbenzene	91	18.865	18.865	0.000	99	2097682	2.00	2.30	
99 Undecane	57	19.258	19.259	-0.001	93	1225234	2.00	2.30	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	99	910820	2.00	2.35	
101 1,2,4,5-Tetramethylbenzene	119	19.674	19.674	0.000	97	2935017	2.00	2.22	
104 Dodecane	57	20.364	20.366	-0.002	97	1246644	2.00	2.33	
105 1,2,4-Trichlorobenzene	180	20.472	20.474	-0.002	94	992300	2.00	2.31	
106 Naphthalene	128	20.601	20.603	-0.002	99	2348566	2.00	2.36	
107 Hexachlorobutadiene	225	20.860	20.859	0.001	96	942489	2.00	2.13	
108 1,2,3-Trichlorobenzene	180	20.898	20.897	0.001	95	941154	2.00	2.21	
109 2-Methylnaphthalene	142	21.701	21.702	-0.001	100	1378404	4.59	5.28	
110 1-Methylnaphthalene	142	21.847	21.847	0.000	100	1131655	4.59	4.99	
S 111 Xylenes, Total	100				0		5.99	6.39	
S 112 1,2-Dichloroethene, Total	1				0		3.99	3.89	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40L6DNP_00016	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

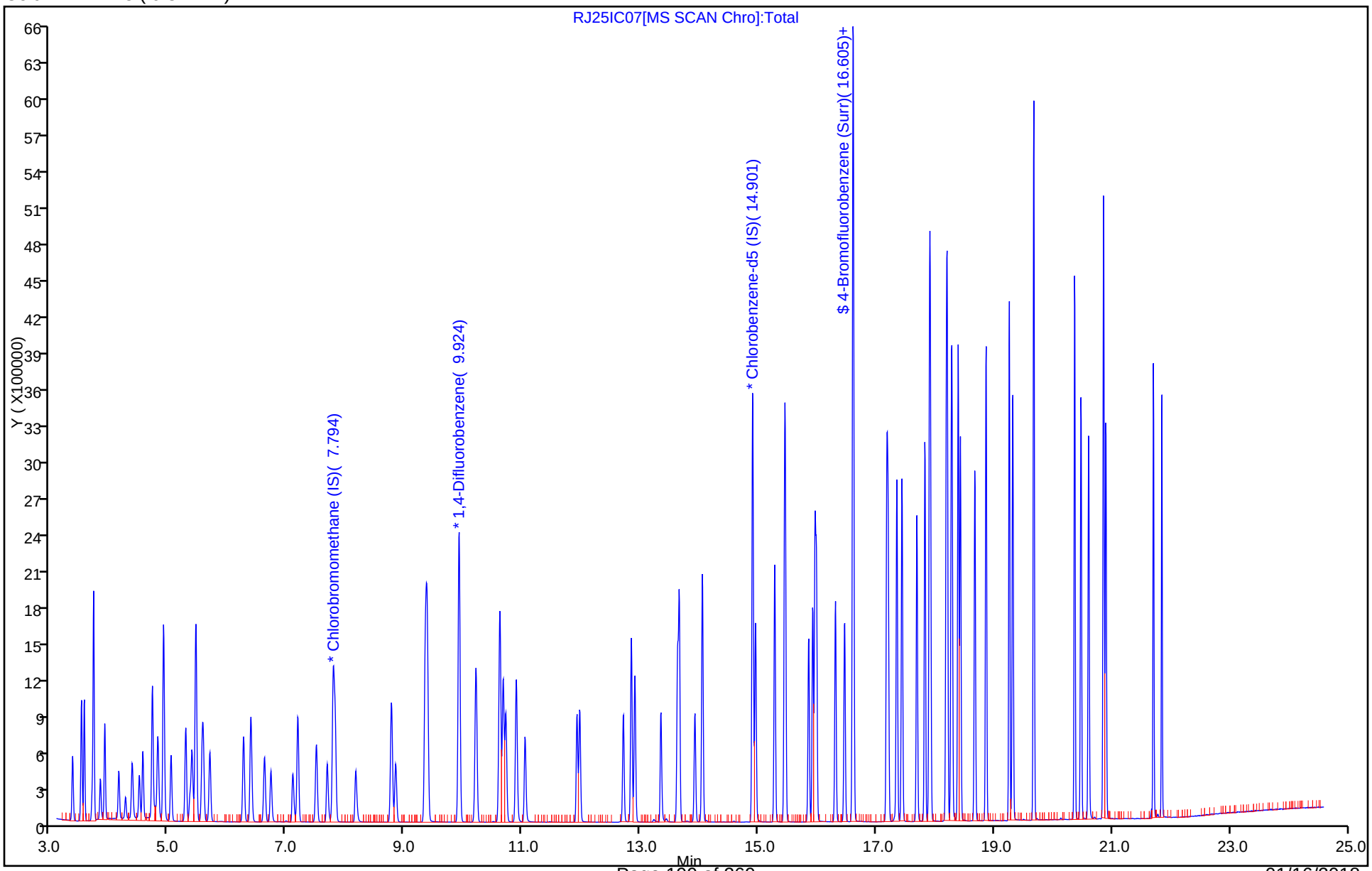
Report Date: 27-Oct-2017 11:56:14 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC07.D

Injection Date:	25-Oct-2017 17:43:30	Instrument ID:	MR	Operator ID:	
Lims ID:	ICIS L7			Worklist Smp#:	9
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

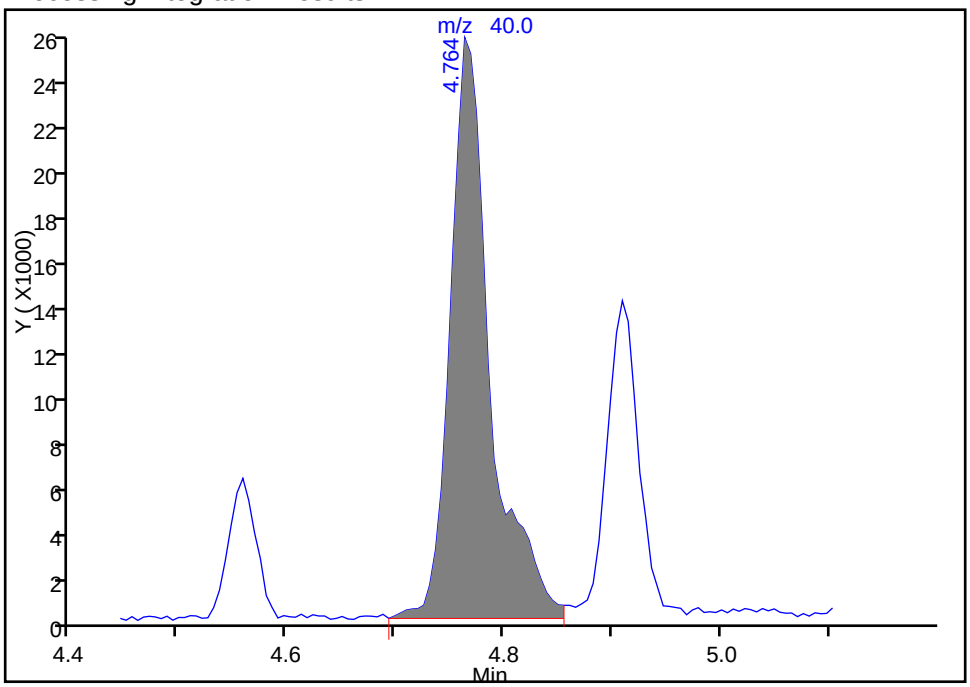
Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC07.D
Injection Date: 25-Oct-2017 17:43:30 Instrument ID: MR
Lims ID: ICIS L7
Client ID:
Operator ID: ALS Bottle#: 5 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

21 Acetonitrile, CAS: 75-05-8

Signal: 1

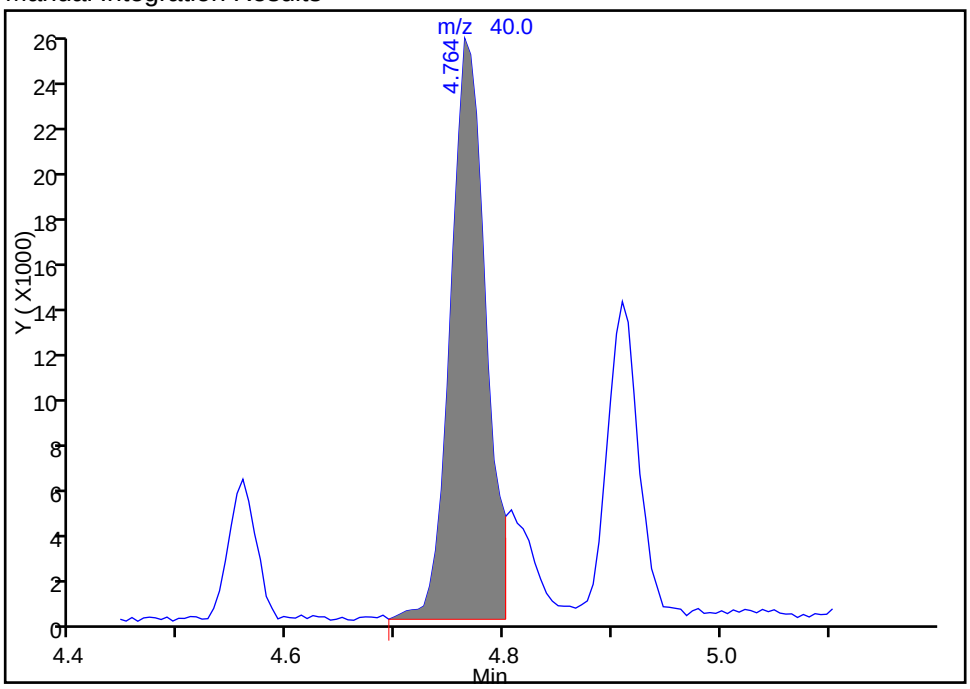
Processing Integration Results

RT: 4.76
Area: 64164
Amount: 2.173212
Amount Units: ppb v/v



Manual Integration Results

RT: 4.76
Area: 56588
Amount: 1.986431
Amount Units: ppb v/v



Reviewer: tajh, 26-Oct-2017 12:13:07
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC08.D
Lims ID: IC L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 25-Oct-2017 18:31:30 ALS Bottle#: 6 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-010
Misc. Info.: 123604
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 11:56:16 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 26-Oct-2017 12:14:17

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.783	7.779	0.004	80	423549	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.919	9.918	0.001	94	2429379	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.901	14.903	-0.002	87	2100763	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.611	16.610	0.001	91	1492736	4.00	3.88	
6 Chlorodifluoromethane	67	3.486	3.505	-0.019	96	202279	4.00	3.80	
7 Propene	41	3.491	3.509	-0.018	97	459626	4.00	3.86	
8 Dichlorodifluoromethane	85	3.534	3.554	-0.020	100	1691282	4.00	4.07	
9 Chloromethane	52	3.674	3.690	-0.016	100	164958	4.00	4.14	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.696	3.713	-0.017	92	1231703	4.00	4.05	
11 Vinyl chloride	62	3.809	3.827	-0.018	99	447334	4.00	3.72	
13 Butadiene	54	3.885	3.900	-0.015	95	301083	4.00	3.83	
12 Butane	43	3.890	3.904	-0.014	90	511458	4.00	3.87	
14 Bromomethane	94	4.127	4.140	-0.013	99	488872	4.00	3.97	
15 Chloroethane	64	4.241	4.254	-0.013	98	212019	4.00	3.84	
16 Ethanol	31	4.370	4.368	0.002	95	761181	20.0	19.7	
17 Vinyl bromide	106	4.478	4.488	-0.010	98	490166	4.00	3.82	
18 2-Methylbutane	43	4.537	4.546	-0.009	84	350900	4.00	3.88	
19 Acrolein	56	4.699	4.709	-0.010	92	131136	4.00	3.82	
20 Trichlorofluoromethane	101	4.699	4.710	-0.011	99	1619197	4.00	3.88	
21 Acetonitrile	40	4.753	4.770	-0.017	97	111432	4.00	3.87	M
22 Acetone	58	4.796	4.807	-0.011	98	513231	12.0	11.0	
24 Pentane	72	4.888	4.899	-0.011	99	111955	4.00	3.87	
23 Isopropyl alcohol	45	4.904	4.906	-0.002	97	2145485	12.0	11.9	
25 Ethyl ether	31	5.017	5.033	-0.016	84	482585	4.00	3.89	
26 1,1-Dichloroethene	96	5.265	5.274	-0.009	98	655584	4.00	3.89	
27 Acrylonitrile	53	5.346	5.349	-0.003	94	422684	4.00	4.02	
28 2-Methyl-2-propanol	59	5.384	5.393	-0.009	92	1295192	4.00	4.06	
29 1,1,2-Trichloro-1,2,2-trif	101	5.438	5.446	-0.008	97	1424722	4.00	3.93	
30 Methylene Chloride	84	5.551	5.552	-0.001	89	602192	4.00	3.49	
31 3-Chloro-1-propene	39	5.567	5.572	-0.005	98	545029	4.00	4.02	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.675	5.683	-0.008	98	1838624	4.00	4.02	
33 trans-1,2-Dichloroethene	96	6.252	6.253	-0.001	99	683800	4.00	3.94	
34 Methyl tert-butyl ether	73	6.376	6.392	-0.016	95	2014267	4.00	4.09	
36 1,1-Dichloroethane	63	6.608	6.609	-0.001	100	1188290	4.00	3.87	
37 Vinyl acetate	43	6.721	6.727	-0.006	99	1456065	4.00	4.36	
38 2-Butanone (MEK)	72	7.093	7.107	-0.014	98	312840	4.00	4.15	
39 Hexane	56	7.174	7.179	-0.005	86	482705	4.00	4.00	
40 cis-1,2-Dichloroethene	96	7.492	7.492	0.000	93	712388	4.00	4.01	
41 Ethyl acetate	43	7.676	7.688	-0.012	99	1232791	4.00	4.17	
42 Chloroform	83	7.810	7.811	-0.001	96	1553122	4.00	3.88	
43 Tetrahydrofuran	42	8.161	8.178	-0.017	86	580107	4.00	3.97	
44 1,1,1-Trichloroethane	97	8.765	8.769	-0.004	94	1680641	4.00	4.03	
45 1,2-Dichloroethane	62	8.840	8.840	0.000	99	1044848	4.00	3.99	
47 Benzene	78	9.342	9.341	0.001	96	1974761	4.00	4.05	
48 Cyclohexane	69	9.358	9.362	-0.004	95	309783	4.00	4.24	
46 n-Butanol	31	9.336	9.365	-0.029	60	175085	4.00	4.34	
50 Carbon tetrachloride	117	9.380	9.378	0.002	97	1751616	4.00	4.21	
52 Isooctane	57	10.205	10.206	-0.001	98	2885411	4.00	4.15	
53 1,2-Dichloropropane	63	10.604	10.602	0.002	86	682983	4.00	4.05	
54 n-Heptane	71	10.614	10.617	-0.003	84	695938	4.00	4.26	
55 Trichloroethene	130	10.668	10.667	0.001	95	973448	4.00	4.15	
56 Dibromomethane	93	10.712	10.711	0.001	95	831073	4.00	3.99	
57 Dichlorobromomethane	83	10.889	10.886	0.003	98	1611990	4.00	4.35	
58 1,4-Dioxane	88	10.900	10.912	-0.012	83	319197	4.00	4.25	
59 Methyl methacrylate	41	11.040	11.045	-0.005	98	761754	4.00	4.62	
61 4-Methyl-2-pentanone (MIBK	43	11.919	11.931	-0.012	94	1259401	4.00	4.34	
62 cis-1,3-Dichloropropene	75	11.968	11.968	0.000	92	1228466	4.00	4.53	
63 trans-1,3-Dichloropropene	75	12.707	12.709	-0.002	96	1169692	4.00	4.60	
64 Toluene	91	12.842	12.845	-0.003	94	2501333	4.00	4.25	
65 1,1,2-Trichloroethane	83	12.906	12.904	0.002	98	705972	4.00	4.18	
66 2-Hexanone	58	13.343	13.355	-0.012	97	714062	4.00	4.80	
67 Chlorodibromomethane	129	13.629	13.628	0.001	98	1664137	4.00	4.78	
68 n-Octane	85	13.656	13.658	-0.002	86	815331	4.00	4.33	
69 Ethylene Dibromide	107	13.920	13.923	-0.003	98	1358421	4.00	4.34	
70 Tetrachloroethene	129	14.049	14.048	0.001	97	954469	4.00	4.14	
71 Chlorobenzene	112	14.950	14.952	-0.002	94	1994464	4.00	4.04	
72 Ethylbenzene	91	15.279	15.278	0.001	98	3290297	4.00	4.27	
73 m-Xylene & p-Xylene	91	15.451	15.452	-0.001	0	5046733	8.00	8.55	
74 Bromoform	173	15.856	15.854	0.002	97	1559205	4.00	5.00	
75 Styrene	104	15.921	15.923	-0.002	98	1920288	4.00	4.64	
76 n-Nonane	57	15.958	15.961	-0.003	84	1364959	4.00	4.19	
77 o-Xylene	91	15.985	15.986	-0.001	98	2630168	4.00	4.17	
78 1,1,2,2-Tetrachloroethane	83	16.309	16.308	0.001	100	1758724	4.00	4.24	
79 1,2,3-Trichloropropane	110	16.465	16.464	0.001	97	591665	4.00	4.06	
80 Isopropylbenzene	105	16.605	16.605	0.000	96	3643421	4.00	4.00	
81 N-Propylbenzene	120	17.182	17.182	0.000	99	1049883	4.00	4.30	
82 2-Chlorotoluene	126	17.204	17.203	0.001	96	928581	4.00	4.11	
83 4-Ethyltoluene	105	17.350	17.351	-0.001	99	3912288	4.00	4.33	
84 1,3,5-Trimethylbenzene	120	17.436	17.436	0.000	93	1620384	4.00	4.38	
85 Alpha Methyl Styrene	118	17.689	17.691	-0.002	88	1590809	4.00	4.59	
86 n-Decane	57	17.824	17.826	-0.002	93	1993844	4.00	4.35	
87 tert-Butylbenzene	119	17.905	17.906	-0.001	93	3691545	4.00	4.27	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.921	17.921	0.000	96	3292671	4.00	4.26	
89 1,3-Dichlorobenzene	146	18.191	18.189	0.002	99	2217431	4.00	4.21	
90 sec-Butylbenzene	105	18.207	18.206	0.001	98	4814563	4.00	4.35	
91 Benzyl chloride	91	18.272	18.273	-0.001	98	3018732	4.00	4.44	
92 1,4-Dichlorobenzene	146	18.288	18.287	0.001	95	2222060	4.00	4.18	
93 4-Isopropyltoluene	119	18.390	18.391	-0.001	97	4473245	4.00	4.50	
94 1,2,3-Trimethylbenzene	105	18.428	18.429	-0.001	98	3720027	4.00	4.30	
95 1,2-Dichlorobenzene	146	18.671	18.672	-0.001	95	2160064	4.00	4.19	
98 n-Butylbenzene	91	18.865	18.865	0.000	99	4159498	4.00	4.57	
99 Undecane	57	19.258	19.259	-0.001	92	2432418	4.00	4.57	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	99	1901418	4.00	4.92	
101 1,2,4,5-Tetramethylbenzene	119	19.674	19.674	0.000	97	5868924	4.00	4.46	
104 Dodecane	57	20.369	20.366	0.003	97	2542680	4.00	4.77	
105 1,2,4-Trichlorobenzene	180	20.477	20.474	0.003	94	2148606	4.00	5.01	
106 Naphthalene	128	20.607	20.603	0.004	99	4921580	4.00	4.96	
107 Hexachlorobutadiene	225	20.860	20.859	0.001	97	1997835	4.00	4.52	
108 1,2,3-Trichlorobenzene	180	20.898	20.897	0.001	95	2025469	4.00	4.78	
109 2-Methylnaphthalene	142	21.701	21.702	-0.001	100	3367217	9.20	12.9	
110 1-Methylnaphthalene	142	21.847	21.847	0.000	100	2775316	9.20	12.3	
S 111 Xylenes, Total	100				0		12.0	12.7	
S 112 1,2-Dichloroethene, Total	1				0		8.00	7.95	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40L7DNP_00015	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

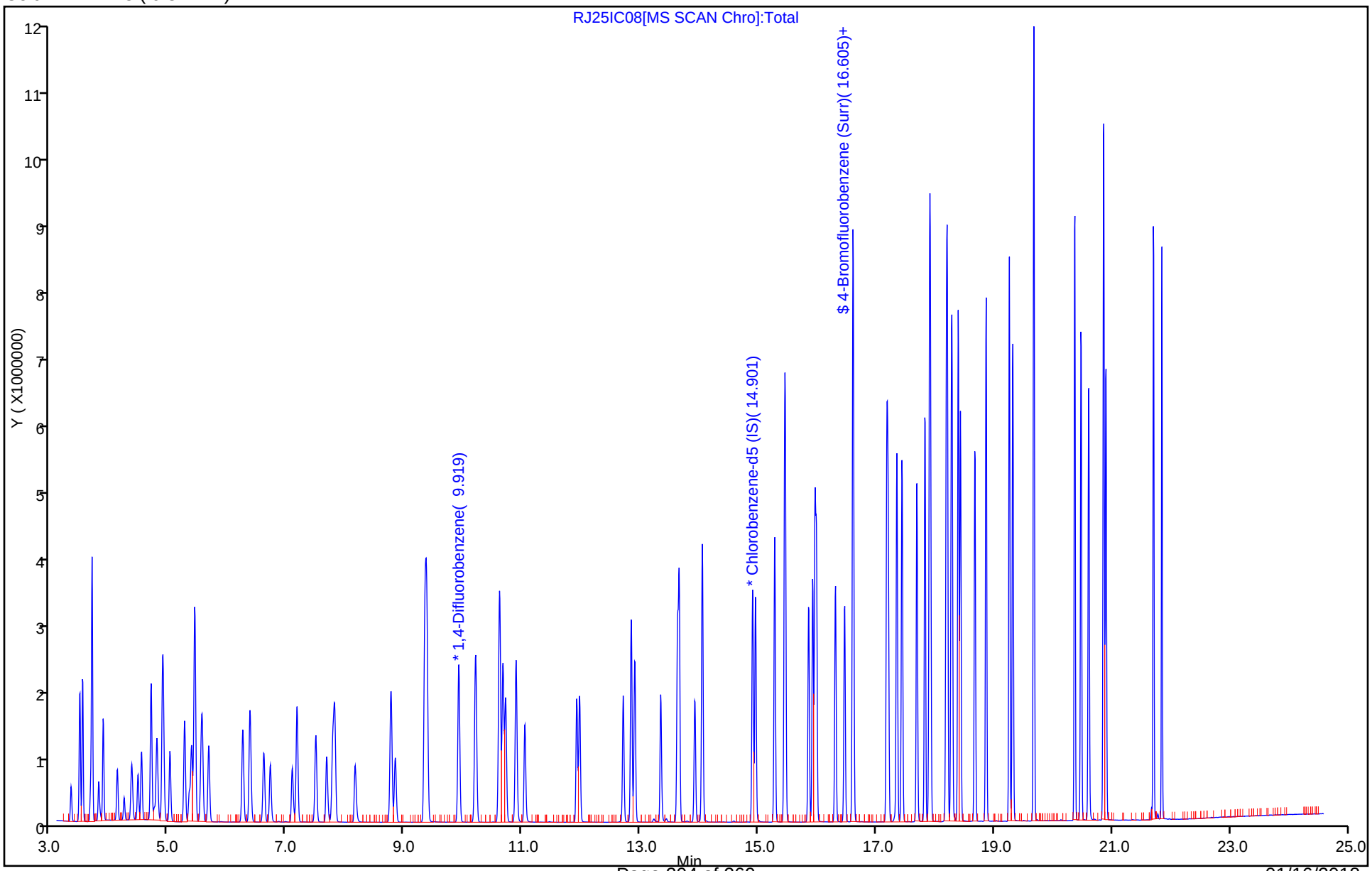
Report Date: 27-Oct-2017 11:56:17 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC08.D

Injection Date:	25-Oct-2017 18:31:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L8			Worklist Smp#:	10
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

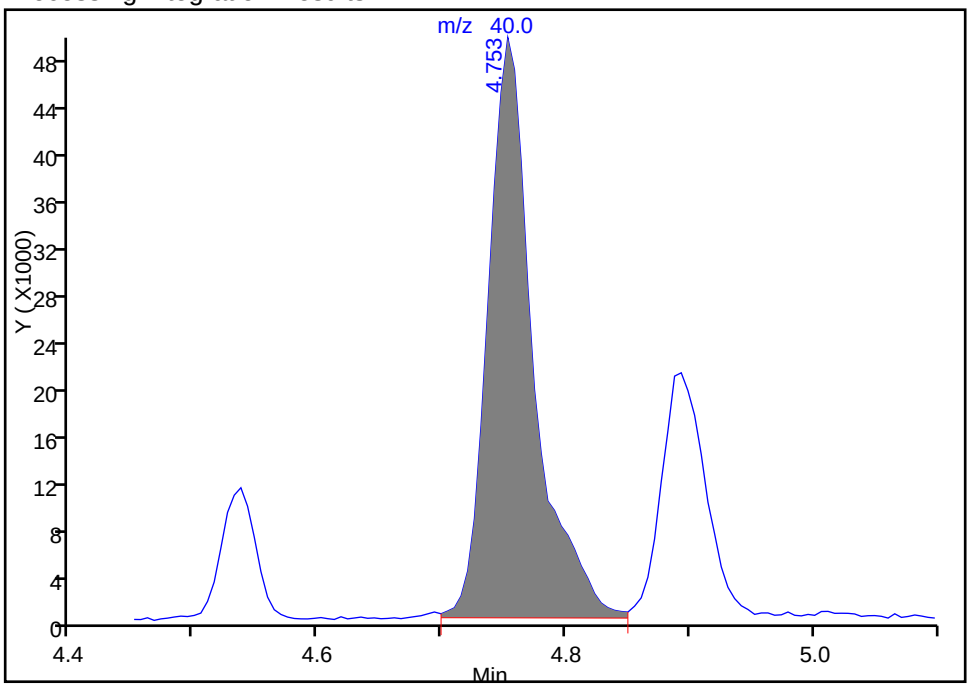
Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC08.D
Injection Date: 25-Oct-2017 18:31:30 Instrument ID: MR
Lims ID: IC L8
Client ID:
Operator ID: ALS Bottle#: 6 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

21 Acetonitrile, CAS: 75-05-8

Signal: 1

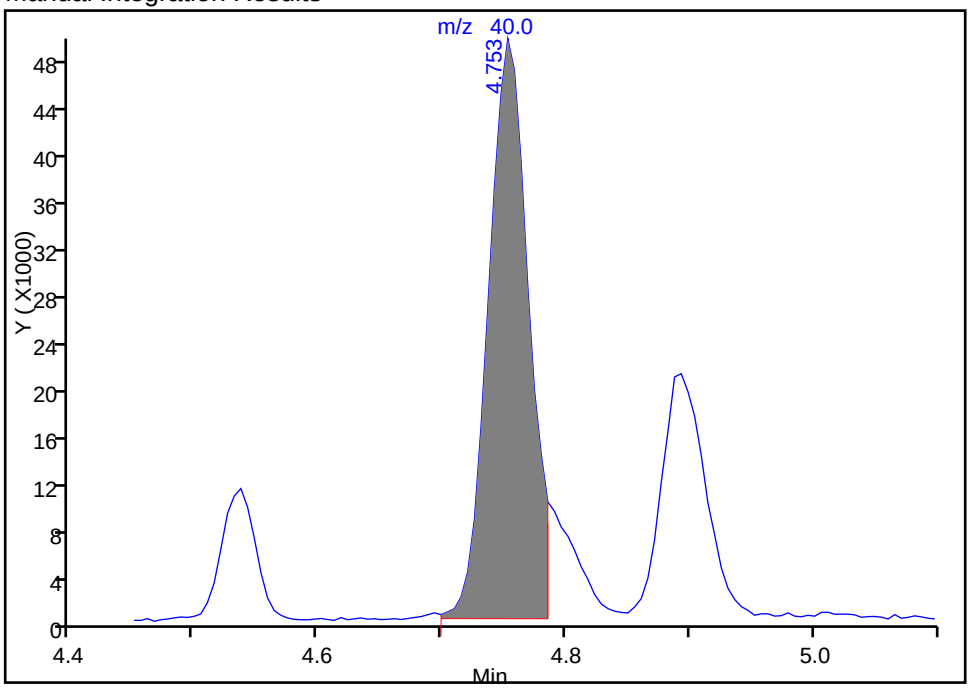
Processing Integration Results

RT: 4.75
Area: 125479
Amount: 4.278931
Amount Units: ppb v/v



Manual Integration Results

RT: 4.75
Area: 111432
Amount: 3.866056
Amount Units: ppb v/v



Reviewer: tajh, 26-Oct-2017 12:13:57
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC09.D
Lims ID: IC L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 25-Oct-2017 19:18:30 ALS Bottle#: 7 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-011
Misc. Info.: 123603
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 11:56:19 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 26-Oct-2017 12:16:35

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.794	7.779	0.015	82	450605	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.930	9.918	0.012	94	2591948	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.907	14.903	0.004	86	2258863	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.611	16.610	0.001	94	1563108	4.00	3.78	
6 Chlorodifluoromethane	67	3.507	3.505	0.002	96	399853	8.00	7.06	
7 Propene	41	3.518	3.509	0.009	97	884721	8.00	6.98	
8 Dichlorodifluoromethane	85	3.561	3.554	0.007	100	3324893	8.00	7.53	
9 Chloromethane	52	3.701	3.690	0.011	100	301993	8.00	7.13	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.723	3.713	0.010	91	2405230	8.00	7.44	
11 Vinyl chloride	62	3.836	3.827	0.009	99	888956	8.00	6.95	
13 Butadiene	54	3.912	3.900	0.012	90	599027	8.00	7.17	
12 Butane	43	3.917	3.904	0.013	90	999430	8.00	7.10	
14 Bromomethane	94	4.154	4.140	0.014	98	964057	8.00	7.36	
15 Chloroethane	64	4.268	4.254	0.014	98	421811	8.00	7.17	
16 Ethanol	31	4.386	4.368	0.018	94	1460090	40.0	35.5	
17 Vinyl bromide	106	4.505	4.488	0.017	98	983817	8.00	7.21	
18 2-Methylbutane	43	4.559	4.546	0.013	84	696681	8.00	7.25	
19 Acrolein	56	4.721	4.709	0.012	51	245571	8.00	6.72	
20 Trichlorofluoromethane	101	4.726	4.710	0.016	99	3168243	8.00	7.14	
21 Acetonitrile	40	4.775	4.770	0.005	97	255539	8.00	8.33	
22 Acetone	58	4.818	4.807	0.011	98	1043967	24.0	21.0	
24 Pentane	72	4.915	4.899	0.016	98	234577	8.00	7.63	
23 Isopropyl alcohol	45	4.920	4.906	0.014	97	4278764	24.0	22.3	
25 Ethyl ether	31	5.039	5.033	0.006	83	964411	8.00	7.31	
26 1,1-Dichloroethene	96	5.292	5.274	0.018	98	1337323	8.00	7.45	
27 Acrylonitrile	53	5.368	5.349	0.019	95	870731	8.00	7.78	
28 2-Methyl-2-propanol	59	5.400	5.393	0.007	93	2641518	8.00	7.79	
29 1,1,2-Trichloro-1,2,2-trif	101	5.459	5.446	0.013	97	2860127	8.00	7.41	
30 Methylene Chloride	84	5.573	5.552	0.021	88	1214064	8.00	6.62	
31 3-Chloro-1-propene	39	5.589	5.572	0.017	98	1096804	8.00	7.60	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.702	5.683	0.019	98	3728924	8.00	7.66	
33 trans-1,2-Dichloroethene	96	6.274	6.253	0.021	98	1412134	8.00	7.64	
34 Methyl tert-butyl ether	73	6.392	6.392	0.000	95	4095585	8.00	7.81	
36 1,1-Dichloroethane	63	6.629	6.609	0.020	100	2399193	8.00	7.34	
37 Vinyl acetate	43	6.737	6.727	0.010	99	2998874	8.00	8.43	
38 2-Butanone (MEK)	72	7.104	7.107	-0.003	98	648132	8.00	8.08	
39 Hexane	56	7.190	7.179	0.011	86	967848	8.00	7.55	
40 cis-1,2-Dichloroethene	96	7.508	7.492	0.016	92	1456970	8.00	7.72	
41 Ethyl acetate	43	7.686	7.688	-0.002	99	2476675	8.00	7.88	
42 Chloroform	83	7.827	7.811	0.016	97	3123300	8.00	7.34	
43 Tetrahydrofuran	42	8.172	8.178	-0.006	86	1176753	8.00	7.57	
44 1,1,1-Trichloroethane	97	8.781	8.769	0.012	95	3393282	8.00	7.66	
45 1,2-Dichloroethane	62	8.851	8.840	0.011	99	2085161	8.00	7.47	
47 Benzene	78	9.353	9.341	0.012	96	3909074	8.00	7.52	
48 Cyclohexane	69	9.369	9.362	0.007	94	608419	8.00	7.81	
46 n-Butanol	31	9.342	9.365	-0.023	66	369245	8.00	8.57	
50 Carbon tetrachloride	117	9.390	9.378	0.012	97	3498240	8.00	7.88	
52 Isooctane	57	10.210	10.206	0.004	98	5699452	8.00	7.68	
53 1,2-Dichloropropane	63	10.609	10.602	0.007	86	1342220	8.00	7.46	
54 n-Heptane	71	10.625	10.617	0.008	82	1381937	8.00	7.92	
55 Trichloroethene	130	10.674	10.667	0.007	97	1983769	8.00	7.92	
56 Dibromomethane	93	10.717	10.711	0.006	94	1685672	8.00	7.59	
57 Dichlorobromomethane	83	10.895	10.886	0.009	98	3280388	8.00	8.29	
58 1,4-Dioxane	88	10.900	10.912	-0.012	81	635939	8.00	7.94	
59 Methyl methacrylate	41	11.040	11.045	-0.005	98	1560531	8.00	8.88	
61 4-Methyl-2-pentanone (MIBK	43	11.925	11.931	-0.006	94	2547644	8.00	8.22	
62 cis-1,3-Dichloropropene	75	11.973	11.968	0.005	92	2495678	8.00	8.62	
63 trans-1,3-Dichloropropene	75	12.712	12.709	0.003	96	2418731	8.00	8.85	
64 Toluene	91	12.847	12.845	0.002	94	5000244	8.00	7.91	
65 1,1,2-Trichloroethane	83	12.906	12.904	0.002	98	1421474	8.00	7.82	
66 2-Hexanone	58	13.348	13.355	-0.007	97	1457582	8.00	9.11	
67 Chlorodibromomethane	129	13.634	13.628	0.006	97	3404955	8.00	9.09	
68 n-Octane	85	13.661	13.658	0.003	85	1619656	8.00	8.00	
69 Ethylene Dibromide	107	13.925	13.923	0.002	98	2777984	8.00	8.25	
70 Tetrachloroethene	129	14.049	14.048	0.001	97	1934461	8.00	7.81	
71 Chlorobenzene	112	14.955	14.952	0.003	94	3997886	8.00	7.54	
72 Ethylbenzene	91	15.279	15.278	0.001	98	6456253	8.00	7.80	
73 m-Xylene & p-Xylene	91	15.451	15.452	-0.001	0	9680607	16.0	15.2	
74 Bromoform	173	15.856	15.854	0.002	99	3245877	8.00	9.67	
75 Styrene	104	15.926	15.923	0.003	98	3870267	8.00	8.69	
76 n-Nonane	57	15.964	15.961	0.003	83	2584312	8.00	7.39	
77 o-Xylene	91	15.985	15.986	-0.001	98	5131084	8.00	7.56	
78 1,1,2,2-Tetrachloroethane	83	16.309	16.308	0.001	100	3446997	8.00	7.72	
79 1,2,3-Trichloropropane	110	16.465	16.464	0.001	97	1168938	8.00	7.46	
80 Isopropylbenzene	105	16.605	16.605	0.000	97	6996543	8.00	7.14	
81 N-Propylbenzene	120	17.182	17.182	0.000	98	2035261	8.00	7.75	
82 2-Chlorotoluene	126	17.204	17.203	0.001	97	1794004	8.00	7.38	
83 4-Ethyltoluene	105	17.350	17.351	-0.001	98	7418547	8.00	7.64	
84 1,3,5-Trimethylbenzene	120	17.436	17.436	0.000	93	3145506	8.00	7.90	
85 Alpha Methyl Styrene	118	17.689	17.691	-0.002	89	3163348	8.00	8.49	
86 n-Decane	57	17.829	17.826	0.003	94	3697959	8.00	7.51	
87 tert-Butylbenzene	119	17.905	17.906	-0.001	92	6958642	8.00	7.48	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.921	17.921	0.000	95	6104034	8.00	7.35	
89 1,3-Dichlorobenzene	146	18.191	18.189	0.002	99	4216783	8.00	7.45	
90 sec-Butylbenzene	105	18.207	18.206	0.001	99	8700337	8.00	7.30	
91 Benzyl chloride	91	18.272	18.273	-0.001	98	5648570	8.00	7.73	
92 1,4-Dichlorobenzene	146	18.288	18.287	0.001	94	4227916	8.00	7.40	
93 4-Isopropyltoluene	119	18.390	18.391	-0.001	96	8172682	8.00	7.64	
94 1,2,3-Trimethylbenzene	105	18.428	18.429	-0.001	98	6961070	8.00	7.49	
95 1,2-Dichlorobenzene	146	18.676	18.672	0.004	96	4093958	8.00	7.38	
98 n-Butylbenzene	91	18.865	18.865	0.000	99	7568750	8.00	7.74	
99 Undecane	57	19.258	19.259	-0.001	91	4523930	8.00	7.90	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	99	3591223	8.00	8.64	
101 1,2,4,5-Tetramethylbenzene	119	19.674	19.674	0.000	97	10496588	8.00	7.41	
104 Dodecane	57	20.369	20.366	0.003	96	4689410	8.00	8.17	
105 1,2,4-Trichlorobenzene	180	20.477	20.474	0.003	95	4331499	8.00	9.39	
106 Naphthalene	128	20.607	20.603	0.004	98	9478899	8.00	8.88	
107 Hexachlorobutadiene	225	20.860	20.859	0.001	96	4054563	8.00	8.54	
108 1,2,3-Trichlorobenzene	180	20.898	20.897	0.001	95	4075342	8.00	8.94	
109 2-Methylnaphthalene	142	21.707	21.702	0.005	99	6499587	18.4	23.2	
110 1-Methylnaphthalene	142	21.847	21.847	0.000	99	5249732	18.4	21.6	
S 111 Xylenes, Total	100				0		24.0	22.8	
S 112 1,2-Dichloroethene, Total	1				0		16.0	15.4	

Reagents:

40L8DNP_00015	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

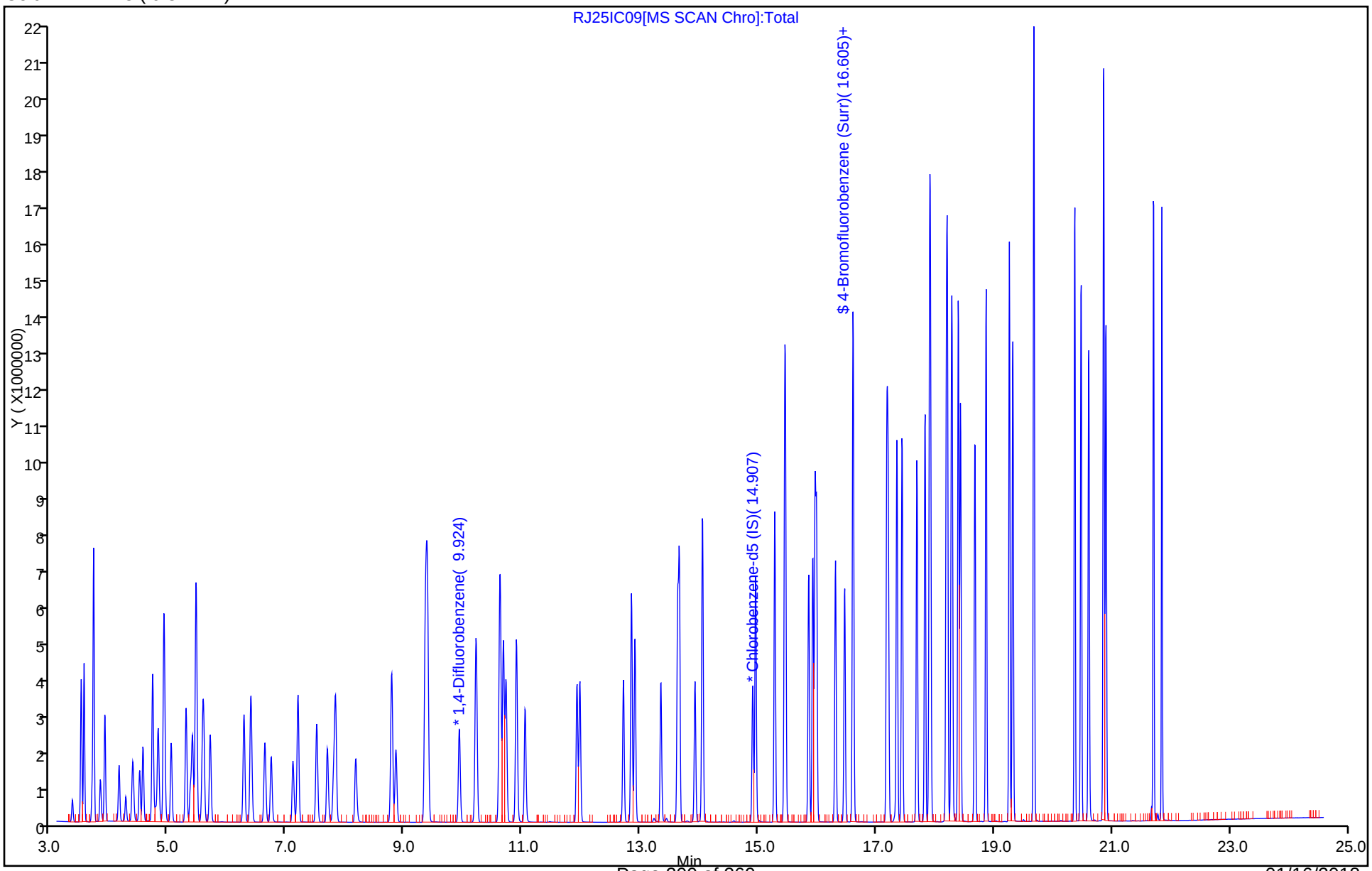
Report Date: 27-Oct-2017 11:56:20 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC09.D

Injection Date:	25-Oct-2017 19:18:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L9			Worklist Smp#:	11
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D
Lims ID: IC L10
Client ID:
Sample Type: IC Calib Level: 10
Inject. Date: 25-Oct-2017 20:06:30 ALS Bottle#: 8 Worklist Smp#: 12
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-012
Misc. Info.: 123602
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 11:56:23 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 26-Oct-2017 12:17:31

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.800	7.779	0.021	93	463451	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.930	9.918	0.012	94	2631400	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.907	14.903	0.004	86	2270324	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.616	16.610	0.006	95	1494682	4.00	3.59	
6 Chlorodifluoromethane	67	3.502	3.505	-0.003	96	803086	16.0	13.8	
7 Propene	41	3.507	3.509	-0.002	97	1695857	16.0	13.0	
8 Dichlorodifluoromethane	85	3.556	3.554	0.002	99	5963801	16.0	13.1	
9 Chloromethane	52	3.691	3.690	0.001	99	590896	16.0	13.6	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.718	3.713	0.005	91	4741073	16.0	14.3	
11 Vinyl chloride	62	3.831	3.827	0.004	99	1751141	16.0	13.3	
13 Butadiene	54	3.907	3.900	0.007	77	1162419	16.0	13.5	
12 Butane	43	3.907	3.904	0.003	80	1909389	16.0	13.2	
14 Bromomethane	94	4.149	4.140	0.009	99	1928308	16.0	14.3	
15 Chloroethane	64	4.262	4.254	0.008	98	831792	16.0	13.8	
16 Ethanol	31	4.392	4.368	0.024	94	2683051	80.0	63.4	
17 Vinyl bromide	106	4.500	4.488	0.012	98	1957010	16.0	13.9	
18 2-Methylbutane	43	4.554	4.546	0.008	83	1352243	16.0	13.7	
19 Acrolein	56	4.721	4.709	0.012	86	497887	16.0	13.3	
20 Trichlorofluoromethane	101	4.721	4.710	0.011	99	6022956	16.0	13.2	
21 Acetonitrile	40	4.775	4.770	0.005	97	496965	16.0	15.8	
22 Acetone	58	4.818	4.807	0.011	98	1999735	48.0	39.1	
24 Pentane	72	4.910	4.899	0.011	97	458645	16.0	14.5	
23 Isopropyl alcohol	45	4.926	4.906	0.020	98	7900031	48.0	40.0	
25 Ethyl ether	31	5.039	5.033	0.006	82	1911537	16.0	14.1	
26 1,1-Dichloroethene	96	5.287	5.274	0.013	99	2771817	16.0	15.0	
27 Acrylonitrile	53	5.368	5.349	0.019	94	1776662	16.0	15.4	
28 2-Methyl-2-propanol	59	5.406	5.393	0.013	93	5152924	16.0	14.8	
29 1,1,2-Trichloro-1,2,2-trif	101	5.460	5.446	0.014	96	5674605	16.0	14.3	
30 Methylene Chloride	84	5.573	5.552	0.021	87	2447809	16.0	13.0	
31 3-Chloro-1-propene	39	5.589	5.572	0.017	97	2172614	16.0	14.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.697	5.683	0.014	98	7538407	16.0	15.1	
33 trans-1,2-Dichloroethene	96	6.274	6.253	0.021	97	2897432	16.0	15.2	
34 Methyl tert-butyl ether	73	6.392	6.392	0.000	95	8173520	16.0	15.2	
36 1,1-Dichloroethane	63	6.630	6.609	0.021	100	4822750	16.0	14.3	
37 Vinyl acetate	43	6.738	6.727	0.011	99	6118655	16.0	16.7	
38 2-Butanone (MEK)	72	7.110	7.107	0.003	98	1326766	16.0	16.1	
39 Hexane	56	7.190	7.179	0.011	85	1914109	16.0	14.5	
40 cis-1,2-Dichloroethene	96	7.509	7.492	0.017	92	2990205	16.0	15.4	
41 Ethyl acetate	43	7.692	7.688	0.004	99	4979960	16.0	15.4	
42 Chloroform	83	7.827	7.811	0.016	97	6252680	16.0	14.3	
43 Tetrahydrofuran	42	8.172	8.178	-0.006	85	2361471	16.0	14.8	
44 1,1,1-Trichloroethane	97	8.781	8.769	0.012	95	6808210	16.0	14.9	
45 1,2-Dichloroethane	62	8.851	8.840	0.011	99	4238188	16.0	14.9	
47 Benzene	78	9.353	9.341	0.012	96	7444515	16.0	14.1	
48 Cyclohexane	69	9.374	9.362	0.012	92	1155065	16.0	14.6	
46 n-Butanol	31	9.342	9.365	-0.023	64	690517	16.0	15.8	
50 Carbon tetrachloride	117	9.391	9.378	0.013	97	6918118	16.0	15.4	
52 Isooctane	57	10.216	10.206	0.010	98	10894189	16.0	14.5	
53 1,2-Dichloropropane	63	10.609	10.602	0.007	86	2579606	16.0	14.1	
54 n-Heptane	71	10.625	10.617	0.008	81	2653569	16.0	15.0	
55 Trichloroethene	130	10.679	10.667	0.012	97	4015133	16.0	15.8	
56 Dibromomethane	93	10.722	10.711	0.011	93	3407808	16.0	15.1	
57 Dichlorobromomethane	83	10.895	10.886	0.009	99	6527638	16.0	16.3	
58 1,4-Dioxane	88	10.906	10.912	-0.006	82	1204443	16.0	14.8	
59 Methyl methacrylate	41	11.046	11.045	0.001	96	3144744	16.0	17.6	
61 4-Methyl-2-pentanone (MIBK	43	11.925	11.931	-0.006	93	4956312	16.0	15.8	
62 cis-1,3-Dichloropropene	75	11.974	11.968	0.006	91	5036601	16.0	17.1	
63 trans-1,3-Dichloropropene	75	12.712	12.709	0.003	96	4954997	16.0	18.0	
64 Toluene	91	12.852	12.845	0.007	95	9732782	16.0	15.3	
65 1,1,2-Trichloroethane	83	12.912	12.904	0.008	98	2818197	16.0	15.4	
66 2-Hexanone	58	13.349	13.355	-0.006	98	2849200	16.0	17.7	
67 Chlorodibromomethane	129	13.634	13.628	0.006	97	6733481	16.0	17.9	
68 n-Octane	85	13.661	13.658	0.003	82	3115693	16.0	15.3	
69 Ethylene Dibromide	107	13.931	13.923	0.008	99	5559926	16.0	16.4	
70 Tetrachloroethene	129	14.055	14.048	0.007	98	3841103	16.0	15.4	
71 Chlorobenzene	112	14.955	14.952	0.003	94	7825995	16.0	14.7	
72 Ethylbenzene	91	15.279	15.278	0.001	98	12015013	16.0	14.4	
73 m-Xylene & p-Xylene	91	15.457	15.452	0.005	0	17160895	32.0	26.9	
74 Bromoform	173	15.856	15.854	0.002	97	6558869	16.0	19.4	
75 Styrene	104	15.926	15.923	0.003	98	7560228	16.0	16.9	
76 n-Nonane	57	15.964	15.961	0.003	81	4652330	16.0	13.2	
77 o-Xylene	91	15.991	15.986	0.005	99	9535161	16.0	14.0	
78 1,1,2,2-Tetrachloroethane	83	16.309	16.308	0.001	99	6530374	16.0	14.6	
79 1,2,3-Trichloropropane	110	16.465	16.464	0.001	96	2302436	16.0	14.6	
80 Isopropylbenzene	105	16.606	16.605	0.001	97	12663589	16.0	12.9	
81 N-Propylbenzene	120	17.183	17.182	0.001	98	3819742	16.0	14.5	
82 2-Chlorotoluene	126	17.204	17.203	0.001	95	3423413	16.0	14.0	
83 4-Ethyltoluene	105	17.355	17.351	0.004	97	13244430	16.0	13.6	
84 1,3,5-Trimethylbenzene	120	17.441	17.436	0.005	94	5947640	16.0	14.9	
85 Alpha Methyl Styrene	118	17.695	17.691	0.004	89	6018724	16.0	16.1	
86 n-Decane	57	17.830	17.826	0.004	94	6320845	16.0	12.8	
87 tert-Butylbenzene	119	17.911	17.906	0.004	92	12330820	16.0	13.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.927	17.921	0.006	95	10587367	16.0	12.7	
89 1,3-Dichlorobenzene	146	18.191	18.189	0.002	99	7759848	16.0	13.6	
90 sec-Butylbenzene	105	18.212	18.206	0.006	98	14464983	16.0	12.1	
91 Benzyl chloride	91	18.277	18.273	0.004	99	9882812	16.0	13.5	
92 1,4-Dichlorobenzene	146	18.293	18.287	0.006	93	7788742	16.0	13.6	
93 4-Isopropyltoluene	119	18.396	18.391	0.005	94	13583476	16.0	12.6	
94 1,2,3-Trimethylbenzene	105	18.434	18.429	0.005	97	12212729	16.0	13.1	
95 1,2-Dichlorobenzene	146	18.676	18.672	0.004	94	7481468	16.0	13.4	
98 n-Butylbenzene	91	18.865	18.865	0.000	98	12271794	16.0	12.5	
99 Undecane	57	19.259	19.259	0.000	88	7559425	16.0	13.1	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	98	6432249	16.0	15.4	
104 Dodecane	57	20.369	20.366	0.003	93	7775809	16.0	13.5	
105 1,2,4-Trichlorobenzene	180	20.477	20.474	0.003	95	8252878	16.0	17.8	
107 Hexachlorobutadiene	225	20.860	20.859	0.001	96	7676608	16.0	16.1	
108 1,2,3-Trichlorobenzene	180	20.898	20.897	0.001	95	8089214	16.0	17.7	
109 2-Methylnaphthalene	142	21.707	21.702	0.005	98	11773396	36.8	41.8	e
110 1-Methylnaphthalene	142	21.847	21.847	0.000	97	9724344	36.8	39.7	
S 111 Xylenes, Total	100				0		48.0	40.9	
S 112 1,2-Dichloroethene, Total	1				0		32.0	30.6	

QC Flag Legend

Processing Flags

e - Potential Peak Saturated

Reagents:

40L9DNP_00018	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

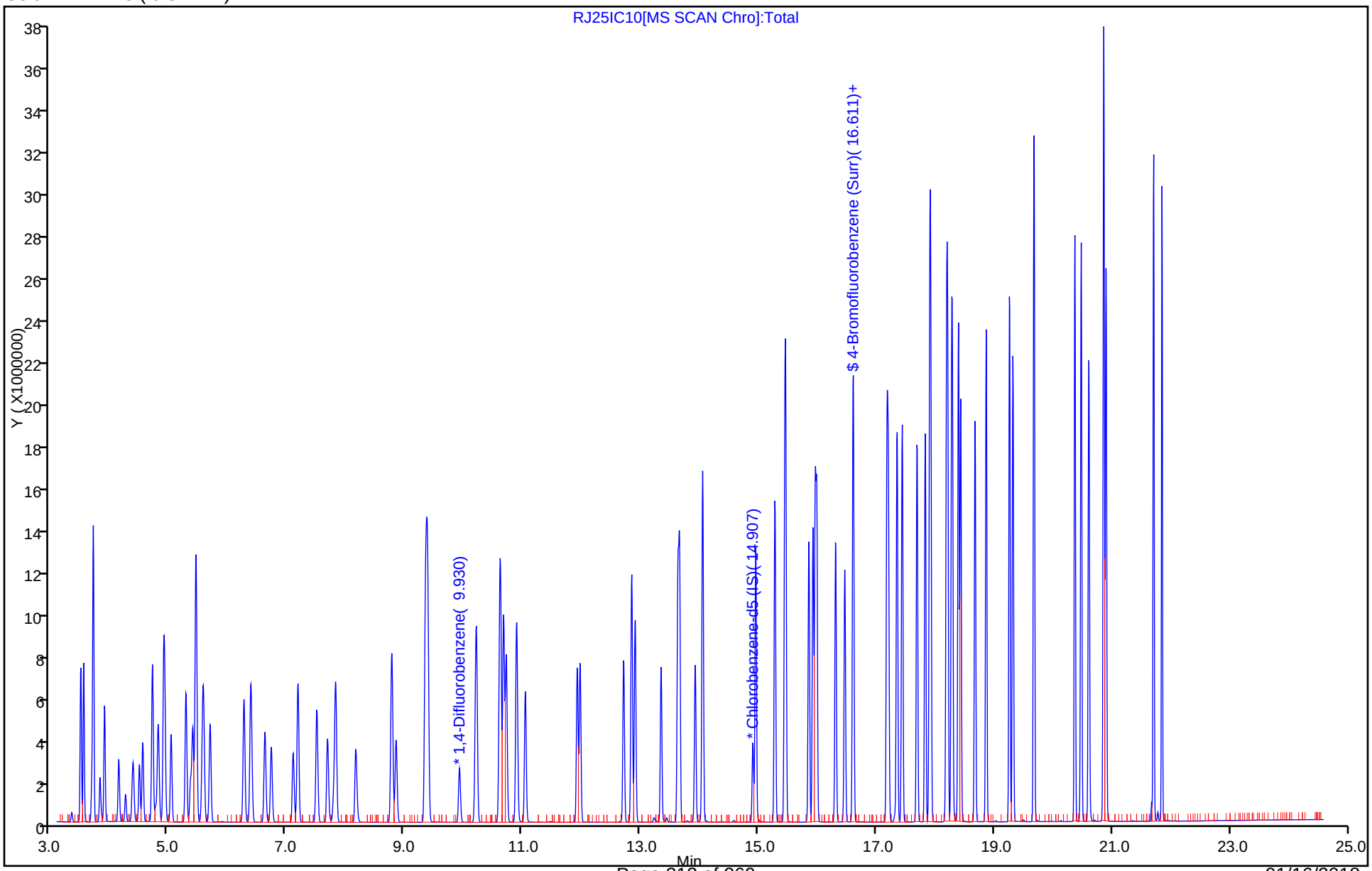
Report Date: 27-Oct-2017 11:56:24 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Injection Date:	25-Oct-2017 20:06:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L10			Worklist Smp#:	12
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1

SDG No.:

Lab Sample ID: ICV 140-15542/14 Calibration Date: 10/25/2017 21:40

Instrument ID: MR Calib Start Date: 10/25/2017 13:00

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/25/2017 20:06

Lab File ID: RJ25ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.5024	0.4937		1.97	2.00	-1.7	35.0
Propene	Ave	1.126	1.072		1.91	2.00	-4.7	35.0
Dichlorodifluoromethane	Ave	3.921	4.337		2.21	2.00	10.6	35.0
Chloromethane	Ave	0.3761	0.3556		1.89	2.00	-5.4	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.869	3.034		2.12	2.00	5.8	35.0
Vinyl chloride	Ave	1.136	1.115		1.96	2.00	-1.9	35.0
1,3-Butadiene	Ave	0.7416	0.7346		1.98	2.00	-1.0	35.0
Butane	Ave	1.249	1.270		2.03	2.00	1.6	35.0
Bromomethane	Ave	1.163	1.161		2.00	2.00	-0.2	35.0
Chloroethane	Ave	0.5221	0.5167		1.98	2.00	-1.0	35.0
Ethanol	Ave	0.3654	0.3418		9.35	10.0	-6.5	35.0
Vinyl bromide	Ave	1.211	1.259		2.08	2.00	4.0	35.0
2-Methylbutane	Ave	0.8530	0.8925		2.09	2.00	4.6	35.0
Acrolein	Ave	0.3243	0.3377		2.08	2.00	4.1	35.0
Trichlorofluoromethane	Ave	3.937	3.974		2.02	2.00	0.9	35.0
Acetonitrile	Ave	0.2722	0.2698		1.98	2.00	-0.9	35.0
Acetone	Ave	0.4409	0.4235		5.76	6.00	-4.0	35.0
Isopropyl alcohol	Ave	1.706	1.717		6.04	6.00	0.7	35.0
Pentane	Ave	0.2731	0.3034		2.22	2.00	11.1	35.0
Ethyl ether	Ave	1.171	1.204		2.06	2.00	2.8	35.0
1,1-Dichloroethene	Ave	1.594	1.652		2.07	2.00	3.7	35.0
Acrylonitrile	Ave	0.9935	1.076		2.17	2.00	8.3	35.0
tert-Butyl alcohol	Ave	3.009	3.177		2.11	2.00	5.6	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.426	3.609		2.11	2.00	5.3	35.0
Methylene Chloride	Ave	1.629	1.559		1.91	2.00	-4.3	35.0
3-Chloropropene	Ave	1.281	1.296		2.02	2.00	1.2	35.0
Carbon disulfide	Ave	4.321	4.473		2.07	2.00	3.5	35.0
trans-1,2-Dichloroethene	Ave	1.640	1.693		2.06	2.00	3.2	35.0
Methyl tert-butyl ether	Ave	4.654	5.005		2.15	2.00	7.6	35.0
1,1-Dichloroethane	Ave	2.901	2.966		2.04	2.00	2.2	35.0
Vinyl acetate	Ave	3.158	3.512		2.22	2.00	11.2	35.0
2-Butanone (MEK)	Ave	0.7119	0.7566		2.13	2.00	6.3	35.0
Hexane	Ave	1.139	1.188		2.09	2.00	4.3	35.0
cis-1,2-Dichloroethene	Ave	1.676	1.787		2.13	2.00	6.6	35.0
Ethyl acetate	Ave	2.792	2.766		1.98	2.00	-0.9	35.0
Chloroform	Ave	3.778	3.815		2.02	2.00	1.0	35.0
Tetrahydrofuran	Ave	1.380	1.400		2.03	2.00	1.4	35.0
1,1,1-Trichloroethane	Ave	3.935	4.084		2.08	2.00	3.8	35.0
1,2-Dichloroethane	Ave	0.4310	0.4469		2.07	2.00	3.7	35.0
1-Butanol	Ave	0.0665	0.0711		2.14	2.00	6.9	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1

SDG No.:

Lab Sample ID: ICV 140-15542/14 Calibration Date: 10/25/2017 21:40

Instrument ID: MR Calib Start Date: 10/25/2017 13:00

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/25/2017 20:06

Lab File ID: RJ25ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzene	Ave	0.8022	0.8707		2.17	2.00	8.5	35.0
Cyclohexane	Ave	0.1203	0.1349		2.24	2.00	12.1	35.0
Carbon tetrachloride	Ave	0.6847	0.7570		2.21	2.00	10.6	35.0
2,2,4-Trimethylpentane	Ave	1.145	1.245		2.18	2.00	8.8	35.0
1,2-Dichloropropane	Ave	0.2775	0.2923		2.11	2.00	5.3	35.0
Heptane	Ave	0.2692	0.2970		2.21	2.00	10.3	35.0
Trichloroethene	Ave	0.3866	0.4296		2.22	2.00	11.1	35.0
Dibromomethane	Ave	0.3429	0.3605		2.10	2.00	5.2	35.0
Bromodichloromethane	Ave	0.6106	0.6771		2.22	2.00	10.9	35.0
1,4-Dioxane	Ave	0.1235	0.1303		2.11	2.00	5.5	35.0
Methyl methacrylate	Ave	0.2712	0.3023		2.23	2.00	11.5	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4780	0.5199		2.18	2.00	8.8	35.0
cis-1,3-Dichloropropene	Ave	0.4468	0.5272		2.36	2.00	18.0	35.0
trans-1,3-Dichloropropene	Ave	0.4839	0.5824		2.41	2.00	20.3	35.0
Toluene	Ave	1.120	1.274		2.28	2.00	13.8	35.0
1,1,2-Trichloroethane	Ave	0.3219	0.3526		2.19	2.00	9.5	35.0
2-Hexanone	Ave	0.2834	0.3423		2.42	2.00	20.8	35.0
Dibromochloromethane	Ave	0.6633	0.8095		2.44	2.00	22.0	35.0
Octane	Ave	0.3585	0.4196		2.34	2.00	17.0	35.0
1,2-Dibromoethane (EDB)	Ave	0.5963	0.6724		2.26	2.00	12.8	35.0
Tetrachloroethene	Ave	0.4387	0.4921		2.24	2.00	12.2	35.0
Chlorobenzene	Ave	0.9392	1.039		2.21	2.00	10.6	35.0
Ethylbenzene	Ave	1.466	1.674		2.29	2.00	14.3	35.0
m-Xylene & p-Xylene	Ave	1.124	1.318		4.69	4.00	17.2	35.0
Bromoform	Ave	0.5943	0.7337		2.47	2.00	23.5	35.0
Styrene	Ave	0.7883	0.9806		2.49	2.00	24.4	35.0
Nonane	Ave	0.6196	0.7116		2.30	2.00	14.8	35.0
o-Xylene	Ave	1.201	1.334		2.22	2.00	11.1	35.0
1,1,2,2-Tetrachloroethane	Ave	0.7903	0.8918		2.26	2.00	12.8	35.0
1,2,3-Trichloropropane	Ave	0.2776	0.3071		2.21	2.00	10.6	35.0
Isopropylbenzene	Ave	1.734	1.949		2.25	2.00	12.4	35.0
Propylbenzene	Ave	0.4649	0.5737		2.47	2.00	23.4	35.0
2-Chlorotoluene	Ave	0.4305	0.5036		2.34	2.00	17.0	35.0
4-Ethyltoluene	Ave	1.720	2.009		2.34	2.00	16.8	35.0
1,3,5-Trimethylbenzene	Ave	0.7048	0.8695		2.47	2.00	23.4	35.0
Alpha Methyl Styrene	Ave	0.6597	0.8303		2.52	2.00	25.9	35.0
Decane	Ave	0.8720	1.042		2.39	2.00	19.5	35.0
tert-Butylbenzene	Ave	1.647	1.983		2.41	2.00	20.4	35.0
1,2,4-Trimethylbenzene	Ave	1.470	1.794		2.44	2.00	22.0	35.0
1,3-Dichlorobenzene	Ave	1.002	1.207		2.41	2.00	20.4	35.0
sec-Butylbenzene	Ave	2.109	2.605		2.47	2.00	23.5	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1

SDG No.:

Lab Sample ID: ICV 140-15542/14 Calibration Date: 10/25/2017 21:40

Instrument ID: MR Calib Start Date: 10/25/2017 13:00

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/25/2017 20:06

Lab File ID: RJ25ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzyl chloride	Ave	1.294	1.591		2.46	2.00	23.0	35.0
1,4-Dichlorobenzene	Ave	1.012	1.203		2.38	2.00	18.9	35.0
4-Isopropyltoluene	Ave	1.894	2.367		2.50	2.00	25.0	35.0
1,2,3-Trimethylbenzene	Ave	1.645	1.832		2.23	2.00	11.3	35.0
1,2-Dichlorobenzene	Ave	0.9822	1.171		2.38	2.00	19.2	35.0
Butylbenzene	Ave	1.731	2.150		2.48	2.00	24.2	35.0
Undecane	Ave	1.014	1.195		2.36	2.00	17.8	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.7356	0.5132		1.40	2.00	-30.2	35.0
1,2,4,5-Tetramethylbenzene	Ave	2.508	2.188		1.74	2.00	-12.8	35.0
Dodecane	Ave	1.016	1.155		2.27	2.00	13.7	35.0
1,2,4-Trichlorobenzene	Ave	0.8170	0.9785		2.40	2.00	19.8	35.0
Naphthalene	Ave	1.890	2.219		2.35	2.00	17.4	35.0
Hexachlorobutadiene	Ave	0.8407	0.9267		2.20	2.00	10.2	35.0
1,2,3-Trichlorobenzene	Ave	0.8074	0.9215		2.28	2.00	14.1	35.0
2-Methylnaphthalene	Ave	0.4957	0.2665		2.47	4.59	-46.2	50.0
1-Methylnaphthalene	Ave	0.4312	0.2477		2.64	4.60	-42.6	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7330	0.7231		3.95	4.00	-1.3	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25ICV.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 25-Oct-2017 21:40:30 ALS Bottle#: 9 Worklist Smp#: 14
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006453-014
Misc. Info.: 123596
Operator ID: Instrument ID: MR
Sublist:

Method: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Oct-2017 14:02:36 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: liul Date: 27-Oct-2017 14:02:36

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.789	7.779	0.010	83	425799	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.924	9.918	0.006	94	2437587	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.907	14.903	0.004	86	2075967	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.611	16.610	0.001	94	1501202	4.00	3.95	
6 Chlorodifluoromethane	67	3.513	3.505	0.008	96	105098	2.00	1.97	
7 Propene	41	3.518	3.509	0.009	98	228332	2.00	1.91	
8 Dichlorodifluoromethane	85	3.561	3.554	0.007	100	923412	2.00	2.21	
9 Chloromethane	52	3.702	3.690	0.012	100	75707	2.00	1.89	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.723	3.713	0.010	93	645990	2.00	2.12	
11 Vinyl chloride	62	3.836	3.827	0.009	99	237402	2.00	1.96	
13 Butadiene	54	3.912	3.900	0.012	95	156385	2.00	1.98	
12 Butane	43	3.912	3.904	0.008	90	270321	2.00	2.03	
14 Bromomethane	94	4.149	4.140	0.009	98	247179	2.00	2.00	
15 Chloroethane	64	4.268	4.254	0.014	98	109999	2.00	1.98	
16 Ethanol	31	4.376	4.368	0.008	95	363822	10.0	9.35	
17 Vinyl bromide	106	4.500	4.488	0.012	98	268094	2.00	2.08	
18 2-Methylbutane	43	4.559	4.546	0.013	84	190003	2.00	2.09	
19 Acrolein	56	4.721	4.709	0.012	31	71895	2.00	2.08	
20 Trichlorofluoromethane	101	4.721	4.710	0.011	99	846071	2.00	2.02	
21 Acetonitrile	40	4.769	4.770	-0.001	93	57440	2.00	1.98	
22 Acetone	58	4.812	4.807	0.005	98	270478	6.00	5.76	
24 Pentane	72	4.910	4.899	0.011	74	64589	2.00	2.22	
23 Isopropyl alcohol	45	4.910	4.906	0.004	81	1096926	6.00	6.04	
25 Ethyl ether	31	5.039	5.033	0.006	84	256412	2.00	2.06	
26 1,1-Dichloroethene	96	5.287	5.274	0.013	98	351693	2.00	2.07	
27 Acrylonitrile	53	5.357	5.349	0.008	94	229018	2.00	2.17	
28 2-Methyl-2-propanol	59	5.389	5.393	-0.004	93	676352	2.00	2.11	
29 1,1,2-Trichloro-1,2,2-trif	101	5.460	5.446	0.014	97	768313	2.00	2.11	
30 Methylene Chloride	84	5.567	5.552	0.015	88	331870	2.00	1.91	
31 3-Chloro-1-propene	39	5.584	5.572	0.012	98	275975	2.00	2.02	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 Carbon disulfide	76	5.697	5.683	0.014	98	952380	2.00	2.07	
33 trans-1,2-Dichloroethene	96	6.268	6.253	0.015	98	360482	2.00	2.06	
34 Methyl tert-butyl ether	73	6.392	6.392	0.000	95	1065614	2.00	2.15	
36 1,1-Dichloroethane	63	6.624	6.609	0.015	100	631412	2.00	2.04	
37 Vinyl acetate	43	6.732	6.727	0.005	99	747694	2.00	2.22	
38 2-Butanone (MEK)	72	7.104	7.107	-0.003	98	161074	2.00	2.13	
39 Hexane	56	7.191	7.179	0.011	86	252826	2.00	2.09	
40 cis-1,2-Dichloroethene	96	7.503	7.492	0.011	92	380495	2.00	2.13	
41 Ethyl acetate	43	7.687	7.688	-0.001	99	588852	2.00	1.98	
42 Chloroform	83	7.821	7.811	0.010	96	812263	2.00	2.02	
43 Tetrahydrofuran	42	8.172	8.178	-0.006	86	298009	2.00	2.03	
44 1,1,1-Trichloroethane	97	8.776	8.769	0.007	95	869460	2.00	2.08	
45 1,2-Dichloroethane	62	8.851	8.840	0.011	99	544654	2.00	2.07	
47 Benzene	78	9.347	9.341	0.006	96	1061203	2.00	2.17	
48 Cyclohexane	69	9.369	9.362	0.007	96	164393	2.00	2.24	
46 n-Butanol	31	9.347	9.365	-0.018	60	86652	2.00	2.14	
50 Carbon tetrachloride	117	9.385	9.378	0.007	96	922634	2.00	2.21	
52 Isooctane	57	10.210	10.206	0.004	98	1517905	2.00	2.18	
53 1,2-Dichloropropane	63	10.604	10.602	0.002	87	356206	2.00	2.11	
54 n-Heptane	71	10.620	10.617	0.003	83	362014	2.00	2.21	
55 Trichloroethene	130	10.674	10.667	0.007	97	523627	2.00	2.22	
56 Dibromomethane	93	10.717	10.711	0.006	94	439427	2.00	2.10	
57 Dichlorobromomethane	83	10.890	10.886	0.004	98	825211	2.00	2.22	
58 1,4-Dioxane	88	10.906	10.912	-0.006	82	158829	2.00	2.11	
59 Methyl methacrylate	41	11.041	11.045	-0.004	98	368468	2.00	2.23	
61 4-Methyl-2-pentanone (MIBK	43	11.925	11.931	-0.006	94	633670	2.00	2.18	
62 cis-1,3-Dichloropropene	75	11.974	11.968	0.006	91	642513	2.00	2.36	
63 trans-1,3-Dichloropropene	75	12.712	12.709	0.003	96	604527	2.00	2.41	
64 Toluene	91	12.847	12.845	0.002	94	1322493	2.00	2.28	
65 1,1,2-Trichloroethane	83	12.906	12.904	0.002	98	365978	2.00	2.19	
66 2-Hexanone	58	13.349	13.355	-0.006	97	355289	2.00	2.42	
67 Chlorodibromomethane	129	13.629	13.628	0.001	98	840212	2.00	2.44	
68 n-Octane	85	13.661	13.658	0.003	86	435481	2.00	2.34	
69 Ethylene Dibromide	107	13.926	13.923	0.003	99	697922	2.00	2.26	
70 Tetrachloroethene	129	14.050	14.048	0.002	97	510757	2.00	2.24	
71 Chlorobenzene	112	14.956	14.952	0.004	95	1078454	2.00	2.21	
72 Ethylbenzene	91	15.279	15.278	0.001	98	1738067	2.00	2.29	
73 m-Xylene & p-Xylene	91	15.452	15.452	0.000	0	2736075	4.00	4.69	
74 Bromoform	173	15.856	15.854	0.002	97	761612	2.00	2.47	
75 Styrene	104	15.921	15.923	-0.002	97	1017828	2.00	2.49	
76 n-Nonane	57	15.964	15.961	0.003	84	738650	2.00	2.30	
77 o-Xylene	91	15.985	15.986	-0.001	98	1384915	2.00	2.22	
78 1,1,2,2-Tetrachloroethane	83	16.309	16.308	0.001	100	925712	2.00	2.26	
79 1,2,3-Trichloropropane	110	16.465	16.464	0.001	97	318763	2.00	2.21	
80 Isopropylbenzene	105	16.606	16.605	0.001	96	2023051	2.00	2.25	
81 N-Propylbenzene	120	17.183	17.182	0.001	99	595507	2.00	2.47	
82 2-Chlorotoluene	126	17.204	17.203	0.001	95	522694	2.00	2.34	
83 4-Ethyltoluene	105	17.350	17.351	-0.001	99	2085318	2.00	2.34	
84 1,3,5-Trimethylbenzene	120	17.436	17.436	0.000	93	902524	2.00	2.47	
85 Alpha Methyl Styrene	118	17.689	17.691	-0.002	89	861835	2.00	2.52	
86 n-Decane	57	17.824	17.826	-0.002	93	1081688	2.00	2.39	
87 tert-Butylbenzene	119	17.905	17.906	-0.001	93	2057995	2.00	2.41	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 1,2,4-Trimethylbenzene	105	17.921	17.921	0.000	96	1862380	2.00	2.44	
89 1,3-Dichlorobenzene	146	18.191	18.189	0.002	98	1252673	2.00	2.41	
90 sec-Butylbenzene	105	18.207	18.206	0.001	98	2704036	2.00	2.47	
91 Benzyl chloride	91	18.272	18.273	-0.001	98	1651585	2.00	2.46	
92 1,4-Dichlorobenzene	146	18.288	18.287	0.001	95	1248974	2.00	2.38	
93 4-Isopropyltoluene	119	18.390	18.391	-0.001	97	2457226	2.00	2.50	
94 1,2,3-Trimethylbenzene	105	18.428	18.429	-0.001	99	1901252	2.00	2.23	
95 1,2-Dichlorobenzene	146	18.671	18.672	-0.001	95	1215165	2.00	2.38	
98 n-Butylbenzene	91	18.865	18.865	0.000	98	2231747	2.00	2.48	
99 Undecane	57	19.259	19.259	0.000	92	1240507	2.00	2.36	
100 1,2-Dibromo-3-Chloropropan	157	19.318	19.318	0.000	99	532660	2.00	1.40	
101 1,2,4,5-Tetramethylbenzene	119	19.674	19.674	0.000	97	2270927	2.00	1.74	
104 Dodecane	57	20.364	20.366	-0.002	98	1199296	2.00	2.27	
105 1,2,4-Trichlorobenzene	180	20.472	20.474	-0.002	94	1015706	2.00	2.40	
106 Naphthalene	128	20.601	20.603	-0.002	99	2302961	2.00	2.35	
107 Hexachlorobutadiene	225	20.855	20.859	-0.004	96	961869	2.00	2.20	
108 1,2,3-Trichlorobenzene	180	20.893	20.897	-0.004	96	956513	2.00	2.28	
109 2-Methylnaphthalene	142	21.701	21.702	-0.001	100	634900	4.59	2.47	
110 1-Methylnaphthalene	142	21.847	21.847	0.000	100	591277	4.60	2.64	
S 111 Xylenes, Total	100				0		6.00	6.91	
S 112 1,2-Dichloroethene, Total	1				0		4.00	4.20	

Reagents:

40CV101S_00051	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

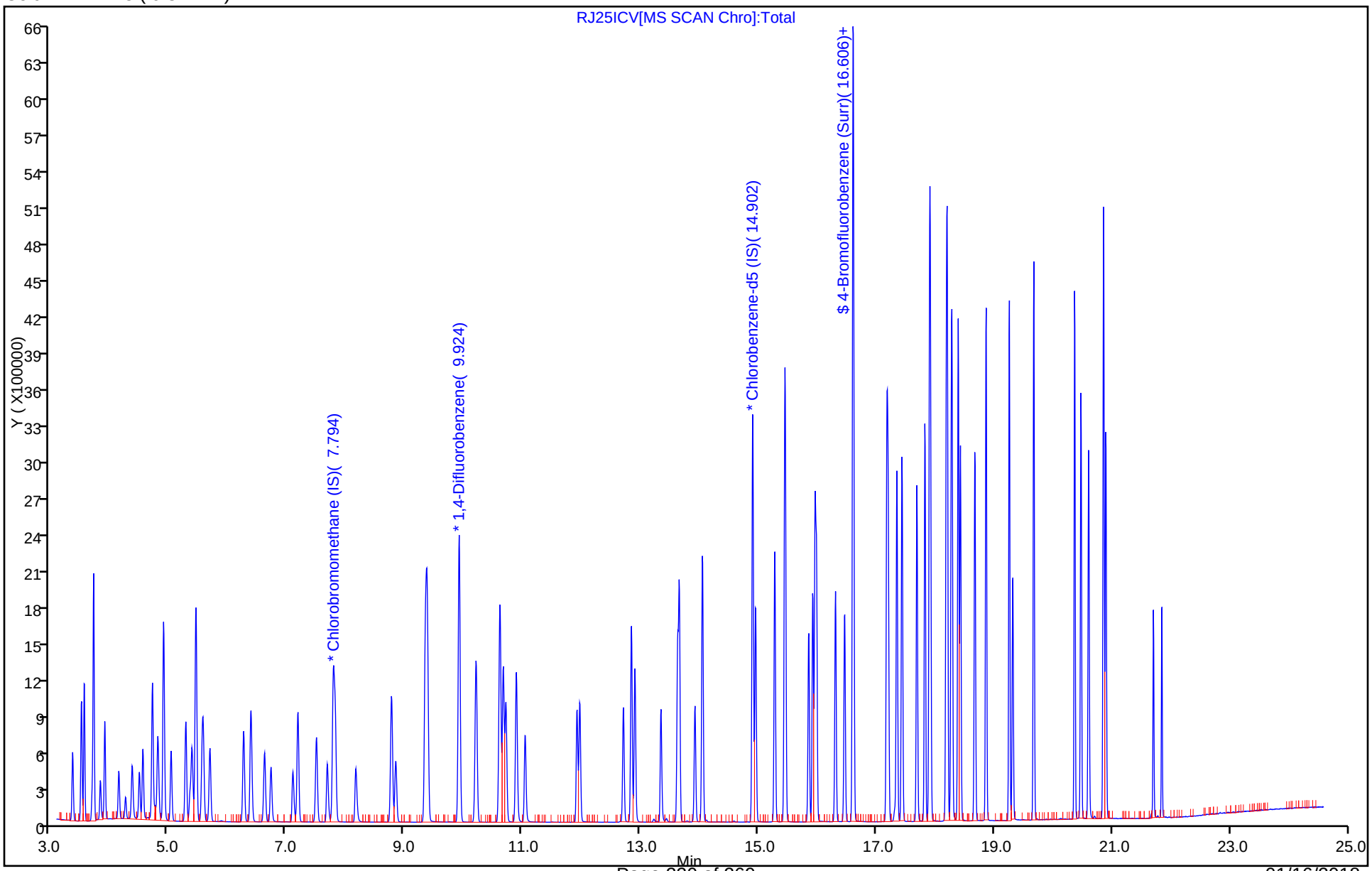
Report Date: 27-Oct-2017 14:02:44 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25ICV.D

Injection Date:	25-Oct-2017 21:40:30	Instrument ID:	MR	Operator ID:	
Lims ID:	ICV			Worklist Smp#:	14
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1

SDG No.:

Lab Sample ID: CCVIS 140-17352/2 Calibration Date: 01/11/2018 10:53

Instrument ID: MR Calib Start Date: 10/25/2017 13:00

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/25/2017 20:06

Lab File ID: RCCVA11.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.5024	0.5722		2.28	2.00	13.9	30.0
Propene	Ave	1.126	0.7799		1.39	2.00	-30.7*	30.0
Dichlorodifluoromethane	Ave	3.921	4.929		2.51	2.00	25.7	30.0
Chloromethane	Ave	0.3761	0.2969		1.58	2.00	-21.1	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.869	3.226		2.25	2.00	12.4	30.0
Vinyl chloride	Ave	1.136	1.024		1.80	2.00	-9.9	30.0
1,3-Butadiene	Ave	0.7416	0.6701		1.81	2.00	-9.7	30.0
Butane	Ave	1.249	1.076		1.72	2.00	-13.9	30.0
Bromomethane	Ave	1.163	1.222		2.10	2.00	5.1	30.0
Chloroethane	Ave	0.5221	0.4994		1.91	2.00	-4.3	30.0
Ethanol	Ave	0.3654	0.2574		7.04	10.0	-29.6	30.0
Vinyl bromide	Ave	1.211	1.253		2.07	2.00	3.4	30.0
2-Methylbutane	Ave	0.8530	0.7525		1.76	2.00	-11.8	30.0
Acrolein	Ave	0.3243	0.2589		1.60	2.00	-20.2	30.0
Trichlorofluoromethane	Ave	3.937	4.917		2.50	2.00	24.9	30.0
Acetonitrile	Ave	0.2722	0.2255		1.66	2.00	-17.2	30.0
Acetone	Ave	0.4409	0.3991		5.43	6.00	-9.5	30.0
Isopropyl alcohol	Ave	1.706	1.165		4.10	6.00	-31.7*	30.0
Pentane	Ave	0.2731	0.2315		1.70	2.00	-15.2	30.0
Ethyl ether	Ave	1.171	0.6862		1.17	2.00	-41.4*	30.0
1,1-Dichloroethene	Ave	1.594	1.518		1.91	2.00	-4.7	30.0
Acrylonitrile	Ave	0.9935	0.7336		1.48	2.00	-26.2	30.0
tert-Butyl alcohol	Ave	3.009	2.519		1.67	2.00	-16.3	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.426	3.531		2.06	2.00	3.1	30.0
Methylene Chloride	Ave	1.629	1.332		1.64	2.00	-18.2	30.0
3-Chloropropene	Ave	1.281	1.110		1.73	2.00	-13.4	30.0
Carbon disulfide	Ave	4.321	3.796		1.76	2.00	-12.1	30.0
trans-1,2-Dichloroethene	Ave	1.640	1.503		1.83	2.00	-8.4	30.0
Methyl tert-butyl ether	Ave	4.654	4.291		1.84	2.00	-7.8	30.0
1,1-Dichloroethane	Ave	2.901	2.350		1.62	2.00	-19.0	30.0
Vinyl acetate	Ave	3.158	2.261		1.43	2.00	-28.4	30.0
2-Butanone (MEK)	Ave	0.7119	0.5496		1.54	2.00	-22.8	30.0
Hexane	Ave	1.139	0.8951		1.57	2.00	-21.4	30.0
cis-1,2-Dichloroethene	Ave	1.676	1.521		1.81	2.00	-9.3	30.0
Ethyl acetate	Ave	2.792	1.865		1.34	2.00	-33.2*	30.0
Chloroform	Ave	3.778	3.557		1.88	2.00	-5.9	30.0
Tetrahydrofuran	Ave	1.380	0.8339		1.21	2.00	-39.6*	30.0
1,1,1-Trichloroethane	Ave	3.935	4.082		2.08	2.00	3.8	30.0
1,2-Dichloroethane	Ave	0.4310	0.4344		2.02	2.00	0.8	30.0
Benzene	Ave	0.8022	0.6865		1.71	2.00	-14.4	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1

SDG No.:

Lab Sample ID: CCVIS 140-17352/2 Calibration Date: 01/11/2018 10:53

Instrument ID: MR Calib Start Date: 10/25/2017 13:00

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/25/2017 20:06

Lab File ID: RCCVA11.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1-Butanol	Ave	0.0665	0.0334		1.01	2.00	-49.7*	30.0
Cyclohexane	Ave	0.1203	0.1107		1.84	2.00	-8.0	30.0
Carbon tetrachloride	Ave	0.6847	0.8156		2.38	2.00	19.1	30.0
2,2,4-Trimethylpentane	Ave	1.145	0.8858		1.55	2.00	-22.6	30.0
1,2-Dichloropropane	Ave	0.2775	0.2111		1.52	2.00	-24.0	30.0
Heptane	Ave	0.2692	0.2314		1.72	2.00	-14.0	30.0
Trichloroethene	Ave	0.3866	0.4087		2.11	2.00	5.7	30.0
Dibromomethane	Ave	0.3429	0.3335		1.95	2.00	-2.7	30.0
Bromodichloromethane	Ave	0.6106	0.6394		2.09	2.00	4.7	30.0
1,4-Dioxane	Ave	0.1235	0.1024		1.66	2.00	-17.1	30.0
Methyl methacrylate	Ave	0.2712	0.2012		1.48	2.00	-25.8	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4780	0.3420		1.43	2.00	-28.4	30.0
cis-1,3-Dichloropropene	Ave	0.4468	0.4224		1.89	2.00	-5.5	30.0
trans-1,3-Dichloropropene	Ave	0.4839	0.4760		1.97	2.00	-1.6	30.0
Toluene	Ave	1.120	1.077		1.92	2.00	-3.9	30.0
1,1,2-Trichloroethane	Ave	0.3219	0.2928		1.82	2.00	-9.0	30.0
2-Hexanone	Ave	0.2834	0.2228		1.57	2.00	-21.4	30.0
Dibromochloromethane	Ave	0.6633	0.7915		2.39	2.00	19.3	30.0
Octane	Ave	0.3585	0.3534		1.97	2.00	-1.4	30.0
1,2-Dibromoethane (EDB)	Ave	0.5963	0.6141		2.06	2.00	3.0	30.0
Tetrachloroethene	Ave	0.4387	0.4773		2.18	2.00	8.8	30.0
Chlorobenzene	Ave	0.9392	0.9062		1.93	2.00	-3.5	30.0
Ethylbenzene	Ave	1.466	1.441		1.97	2.00	-1.7	30.0
m-Xylene & p-Xylene	Ave	1.124	1.192		4.24	4.00	6.0	30.0
Bromoform	Ave	0.5943	0.7408		2.49	2.00	24.6	30.0
Styrene	Ave	0.7883	0.8322		2.11	2.00	5.6	30.0
Nonane	Ave	0.6196	0.5365		1.73	2.00	-13.4	30.0
o-Xylene	Ave	1.201	1.247		2.08	2.00	3.8	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7903	0.7324		1.85	2.00	-7.3	30.0
1,2,3-Trichloropropane	Ave	0.2776	0.2922		2.10	2.00	5.2	30.0
Isopropylbenzene	Ave	1.734	1.697		1.96	2.00	-2.2	30.0
Propylbenzene	Ave	0.4649	0.5360		2.31	2.00	15.3	30.0
2-Chlorotoluene	Ave	0.4305	0.4777		2.22	2.00	11.0	30.0
4-Ethyltoluene	Ave	1.720	1.981		2.30	2.00	15.1	30.0
1,3,5-Trimethylbenzene	Ave	0.7048	0.8342		2.37	2.00	18.4	30.0
Alpha Methyl Styrene	Ave	0.6597	0.7817		2.37	2.00	18.5	30.0
Decane	Ave	0.8720	0.7821		1.79	2.00	-10.3	30.0
tert-Butylbenzene	Ave	1.647	1.944		2.36	2.00	18.0	30.0
1,2,4-Trimethylbenzene	Ave	1.470	1.767		2.40	2.00	20.2	30.0
1,3-Dichlorobenzene	Ave	1.002	1.245		2.48	2.00	24.2	30.0
sec-Butylbenzene	Ave	2.109	2.466		2.34	2.00	16.9	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1

SDG No.:

Lab Sample ID: CCVIS 140-17352/2 Calibration Date: 01/11/2018 10:53

Instrument ID: MR Calib Start Date: 10/25/2017 13:00

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/25/2017 20:06

Lab File ID: RCCVA11.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzyl chloride	Ave	1.294	1.435		2.22	2.00	10.9	30.0
1,4-Dichlorobenzene	Ave	1.012	1.251		2.47	2.00	23.5	30.0
4-Isopropyltoluene	Ave	1.894	2.379		2.51	2.00	25.6	30.0
1,2,3-Trimethylbenzene	Ave	1.645	2.053		2.50	2.00	24.8	30.0
1,2-Dichlorobenzene	Ave	0.9822	1.248		2.54	2.00	27.0	30.0
Butylbenzene	Ave	1.731	1.994		2.30	2.00	15.2	30.0
Undecane	Ave	1.014	0.9310		1.84	2.00	-8.2	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.7356	0.8758		2.38	2.00	19.1	30.0
1,2,4,5-Tetramethylbenzene	Ave	2.508	1.172		0.934	2.00	-53.3*	30.0
Dodecane	Ave	1.016	0.9484		1.87	2.00	-6.6	30.0
1,2,4-Trichlorobenzene	Ave	0.8170	1.115		2.73	2.00	36.5*	30.0
Naphthalene	Ave	1.890	2.360		2.50	2.00	24.9	30.0
Hexachlorobutadiene	Ave	0.8407	1.128		2.68	2.00	34.1*	30.0
1,2,3-Trichlorobenzene	Ave	0.8074	1.063		2.63	2.00	31.7*	30.0
2-Methylnaphthalene	Ave	0.4957	0.3722		3.45	4.60	-24.9	50.0
1-Methylnaphthalene	Ave	0.4312	0.4089		4.36	4.60	-5.2	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7330	0.7887		4.30	4.00	7.6	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RCCVA11.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 11-Jan-2018 10:53:30 ALS Bottle#: 15 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007100-002
Misc. Info.: P54
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 12-Jan-2018 10:51:10 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 12-Jan-2018 10:51:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.730	7.779	-0.049	70	264991	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.865	9.918	-0.053	94	1472710	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.869	14.903	-0.034	87	1255501	4.00	4.00	s
$ 4 4-Bromofluorobenzene (Surr	95	16.578	16.610	-0.032	92	990212	4.00	4.30	
6 Chlorodifluoromethane	67	3.486	3.505	-0.019	95	75814	2.00	2.28	
7 Propene	41	3.491	3.509	-0.018	95	103337	2.00	1.39	
8 Dichlorodifluoromethane	85	3.534	3.554	-0.020	99	653063	2.00	2.51	
9 Chloromethane	52	3.664	3.690	-0.026	99	39340	2.00	1.58	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.691	3.713	-0.022	89	427465	2.00	2.25	
11 Vinyl chloride	62	3.804	3.827	-0.023	99	135678	2.00	1.80	
13 Butadiene	54	3.874	3.900	-0.026	94	88778	2.00	1.81	
14 Butane	43	3.879	3.904	-0.025	87	142556	2.00	1.72	
15 Bromomethane	94	4.111	4.140	-0.029	97	161922	2.00	2.10	
16 Chloroethane	64	4.225	4.254	-0.029	96	66165	2.00	1.91	
17 Ethanol	31	4.332	4.368	-0.036	88	170486	10.0	7.04	
18 Vinyl bromide	106	4.456	4.488	-0.032	97	165971	2.00	2.07	
19 2-Methylbutane	43	4.516	4.546	-0.030	78	99700	2.00	1.76	
20 Acrolein	56	4.672	4.709	-0.037	95	34299	2.00	1.60	
21 Trichlorofluoromethane	101	4.678	4.710	-0.032	99	651513	2.00	2.50	
22 Acetonitrile	40	4.721	4.770	-0.049	95	29875	2.00	1.66	
23 Acetone	58	4.764	4.807	-0.043	99	158638	6.00	5.43	
25 Pentane	72	4.866	4.899	-0.033	76	30674	2.00	1.70	
24 Isopropyl alcohol	45	4.866	4.906	-0.040	80	463190	6.00	4.10	
26 Ethyl ether	31	4.990	5.033	-0.043	72	90914	2.00	1.17	
27 1,1-Dichloroethene	96	5.238	5.274	-0.036	99	201133	2.00	1.91	
28 Acrylonitrile	53	5.308	5.349	-0.041	92	97200	2.00	1.48	
29 2-Methyl-2-propanol	59	5.341	5.393	-0.052	92	333704	2.00	1.67	
30 1,1,2-Trichloro-1,2,2-trif	101	5.411	5.446	-0.035	95	467899	2.00	2.06	
31 Methylene Chloride	84	5.513	5.552	-0.039	83	176529	2.00	1.64	
32 3-Chloro-1-propene	39	5.535	5.572	-0.037	89	147010	2.00	1.73	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.643	5.683	-0.040	98	503004	2.00	1.76	
34 trans-1,2-Dichloroethene	96	6.209	6.253	-0.044	96	199123	2.00	1.83	
36 Methyl tert-butyl ether	73	6.338	6.392	-0.054	93	568506	2.00	1.84	
37 1,1-Dichloroethane	63	6.565	6.609	-0.044	99	311298	2.00	1.62	
38 Vinyl acetate	43	6.673	6.727	-0.054	99	299563	2.00	1.43	
39 2-Butanone (MEK)	72	7.045	7.107	-0.062	96	72814	2.00	1.54	
40 Hexane	56	7.136	7.179	-0.043	82	118596	2.00	1.57	
41 cis-1,2-Dichloroethene	96	7.444	7.492	-0.048	91	201528	2.00	1.81	
42 Ethyl acetate	43	7.627	7.688	-0.061	98	247162	2.00	1.34	
43 Chloroform	83	7.762	7.811	-0.049	97	471222	2.00	1.88	
44 Tetrahydrofuran	42	8.112	8.178	-0.066	78	110481	2.00	1.21	
45 1,1,1-Trichloroethane	97	8.716	8.769	-0.053	94	540894	2.00	2.08	
46 1,2-Dichloroethane	62	8.787	8.840	-0.054	98	319897	2.00	2.02	
48 Benzene	78	9.288	9.341	-0.053	97	505513	2.00	1.71	
49 Cyclohexane	69	9.315	9.362	-0.047	91	81479	2.00	1.84	
47 n-Butanol	31	9.293	9.365	-0.072	58	24618	2.00	1.01	
51 Carbon tetrachloride	117	9.326	9.378	-0.052	97	600598	2.00	2.38	
53 Isooctane	57	10.156	10.206	-0.050	96	652246	2.00	1.55	
54 1,2-Dichloropropane	63	10.550	10.602	-0.052	79	155410	2.00	1.52	
55 n-Heptane	71	10.571	10.617	-0.046	76	170411	2.00	1.72	
56 Trichloroethene	130	10.620	10.667	-0.047	94	300921	2.00	2.11	
57 Dibromomethane	93	10.663	10.711	-0.048	91	245590	2.00	1.95	
58 Dichlorobromomethane	83	10.836	10.886	-0.050	98	470855	2.00	2.09	
59 1,4-Dioxane	88	10.852	10.912	-0.060	80	75397	2.00	1.66	
60 Methyl methacrylate	41	10.992	11.045	-0.053	90	148142	2.00	1.48	
62 4-Methyl-2-pentanone (MIBK	43	11.876	11.931	-0.055	91	251855	2.00	1.43	
63 cis-1,3-Dichloropropene	75	11.925	11.968	-0.043	92	311029	2.00	1.89	
64 trans-1,3-Dichloropropene	75	12.669	12.709	-0.040	96	298817	2.00	1.97	
65 Toluene	91	12.804	12.845	-0.041	93	675771	2.00	1.92	
66 1,1,2-Trichloroethane	83	12.863	12.904	-0.041	96	183813	2.00	1.82	
67 2-Hexanone	58	13.305	13.355	-0.050	97	139837	2.00	1.57	
68 Chlorodibromomethane	129	13.591	13.628	-0.037	97	496881	2.00	2.39	
69 n-Octane	85	13.623	13.658	-0.035	78	221868	2.00	1.97	
70 Ethylene Dibromide	107	13.882	13.923	-0.041	98	385496	2.00	2.06	
71 Tetrachloroethene	129	14.012	14.048	-0.036	96	299608	2.00	2.18	
72 Chlorobenzene	112	14.918	14.952	-0.034	94	568857	2.00	1.93	
74 Ethylbenzene	91	15.241	15.278	-0.037	98	904837	2.00	1.97	
75 m-Xylene & p-Xylene	91	15.419	15.452	-0.033	99	1496103	4.00	4.24	
76 Bromoform	173	15.818	15.854	-0.036	96	465004	2.00	2.49	
77 Styrene	104	15.888	15.923	-0.035	98	522415	2.00	2.11	
78 n-Nonane	57	15.931	15.961	-0.030	79	336794	2.00	1.73	
79 o-Xylene	91	15.953	15.986	-0.033	97	782861	2.00	2.08	
80 1,1,2,2-Tetrachloroethane	83	16.277	16.308	-0.032	97	459783	2.00	1.85	
81 1,2,3-Trichloropropane	110	16.427	16.464	-0.037	96	183416	2.00	2.10	
82 Isopropylbenzene	105	16.573	16.605	-0.032	98	1065345	2.00	1.96	
83 N-Propylbenzene	120	17.150	17.182	-0.032	99	336447	2.00	2.31	
84 2-Chlorotoluene	126	17.166	17.203	-0.037	93	299849	2.00	2.22	
85 4-Ethyltoluene	105	17.317	17.351	-0.034	98	1243281	2.00	2.30	
86 1,3,5-Trimethylbenzene	120	17.409	17.436	-0.027	92	523685	2.00	2.37	
87 Alpha Methyl Styrene	118	17.657	17.691	-0.034	89	490719	2.00	2.37	
88 n-Decane	57	17.797	17.826	-0.029	93	490984	2.00	1.79	
89 tert-Butylbenzene	119	17.873	17.906	-0.033	92	1220087	2.00	2.36	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
90 1,2,4-Trimethylbenzene	105	17.889	17.921	-0.032	96	1109383	2.00	2.40	
91 1,3-Dichlorobenzene	146	18.158	18.189	-0.031	99	781810	2.00	2.48	
92 sec-Butylbenzene	105	18.175	18.206	-0.031	98	1547778	2.00	2.34	
93 Benzyl chloride	91	18.245	18.273	-0.028	98	900887	2.00	2.22	
94 1,4-Dichlorobenzene	146	18.256	18.287	-0.031	94	785026	2.00	2.47	
95 4-Isopropyltoluene	119	18.363	18.391	-0.028	96	1493197	2.00	2.51	
96 1,2,3-Trimethylbenzene	105	18.401	18.429	-0.028	98	1288854	2.00	2.50	
98 1,2-Dichlorobenzene	146	18.644	18.672	-0.028	96	783237	2.00	2.54	
101 n-Butylbenzene	91	18.838	18.865	-0.027	98	1251834	2.00	2.30	
102 Undecane	57	19.232	19.259	-0.027	89	584462	2.00	1.84	
103 1,2-Dibromo-3-Chloropropan	157	19.291	19.318	-0.027	98	549810	2.00	2.38	
104 1,2,4,5-Tetramethylbenzene	119	19.647	19.674	-0.027	96	735596	2.00	0.9345	
107 Dodecane	57	20.348	20.366	-0.018	96	595360	2.00	1.87	
108 1,2,4-Trichlorobenzene	180	20.450	20.474	-0.024	94	700020	2.00	2.73	
109 Naphthalene	128	20.580	20.603	-0.023	99	1481630	2.00	2.50	
110 Hexachlorobutadiene	225	20.833	20.859	-0.026	96	707819	2.00	2.68	
111 1,2,3-Trichlorobenzene	180	20.871	20.897	-0.026	95	667361	2.00	2.63	
112 2-Methylnaphthalene	142	21.680	21.702	-0.022	99	537340	4.60	3.45	
113 1-Methylnaphthalene	142	21.825	21.847	-0.022	98	590344	4.60	4.36	
S 114 Xylenes, Total	100				0		6.00	6.32	
S 115 1,2-Dichloroethene, Total	1				0		4.00	3.65	

QC Flag Legend

Processing Flags

s - Failed ISTD Recovery Test

Reagents:

40CV101P_00054	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

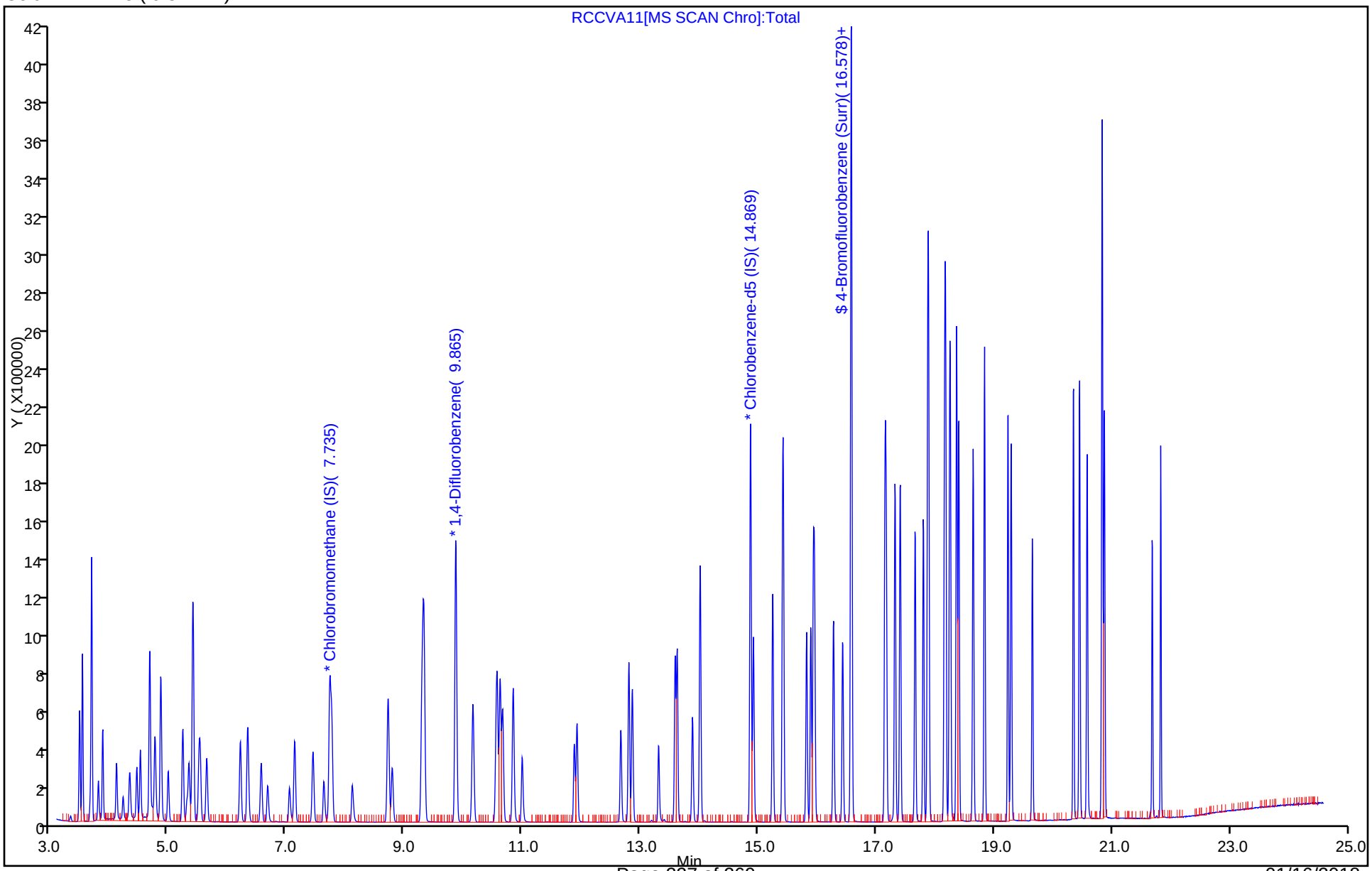
Report Date: 12-Jan-2018 10:51:10 Chrom Revision: 2.2 10-Jan-2018 22:54:36

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RCCVA11.D

Injection Date:	11-Jan-2018 10:53:30	Instrument ID:	MR	Operator ID:	
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RBFBJ25.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	25-Oct-2017 11:43:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006453-001				
Misc. Info.:	TUNE				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	27-Oct-2017 11:55:49	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				
First Level Reviewer: tajh		Date:	26-Oct-2017 09:16:17		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.340	4.340	0.000	0	1559366	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

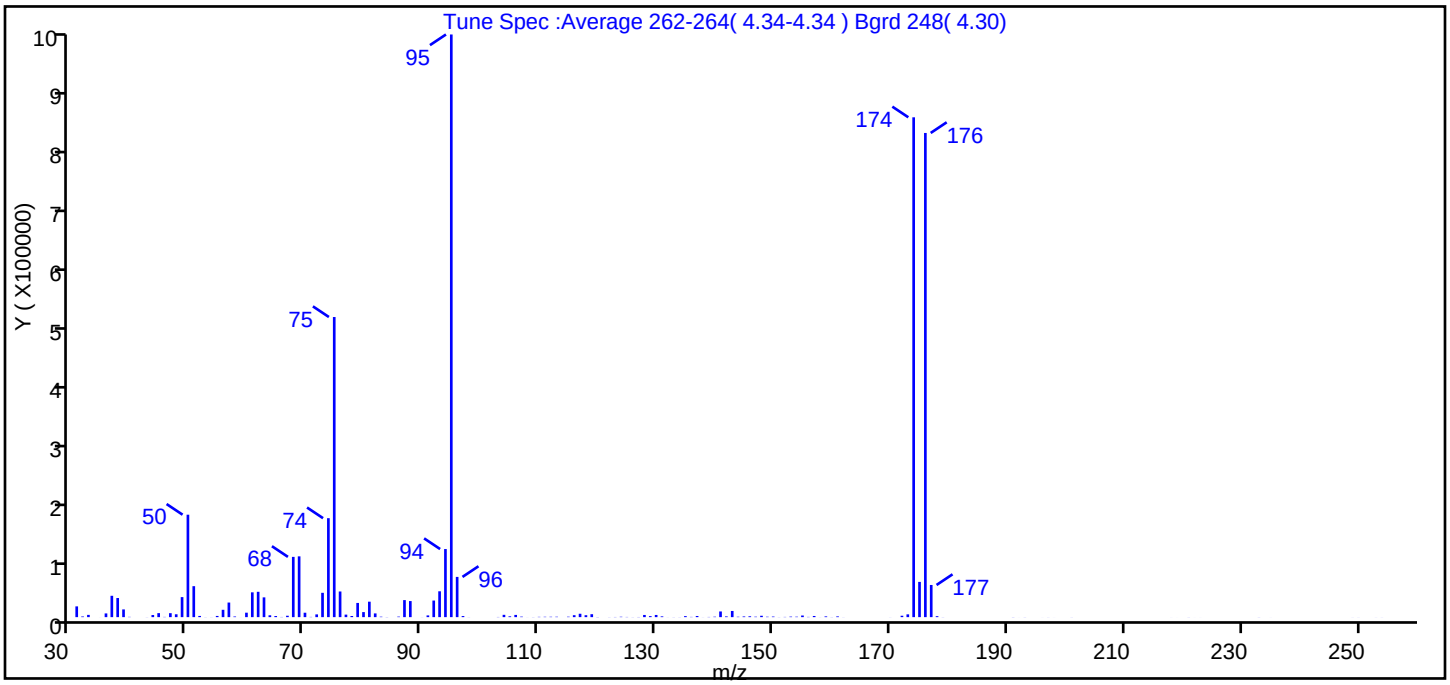
40MXSUR_00002 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RBFBJ25.D
Injection Date: 25-Oct-2017 11:43:30 Instrument ID: MR
Lims ID: BFB
Client ID:
Operator ID: ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	17.6
75	30 to 60% of m/z 95	51.5
96	5 to 9% of m/z 95	6.9
173	Less than 2% of m/z 174	0.5 (0.6)
174	50 to 120% of m/z 95	85.8
175	5 to 9% of m/z 174	6.0 (7.1)
176	Greater than 95% but less than 101% of m/z 174	83.1 (96.9)
177	5 to 9% of m/z 176	5.5 (6.6)

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RBFBJ25.D\MR_TO15.rslt\spectra.d
Injection Date: 25-Oct-2017 11:43:30
Spectrum: Tune Spec :Average 262-264(4.34-4.34) Bgrd 248(4.30)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 148

m/z	Y	m/z	Y	m/z	Y	m/z	Y
31.00	18480	71.00	383	115.00	753	153.00	902
32.00	1144	72.00	4718	116.00	3350	154.00	773
33.00	3880	73.00	41752	117.00	5823	155.00	2792
35.00	57	74.00	169856	118.00	3325	156.00	409
36.00	6392	75.00	515072	119.00	5054	157.00	1980
37.00	36648	76.00	44040	120.00	245	158.00	83
38.00	32824	77.00	4326	122.00	143	159.00	1286
39.00	13275	78.00	1962	123.00	287	160.00	164
40.00	467	79.00	24368	124.00	669	161.00	1263
43.00	130	80.00	8656	125.00	335	162.00	104
44.00	3621	81.00	26536	126.00	149	170.00	86
45.00	6874	82.00	6400	127.00	269	172.00	2407
46.00	391	83.00	771	128.00	3739	173.00	4794
47.00	6822	84.00	221	129.00	1727	174.00	857856
48.00	4926	86.00	909	130.00	3738	175.00	60496
49.00	34368	87.00	29232	131.00	1312	176.00	830976
50.00	175808	88.00	27576	132.00	79	177.00	55208
51.00	53160	90.00	91	133.00	141	178.00	1646
52.00	2069	91.00	2969	134.00	148	179.00	145
53.00	142	92.00	28480	135.00	1744	191.00	182
54.00	110	93.00	44376	136.00	404	192.00	36
55.00	2055	94.00	116872	137.00	1970	193.00	129
56.00	12613	95.00	1000000	138.00	94	196.00	44
57.00	25048	96.00	69048	139.00	335	197.00	89
58.00	1102	97.00	1859	140.00	741	198.00	38
59.00	53	98.00	119	141.00	9765	201.00	101
60.00	7638	103.00	310	142.00	1256	218.00	48
61.00	42584	104.00	3976	143.00	10604	219.00	23
62.00	43496	105.00	1381	144.00	694	221.00	122
63.00	33944	106.00	3817	145.00	1181	222.00	34
64.00	3177	107.00	886	146.00	1466	223.00	36
65.00	1919	108.00	61	147.00	786	233.00	132
66.00	302	109.00	161	148.00	2376	235.00	48

Report Date: 27-Oct-2017 11:55:49 Chrom Revision: 2.2 16-Aug-2017 16:24:46
Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RBFBJ25.D\MR_TO15.rslt\spectra.d
Injection Date: 25-Oct-2017 11:43:30
Spectrum: Tune Spec :Average 262-264(4.34-4.34) Bgrd 248(4.30)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 148

m/z	Y	m/z	Y	m/z	Y	m/z	Y
67.00	2410	110.00	490	149.00	702	249.00	70
68.00	103432	111.00	617	150.00	981	250.00	73
69.00	104336	112.00	655	151.00	147	253.00	72
70.00	7580	113.00	702	152.00	375	254.00	79

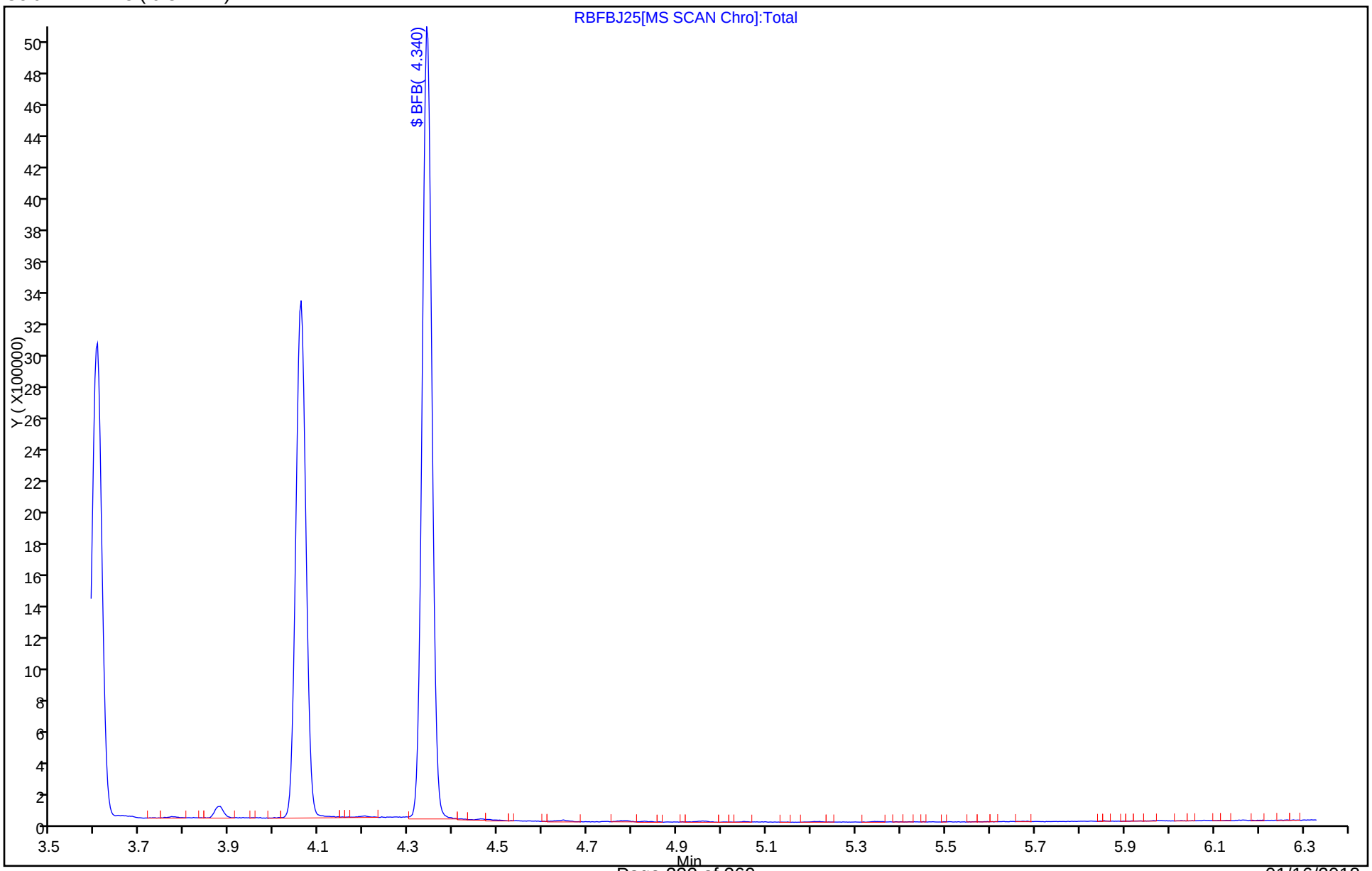
Report Date: 27-Oct-2017 11:55:49 Chrom Revision: 2.2 16-Aug-2017 16:24:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RBFBJ25.D

Injection Date:	25-Oct-2017 11:43:30	Instrument ID:	MR	Operator ID:	
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RBFBA11.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	11-Jan-2018 10:20:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007100-001				
Misc. Info.:	BFB				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	12-Jan-2018 10:14:58	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				
First Level Reviewer: tajh		Date:	11-Jan-2018 11:24:13		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.331	4.326	0.005	0	1312122	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

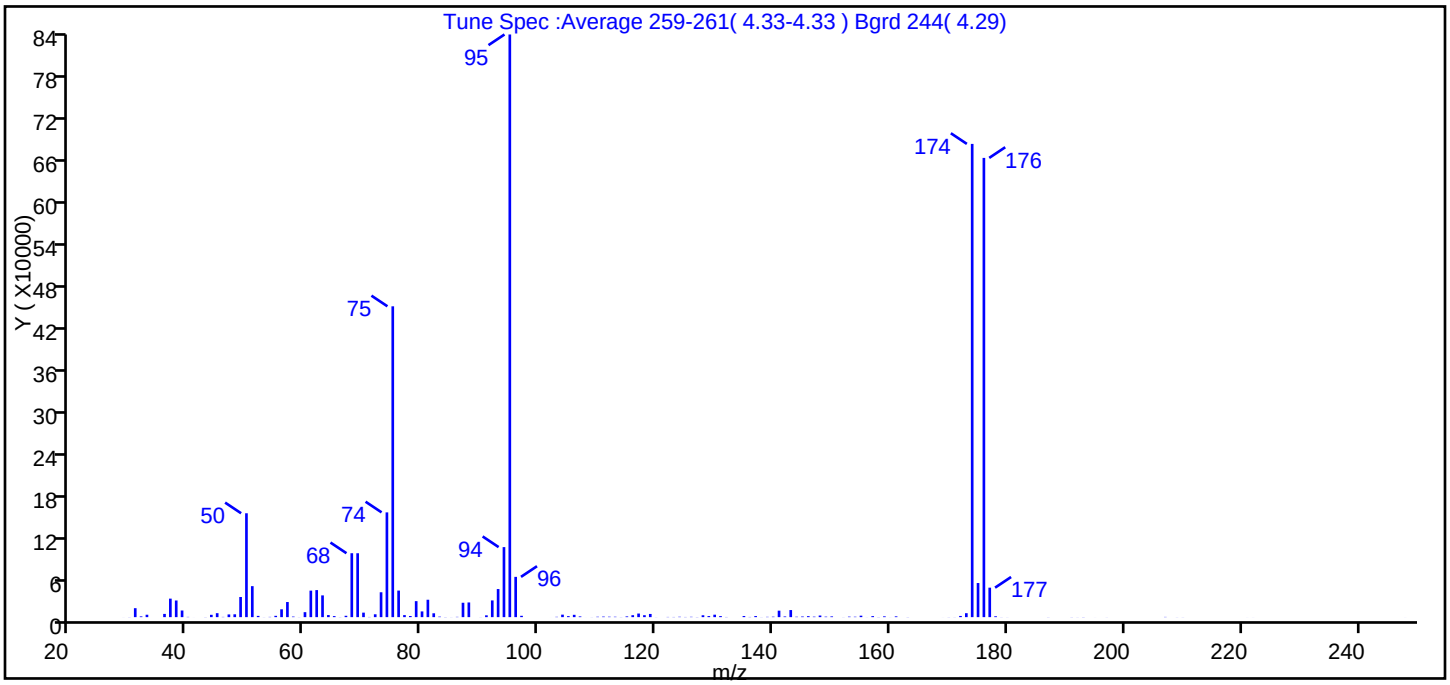
40MXSUR_00002 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RBFBA11.D
Injection Date: 11-Jan-2018 10:20:30 Instrument ID: MR
Lims ID: BFB
Client ID:
Operator ID: ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	17.8
75	30 to 60% of m/z 95	53.3
96	5 to 9% of m/z 95	6.9
173	Less than 2% of m/z 174	0.7 (0.8)
174	50 to 120% of m/z 95	81.2
175	5 to 9% of m/z 174	5.9 (7.2)
176	Greater than 95% but less than 101% of m/z 174	78.8 (97.0)
177	5 to 9% of m/z 176	5.1 (6.4)

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RBFBA11.D\MR_TO15.rslt\spectra.d
Injection Date: 11-Jan-2018 10:20:30
Spectrum: Tune Spec :Average 259-261(4.33-4.33) Bgrd 244(4.29)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 146

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	47	69.00	91448	111.00	782	152.00	96
30.00	133	70.00	6451	112.00	633	153.00	716
31.00	12820	71.00	265	113.00	568	154.00	598
32.00	1067	72.00	4103	114.00	140	155.00	2081
33.00	3454	73.00	35608	115.00	1063	156.00	59
36.00	4629	74.00	149952	116.00	2787	157.00	1452
37.00	26488	75.00	444864	117.00	5146	158.00	171
38.00	23832	76.00	38024	118.00	2788	159.00	1129
39.00	9508	77.00	2914	119.00	4574	160.00	50
40.00	347	78.00	1597	120.00	82	161.00	1122
41.00	31	79.00	22904	122.00	292	163.00	154
43.00	148	80.00	8203	123.00	258	169.00	38
44.00	3350	81.00	24904	124.00	531	170.00	124
45.00	5674	82.00	5524	125.00	257	171.00	103
46.00	327	83.00	715	126.00	471	172.00	1711
47.00	3873	84.00	191	127.00	193	173.00	5671
48.00	4083	85.00	87	128.00	2683	174.00	677312
49.00	28832	86.00	399	129.00	1526	175.00	48832
50.00	148672	87.00	20592	130.00	3504	176.00	657280
51.00	44352	88.00	21024	131.00	1488	177.00	42192
52.00	1794	90.00	106	132.00	236	178.00	1233
53.00	95	91.00	2595	135.00	1587	179.00	111
54.00	350	92.00	23928	136.00	275	180.00	76
55.00	1886	93.00	40208	137.00	1565	187.00	128
56.00	11243	94.00	100232	138.00	109	191.00	140
57.00	21624	95.00	833920	139.00	417	192.00	94
58.00	785	96.00	57648	140.00	654	193.00	181
59.00	123	97.00	1934	141.00	9266	195.00	36
60.00	7126	102.00	17	142.00	982	197.00	73
61.00	37952	103.00	448	143.00	10144	207.00	325
62.00	38704	104.00	3573	144.00	594	209.00	93
63.00	31144	105.00	1411	145.00	905	210.00	94
64.00	2978	106.00	3330	146.00	1406	221.00	36

Report Date: 12-Jan-2018 10:14:59 Chrom Revision: 2.2 10-Jan-2018 22:54:36
Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RBFBA11.D\MR_TO15.rslt\spectra.d
Injection Date: 11-Jan-2018 10:20:30
Spectrum: Tune Spec :Average 259-261(4.33-4.33) Bgrd 244(4.29)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 146

m/z	Y	m/z	Y	m/z	Y	m/z	Y
65.00	1487	107.00	1017	147.00	704	222.00	44
66.00	150	108.00	19	148.00	2306	248.00	36
67.00	1955	109.00	90	149.00	703		
68.00	91496	110.00	559	150.00	1049		

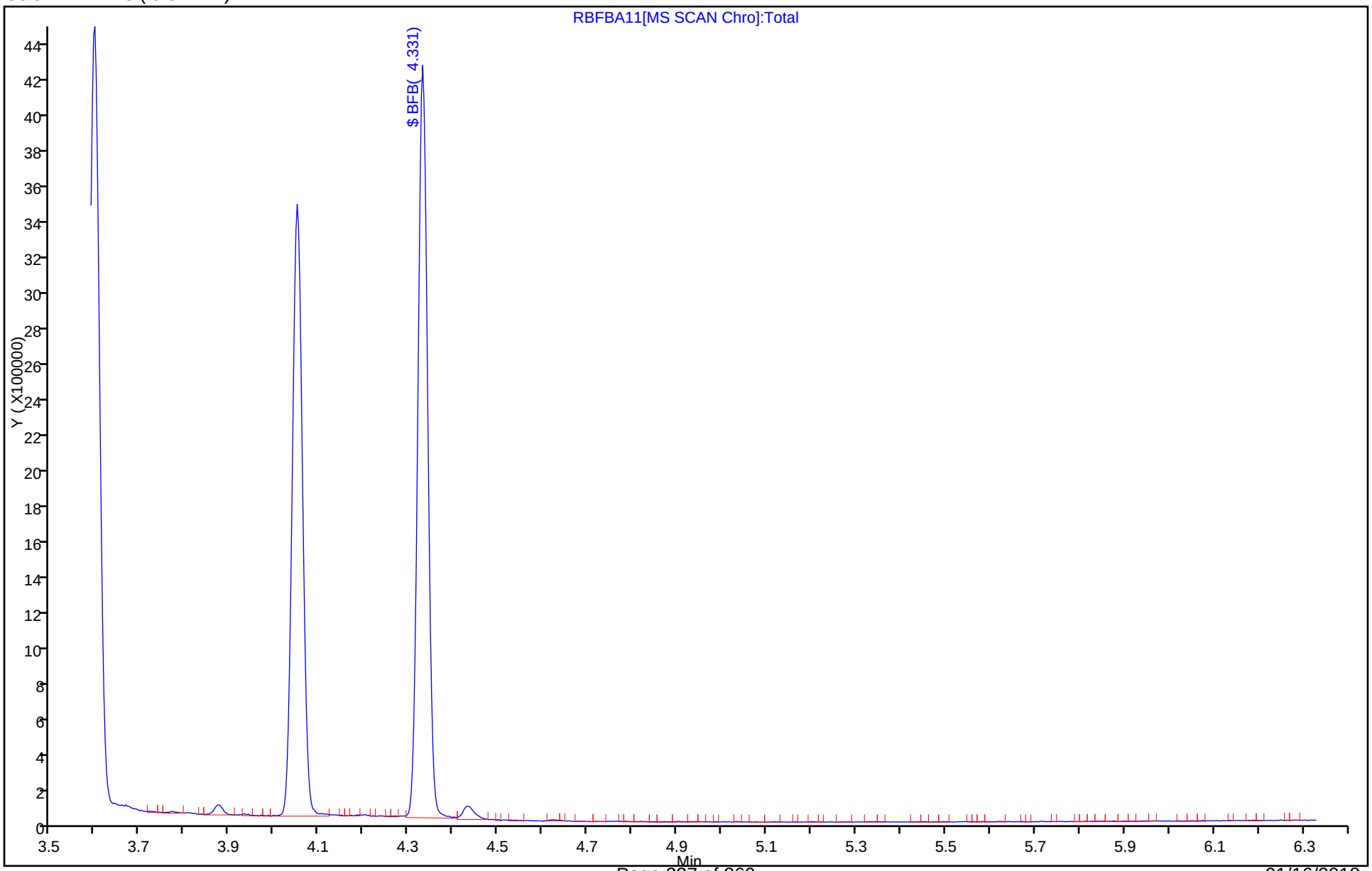
Report Date: 12-Jan-2018 10:14:59 Chrom Revision: 2.2 10-Jan-2018 22:54:36

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RBFBA11.D

Injection Date:	11-Jan-2018 10:20:30	Instrument ID:	MR	Operator ID:	
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10405-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-17352/4

Matrix: Air | Lab File ID: R500BA11.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 01/11/2018 12:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17352 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	109		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10405-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-17352/4

Matrix: Air | Lab File ID: R500BA11.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 01/11/2018 12:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17352 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	109		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\R500BA11.D
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 11-Jan-2018 12:37:30 ALS Bottle#: 16 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007100-004
Misc. Info.: 500ML BLK
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 12-Jan-2018 10:15:00 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 11-Jan-2018 13:13:29

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.719	7.779	-0.060	69	263079	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.859	9.918	-0.059	94	1491090	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.864	14.903	-0.039	87	1253345	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.573	16.610	-0.037	91	1000084	4.00	4.35	
12 Acetaldehyde	44	3.804	3.871	-0.070	20	16598		NC	
14 Butane	43	3.890	3.904	-0.014	88	8173		0.0995	
35 2-Methylpentane	43	6.344	6.339	0.000	42	105		NC	
50 Thiophene	84	9.207	9.326	-0.119	1	159		NC	
99 2,3-Dihydroindene	117	18.498	18.660	-0.162	1	51		NC	
105 1,2,3,5-Tetramethylbenzene	119	19.706	19.712	-0.006	19	551		NC	
106 1,2,3,4-Tetramethylbenzene	119	19.738	19.933	-0.195	1	65		NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

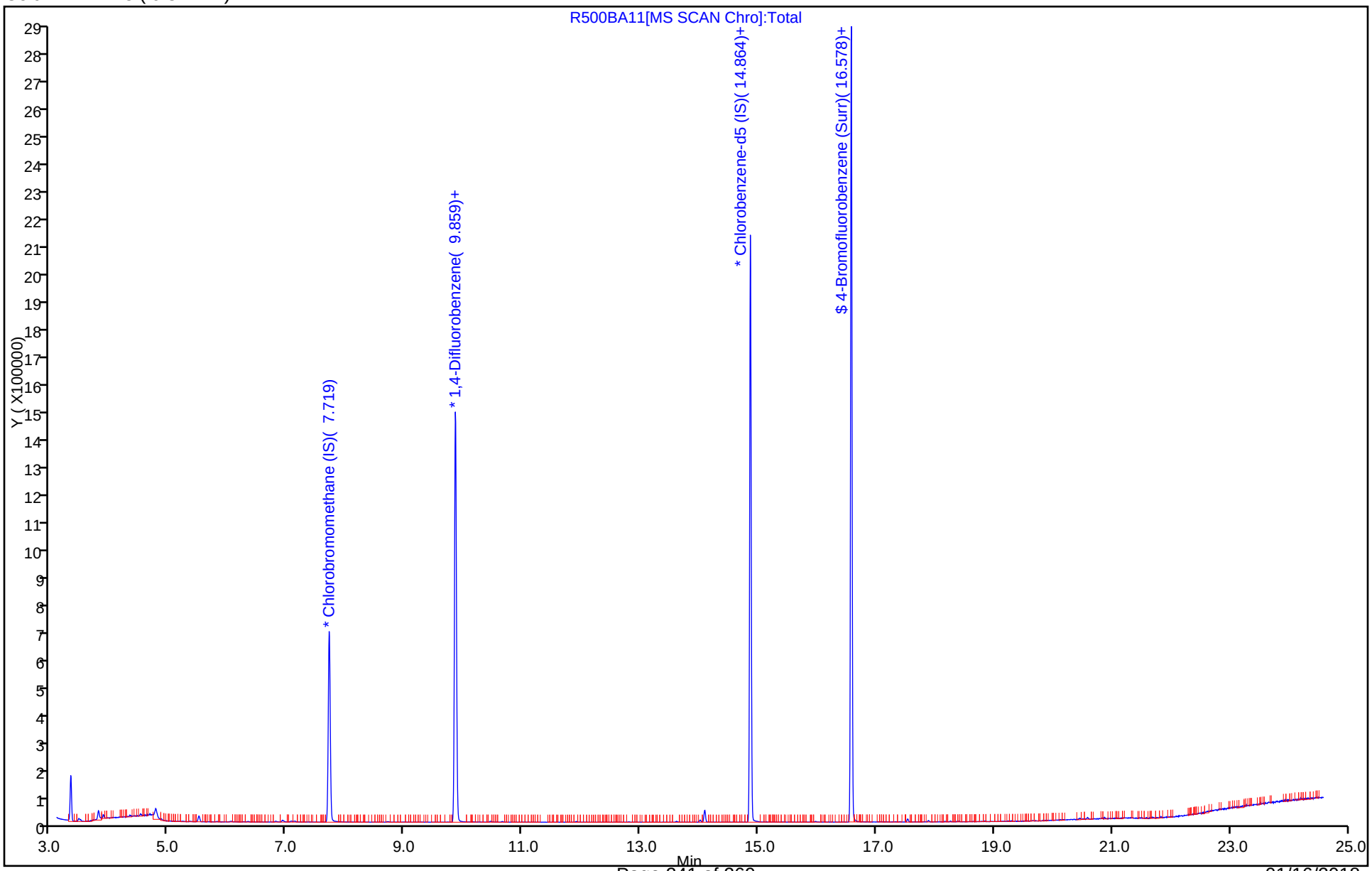
Report Date: 12-Jan-2018 10:15:13 Chrom Revision: 2.2 10-Jan-2018 22:54:36

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\R500BA11.D

Injection Date:	11-Jan-2018 12:37:30	Instrument ID:	MR	Operator ID:	
Lims ID:	mb			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\R500BA11.D				
Lims ID:	mb				
Client ID:					
Sample Type:	MB				
Inject. Date:	11-Jan-2018 12:37:30	ALS Bottle#:	16	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007100-004				
Misc. Info.:	500ML BLK				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	12-Jan-2018 10:15:00	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				
First Level Reviewer: tajh		Date:	11-Jan-2018 13:13:29		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.35	108.86

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10405-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 140-17352/1002

Matrix: Air | Lab File ID: RCCVA11-LCS.d

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 01/11/2018 10:53

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17352 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.71		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.38		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.28		0.080	0.015
67-66-3	Chloroform	119.38	1.88		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	1.81		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.51		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	1.62		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	2.02		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	1.91		0.080	0.014
100-41-4	Ethylbenzene	106.17	1.97		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.64		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.84		0.40	0.068
91-20-3	Naphthalene	128.17	2.50		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.18		0.080	0.016
108-88-3	Toluene	92.14	1.92		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	1.83		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	2.73		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	2.08		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	1.82		0.080	0.021
79-01-6	Trichloroethene	131.39	2.11		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	2.50		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	2.40		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	2.37		0.080	0.026
75-01-4	Vinyl chloride	62.50	1.80		0.040	0.029
1330-20-7	Xylenes, Total	106.17	6.32		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	108		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RCCVA11-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 11-Jan-2018 10:53:30 ALS Bottle#: 15 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007100-002
Misc. Info.: P54
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 12-Jan-2018 10:51:10 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 12-Jan-2018 10:51:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.730	7.779	-0.049	70	264991	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.865	9.918	-0.053	94	1472710	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.869	14.903	-0.034	87	1255501	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.578	16.610	-0.032	92	990212	4.00	4.30	
6 Chlorodifluoromethane	67	3.486	3.505	-0.019	95	75814	2.00	2.28	
7 Propene	41	3.491	3.509	-0.018	95	103337	2.00	1.39	
8 Dichlorodifluoromethane	85	3.534	3.554	-0.020	99	653063	2.00	2.51	
9 Chloromethane	52	3.664	3.690	-0.026	99	39340	2.00	1.58	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.691	3.713	-0.022	89	427465	2.00	2.25	
11 Vinyl chloride	62	3.804	3.827	-0.023	99	135678	2.00	1.80	
13 Butadiene	54	3.874	3.900	-0.026	94	88778	2.00	1.81	
14 Butane	43	3.879	3.904	-0.025	87	142556	2.00	1.72	
15 Bromomethane	94	4.111	4.140	-0.029	97	161922	2.00	2.10	
16 Chloroethane	64	4.225	4.254	-0.029	96	66165	2.00	1.91	
17 Ethanol	31	4.332	4.368	-0.036	88	170486	10.0	7.04	
18 Vinyl bromide	106	4.456	4.488	-0.032	97	165971	2.00	2.07	
19 2-Methylbutane	43	4.516	4.546	-0.030	78	99700	2.00	1.76	
20 Acrolein	56	4.672	4.709	-0.037	95	34299	2.00	1.60	
21 Trichlorofluoromethane	101	4.678	4.710	-0.032	99	651513	2.00	2.50	
22 Acetonitrile	40	4.721	4.770	-0.049	95	29875	2.00	1.66	
23 Acetone	58	4.764	4.807	-0.043	99	158638	6.00	5.43	
25 Pentane	72	4.866	4.899	-0.033	76	30674	2.00	1.70	
24 Isopropyl alcohol	45	4.866	4.906	-0.040	80	463190	6.00	4.10	
26 Ethyl ether	31	4.990	5.033	-0.043	72	90914	2.00	1.17	
27 1,1-Dichloroethene	96	5.238	5.274	-0.036	99	201133	2.00	1.91	
28 Acrylonitrile	53	5.308	5.349	-0.041	92	97200	2.00	1.48	
29 2-Methyl-2-propanol	59	5.341	5.393	-0.052	92	333704	2.00	1.67	
30 1,1,2-Trichloro-1,2,2-trif	101	5.411	5.446	-0.035	95	467899	2.00	2.06	
31 Methylene Chloride	84	5.513	5.552	-0.039	83	176529	2.00	1.64	
32 3-Chloro-1-propene	39	5.535	5.572	-0.037	89	147010	2.00	1.73	
33 Carbon disulfide	76	5.643	5.683	-0.040	98	503004	2.00	1.76	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
34 trans-1,2-Dichloroethene	96	6.209	6.253	-0.044	96	199123	2.00	1.83	
36 Methyl tert-butyl ether	73	6.338	6.392	-0.054	93	568506	2.00	1.84	
37 1,1-Dichloroethane	63	6.565	6.609	-0.044	99	311298	2.00	1.62	
38 Vinyl acetate	43	6.673	6.727	-0.054	99	299563	2.00	1.43	
39 2-Butanone (MEK)	72	7.045	7.107	-0.062	96	72814	2.00	1.54	
40 Hexane	56	7.136	7.179	-0.043	82	118596	2.00	1.57	
41 cis-1,2-Dichloroethene	96	7.444	7.492	-0.048	91	201528	2.00	1.81	
42 Ethyl acetate	43	7.627	7.688	-0.061	98	247162	2.00	1.34	
43 Chloroform	83	7.762	7.811	-0.049	97	471222	2.00	1.88	
44 Tetrahydrofuran	42	8.112	8.178	-0.066	78	110481	2.00	1.21	
45 1,1,1-Trichloroethane	97	8.716	8.769	-0.053	94	540894	2.00	2.08	
46 1,2-Dichloroethane	62	8.787	8.840	-0.054	98	319897	2.00	2.02	
48 Benzene	78	9.288	9.341	-0.053	97	505513	2.00	1.71	
49 Cyclohexane	69	9.315	9.362	-0.047	91	81479	2.00	1.84	
47 n-Butanol	31	9.293	9.365	-0.072	58	24618	2.00	1.01	
51 Carbon tetrachloride	117	9.326	9.378	-0.052	97	600598	2.00	2.38	
53 Isooctane	57	10.156	10.206	-0.050	96	652246	2.00	1.55	
54 1,2-Dichloropropane	63	10.550	10.602	-0.052	79	155410	2.00	1.52	
55 n-Heptane	71	10.571	10.617	-0.046	76	170411	2.00	1.72	
56 Trichloroethene	130	10.620	10.667	-0.047	94	300921	2.00	2.11	
57 Dibromomethane	93	10.663	10.711	-0.048	91	245590	2.00	1.95	
58 Dichlorobromomethane	83	10.836	10.886	-0.050	98	470855	2.00	2.09	
59 1,4-Dioxane	88	10.852	10.912	-0.060	80	75397	2.00	1.66	
60 Methyl methacrylate	41	10.992	11.045	-0.053	90	148142	2.00	1.48	
62 4-Methyl-2-pentanone (MIBK	43	11.876	11.931	-0.055	91	251855	2.00	1.43	
63 cis-1,3-Dichloropropene	75	11.925	11.968	-0.043	92	311029	2.00	1.89	
64 trans-1,3-Dichloropropene	75	12.669	12.709	-0.040	96	298817	2.00	1.97	
65 Toluene	91	12.804	12.845	-0.041	93	675771	2.00	1.92	
66 1,1,2-Trichloroethane	83	12.863	12.904	-0.041	96	183813	2.00	1.82	
67 2-Hexanone	58	13.305	13.355	-0.050	97	139837	2.00	1.57	
68 Chlorodibromomethane	129	13.591	13.628	-0.037	97	496881	2.00	2.39	
69 n-Octane	85	13.623	13.658	-0.035	78	221868	2.00	1.97	
70 Ethylene Dibromide	107	13.882	13.923	-0.041	98	385496	2.00	2.06	
71 Tetrachloroethene	129	14.012	14.048	-0.036	96	299608	2.00	2.18	
72 Chlorobenzene	112	14.918	14.952	-0.034	94	568857	2.00	1.93	
74 Ethylbenzene	91	15.241	15.278	-0.037	98	904837	2.00	1.97	
75 m-Xylene & p-Xylene	91	15.419	15.452	-0.033	99	1496103	4.00	4.24	
76 Bromoform	173	15.818	15.854	-0.036	96	465004	2.00	2.49	
77 Styrene	104	15.888	15.923	-0.035	98	522415	2.00	2.11	
78 n-Nonane	57	15.931	15.961	-0.030	79	336794	2.00	1.73	
79 o-Xylene	91	15.953	15.986	-0.033	97	782861	2.00	2.08	
80 1,1,2,2-Tetrachloroethane	83	16.277	16.308	-0.032	97	459783	2.00	1.85	
81 1,2,3-Trichloropropane	110	16.427	16.464	-0.037	96	183416	2.00	2.10	
82 Isopropylbenzene	105	16.573	16.605	-0.032	98	1065345	2.00	1.96	
83 N-Propylbenzene	120	17.150	17.182	-0.032	99	336447	2.00	2.31	
84 2-Chlorotoluene	126	17.166	17.203	-0.037	93	299849	2.00	2.22	
85 4-Ethyltoluene	105	17.317	17.351	-0.034	98	1243281	2.00	2.30	
86 1,3,5-Trimethylbenzene	120	17.409	17.436	-0.027	92	523685	2.00	2.37	
87 Alpha Methyl Styrene	118	17.657	17.691	-0.034	89	490719	2.00	2.37	
88 n-Decane	57	17.797	17.826	-0.029	93	490984	2.00	1.79	
89 tert-Butylbenzene	119	17.873	17.906	-0.033	92	1220087	2.00	2.36	
90 1,2,4-Trimethylbenzene	105	17.889	17.921	-0.032	96	1109383	2.00	2.40	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
91 1,3-Dichlorobenzene	146	18.158	18.189	-0.031	99	781810	2.00	2.48	
92 sec-Butylbenzene	105	18.175	18.206	-0.031	98	1547778	2.00	2.34	
93 Benzyl chloride	91	18.245	18.273	-0.028	98	900887	2.00	2.22	
94 1,4-Dichlorobenzene	146	18.256	18.287	-0.031	94	785026	2.00	2.47	
95 4-Isopropyltoluene	119	18.363	18.391	-0.028	96	1493197	2.00	2.51	
96 1,2,3-Trimethylbenzene	105	18.401	18.429	-0.028	98	1288854	2.00	2.50	
98 1,2-Dichlorobenzene	146	18.644	18.672	-0.028	96	783237	2.00	2.54	
101 n-Butylbenzene	91	18.838	18.865	-0.027	98	1251834	2.00	2.30	
102 Undecane	57	19.232	19.259	-0.027	89	584462	2.00	1.84	
103 1,2-Dibromo-3-Chloropropan	157	19.291	19.318	-0.027	98	549810	2.00	2.38	
104 1,2,4,5-Tetramethylbenzene	119	19.647	19.674	-0.027	96	735596	2.00	0.9345	
107 Dodecane	57	20.348	20.366	-0.018	96	595360	2.00	1.87	
108 1,2,4-Trichlorobenzene	180	20.450	20.474	-0.024	94	700020	2.00	2.73	
109 Naphthalene	128	20.580	20.603	-0.023	99	1481630	2.00	2.50	
110 Hexachlorobutadiene	225	20.833	20.859	-0.026	96	707819	2.00	2.68	
111 1,2,3-Trichlorobenzene	180	20.871	20.897	-0.026	95	667361	2.00	2.63	
112 2-Methylnaphthalene	142	21.680	21.702	-0.022	99	537340	4.60	3.45	
113 1-Methylnaphthalene	142	21.825	21.847	-0.022	98	590344	4.60	4.36	
S 114 Xylenes, Total	100				0		6.00	6.32	
S 115 1,2-Dichloroethene, Total	1				0		4.00	3.65	

Reagents:

40CV101P_00054	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

Report Date: 12-Jan-2018 10:51:13 Chrom Revision: 2.2 10-Jan-2018 22:54:36

TestAmerica Laboratories

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RCCVA11-LCS.d

Injection Date: 11-Jan-2018 10:53:30 Instrument ID: MR Operator ID:

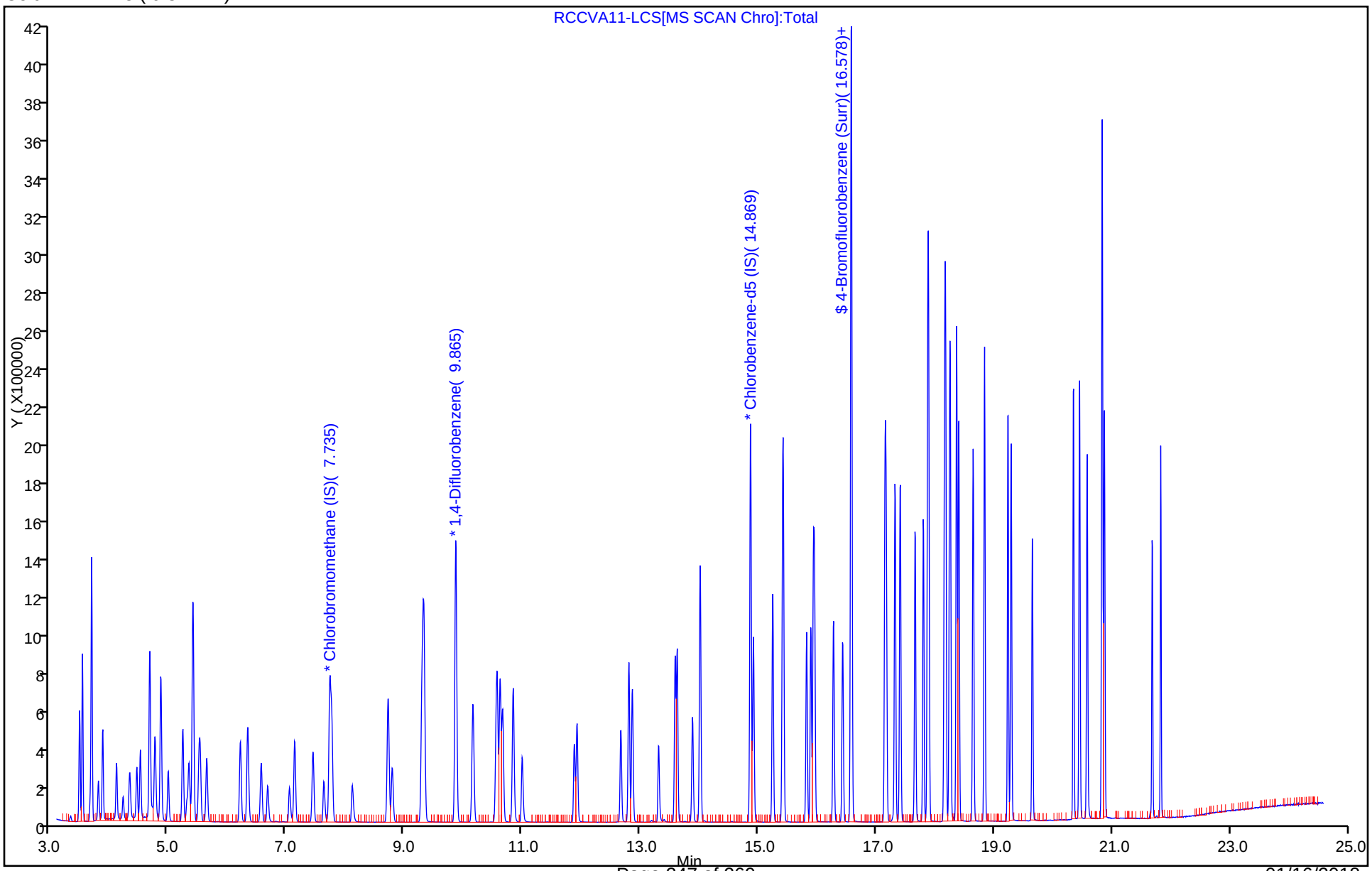
Lims ID: LCS Worklist Smp#: 1002

Client ID:

Purge Vol: 500.000 mL Dil. Factor: 1.0000 ALS Bottle#: 15

Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\RCCVA11-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 11-Jan-2018 10:53:30 ALS Bottle#: 15 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007100-002
Misc. Info.: P54
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20180110-7100.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 12-Jan-2018 10:51:10 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 12-Jan-2018 10:51:10

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.30	107.60

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1

SDG No.:

Instrument ID: MR Start Date: 10/25/2017 11:43

Analysis Batch Number: 15542 End Date: 10/26/2017 00:08

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-15542/1		10/25/2017 11:43	1	RBFBJ25.D	RTX-5 0.32(mm)
IC 140-15542/3		10/25/2017 13:00	1	RJ25IC01.D	RTX-5 0.32(mm)
IC 140-15542/4		10/25/2017 13:46	1	RJ25IC02.D	RTX-5 0.32(mm)
140-9802-A-1 MDLV		10/25/2017 13:46	1		RTX-5 0.32(mm)
IC 140-15542/5		10/25/2017 14:33	1	RJ25IC03.D	RTX-5 0.32(mm)
140-9802-A-2 MDLV		10/25/2017 14:33	1		RTX-5 0.32(mm)
IC 140-15542/6		10/25/2017 15:20	1	RJ25IC04.D	RTX-5 0.32(mm)
140-9802-A-3 MDLV		10/25/2017 15:20	1		RTX-5 0.32(mm)
IC 140-15542/7		10/25/2017 16:08	1	RJ25IC05.D	RTX-5 0.32(mm)
140-9802-A-4 MDLV		10/25/2017 16:08	1		RTX-5 0.32(mm)
IC 140-15542/8		10/25/2017 16:56	1	RJ25IC06.D	RTX-5 0.32(mm)
140-9802-A-5 MDLV		10/25/2017 16:56	1		RTX-5 0.32(mm)
ICIS 140-15542/9		10/25/2017 17:43	1	RJ25IC07.D	RTX-5 0.32(mm)
IC 140-15542/10		10/25/2017 18:31	1	RJ25IC08.D	RTX-5 0.32(mm)
IC 140-15542/11		10/25/2017 19:18	1	RJ25IC09.D	RTX-5 0.32(mm)
IC 140-15542/12		10/25/2017 20:06	1	RJ25IC10.D	RTX-5 0.32(mm)
ICV 140-15542/14		10/25/2017 21:40	1	RJ25ICV.D	RTX-5 0.32(mm)
ZZZZZ		10/26/2017 00:08	1		RTX-5 0.32(mm)

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 18 & KNOX-MS-0023, Rev 2

Analysis Date:	10/25/17	Instrument:	UR	Chrom WL #:	6453	TALS Batch & Event #	TO14/15: 15542 - 1314
							DOD: 15544 1316 OHIO: 15543 1315

Chrom/Worklist Review		1st	Comments	2nd
1. Re-read each Limit Group	[method editor-limit groups]	✓		na
2. Verify LODV in Chrom	[method editor -> edit -> MDL]	✓		na
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level)	[WL Sample Reagents Tab vs. Entech]	✓		✓
4. Files linked properly to calibration levels?	[Sample List- Lab ID vs. Info]	✓		✓
5. Did BFB meet tune criteria?	[F8]	✓		✓
6. Were all standards injected within 24 hr of BFB?	[F7]	✓		✓
7. High point checked for saturation and point removed if so?	[Chrom]	✓	(5) Naph. 1245 TMBF	✓
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given?	[Chrom]	✓	Acetonitrile lvl 7.8	✓ 10/26/17
9. RT for each IS ±20 sec avg. RT?	[F6 IstdRec]	✓		✓
10. Area for each IS ± 40% avg. area?	[F6 IstdRec]	✓		✓
11. Each analyte ± 0.06 RRT of avg. RRT?	[F6 - RRT]	✓		✓
12. Elution order checked on isomeric pairs?	[Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane		✓		✓
• 2-methyl butane / acrolein		✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane		✓		✓
• vinyl acetate / hexane		✓		✓
• cis- and trans- isomers		✓		✓
• ethyl benzene / m/p-xylene / o-xylene		✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/ sec-butylbenzene/1,2,3-trimethylbenzene		✓		✓
• tert-butylbenzene/4-isopropyltoluene		✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene		✓		✓
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes		ND 1285, 1234		✓
• 1,2,4- and 1,2,3-trichlorobenzenes		✓		✓
• 2-, and 1-methylnaphthalene		✓		✓
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?		✓		✓

MLG Review		TO	DOD	OH	Comments	TO-	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1& 2 methylnaphthalene ≤ 50%	[F6 Σ]	✓	✓	✓		✓	✓	✓
15. Were at least 5 levels of each compound analyzed?	[F6]	✓	✓	✓		✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.?	[F6]	✓	✓	✓		✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? (Note: Ohio does not allow quad)	[F6]	NA ✓	→	✓		NA	→	→
18. If curves were used, is correlation coefficient ≥0.990?	[F6]	NL	→			NA	→	→
19. Is the intercept less than the RL for each curve?	[F6]	NL	→			NA	→	→
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous.	[Cntrl-C, details]	NL	NL	na		NA	→	na
21. Is low point RSE ≤ 50 %?	[F6]	✓	✓	✓		✓	✓	✓
22. Is the second source analysis within limits?	[F8 - icv]	✓	✓	✓				

Analyst/Date: 10/26/17 **2nd Level Reviewer/Date:** ✓ 10/26/17

TALS Review		TO	DOD	OH	Comments	TO	DOD	OH
23. Upload ICAL		✓				na	na	na
24. Graphics uploaded?	[paperclip]	✓	✓	✓		✓	✓	✓
25. All points are in the most recent active calibration event?	[Calibration Events --'Fix ICAL linkage' if needed]	✓	✓	✓		✓	✓	✓
26. Runs linked to BFB?	[QC Links]	✓	✓	✓		✓	✓	✓
27. Run Checklist and acknowledge findings	[F6]	✓	✓	✓		✓	✓	✓
28. If criteria not met, was a NCM generated?		NL	→	→		NA	→	→
29. After review in TALS, approve the method in TALS.		na	na	na		✓	✓	✓
30. After verifying TALS is correct, lock method in Chrom	<resolve any error issues>		na	na		✓	✓	✓
31. Checklist & Entech report scanned, attached & assigned properly?			na	na		✓	✓	✓

Analyst/date: 10/27/17	2nd Level Reviewer/date: ✓ 10/27/17
Comments:	Comments:

MS017r42, 08/30/2017

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-10405-1

SDG No.:

Instrument ID: MR Start Date: 01/11/2018 10:20

Analysis Batch Number: 17352 End Date: 01/12/2018 09:53

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-17352/1		01/11/2018 10:20	1	RBFBA11.D	RTX-5 0.32(mm)
CCVIS 140-17352/2		01/11/2018 10:53	1	RCCVA11.D	RTX-5 0.32(mm)
LCS 140-17352/1002		01/11/2018 10:53	1	RCCVA11-LCS.d	RTX-5 0.32(mm)
ZZZZZ		01/11/2018 12:00	1		RTX-5 0.32(mm)
MB 140-17352/4		01/11/2018 12:37	1	R500BA11.D	RTX-5 0.32(mm)
ZZZZZ		01/11/2018 13:24	1		RTX-5 0.32(mm)
ZZZZZ		01/11/2018 14:50	1		RTX-5 0.32(mm)
140-10405-4 DL		01/11/2018 16:09	1	RA11P102.D	RTX-5 0.32(mm)
140-10405-5		01/11/2018 16:56	1	RA11P103.D	RTX-5 0.32(mm)
140-10405-6		01/11/2018 17:44	1	RA11P104.D	RTX-5 0.32(mm)
140-10405-1		01/11/2018 18:31	1	RA11P105.D	RTX-5 0.32(mm)
140-10405-2		01/11/2018 19:18	1	RA11P106.D	RTX-5 0.32(mm)
140-10405-3		01/11/2018 20:05	1	RA11P107.D	RTX-5 0.32(mm)
ZZZZZ		01/11/2018 20:53	64.9		RTX-5 0.32(mm)
ZZZZZ		01/11/2018 21:41	3346.94		RTX-5 0.32(mm)
ZZZZZ		01/11/2018 22:31	1.71		RTX-5 0.32(mm)
ZZZZZ		01/11/2018 23:21	1.77		RTX-5 0.32(mm)
ZZZZZ		01/12/2018 00:11	1.77		RTX-5 0.32(mm)
140-10405-4		01/12/2018 01:44	1	RA11P102R.D	RTX-5 0.32(mm)
ZZZZZ		01/12/2018 02:34	1		RTX-5 0.32(mm)
ZZZZZ		01/12/2018 09:53	1		RTX-5 0.32(mm)

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 18 & KNOX-MS-0023, Rev 3

Instrument/Date	1/11/18 MR		Routine	DOD	OHIO
CCAL Chrom WL #	7100	CCAL Batch #	17352		17411
ICAL Chrom WL #	6453	ICAL Batch # / Event #	15542 / 1317		15543 / 1315

Chrom Review	1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	✓		na
2. Did BFB meet tune criteria? [F8]	✓	□ [Failed TO-14A, but passes TO-15] (NCM#_____)	✓
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICal File batch #/start/end Cal date/time)? [F8]	✓		✓
4. Is the %D ≤ 30% for all target analytes? 124 TWF [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab]	✓	□ CCV - %D - LCS criteria met (NCM# 11-0-18) □ CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM#_____)	✓
5. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene/1,2,3-trimethylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	N		no
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene	N		N
• 2-, and 1-methylnaphthalene			
6. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	N		no
7. Has the RT been updated to the method?			
Analyst/date CH 1/18/18		**2nd Level Reviewer/date** ✓ 01/12/18	
8. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]	✓	✓ on screen	✓
9. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]	✓		✓
10. Were all samples/QC analyzed within 24 hr of BFB? [F7]	✓		✓
11. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). *If no, list blank ID:*	✓	□ Method Blank – Report, ND (NCM#_____) □ Method Blank – Report, 10X (NCM#_____)	✓
12. All runs - peaks ID'd correctly and false positives removed?	✓		✓
13. If manual integrations performed, are they properly performed, correctly ID'd, baseline clearly identified, and reason given?	✓		✓
14. IS/Surr within limits? *List samples and reason (e.g.,* 1 thru 5*):* [Batch Results IS & SUR Tab] Sample / Reason / Sample / Reason	✓	□ (1) Surrogate – Matrix (NCM#_____) □ (2) Surrogate – High, ND (NCM#_____) □ (3) ISTD – RA/RA Concurs (NCM#_____) □ (4) Surrogate –RX concur, Report both (NCM#_____) □ (5) ISTD – Matrix, DL required (NCM#_____)	✓
15. Samples outside calibration range scheduled for dilution?	✓	□ ICAL – Range Exceeded; Minimum Dilution	✓
Chrom Review	**1st**	**If No, why is data reportable?**	**2nd**
16. For first analysis that is at a dilution, is highest target analyte >20% cal range? *List samples and reason:* Sample / Reason / Sample / Reason	✓	□ (1) Reporting Limit – Dilution, Matrix (NCM#_____) □ (2) Reporting Limit – Dilution, Non-Target (NCM#_____) □ (3) Issues with initial collection volume; see DRC.	✓
17. RIC inspected for proper integration for TPH?	N		no
18. Obvious non-TPH peaks excluded?			✓
19. Individual TPH peak area < octane high point area?			

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 18 & KNOX-MS-0023, Rev 3

TALS Review	1st	If No, why is data reportable?	2nd
20. Graphics uploaded? [paperclip]	✓		✓
21. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	✓		na
22. Sample special instructions verified?	✓		✓
23. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	✓	□ Marginal Exceedances - Within ME Limits and Random; Report (NCM# ___) □ LCS/LCSD - %R High (NCM#_____)	✓
24. Suffixes assigned properly (DL/RE)? [Sample List Tab]	✓		✓
25. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	✓		✓
26. Analytes over calibration range set to secondary [Conditions Review Tab]	✓		✓
27. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	✓		✓
28. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) *(If DUP not reported - set to 'Acceptable' for each job)*	✓		✓
29. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	✓	**500 mL blank ID:** 4 **200 mL blank ID:** 5	✓
30. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	✓		✓
31. Correct ICV linked to each MB? [QC Links]	✓		✓
32. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	✓		✓
33. Run Checklist and acknowledge findings [TALS]	✓		✓
34. Runs set to 1st level review?	✓	Runs set to 2nd level review?	✓
35. QC checker run and items addressed?	-na-		✓
36. Checklist & Entech report scanned, attached & assigned properly?	-na-		✓

Analyst:	**Date:** 4/12/18
Comments:	
2nd Level Reviewer :	**Date:** 04/15/18
Comments:	

Example Calculation: 10411-1 PE

On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF

4.53 x 200 mL x 6490 = 736.23

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10113-1

SDG No.:

Client Sample ID: 10605 | Lab Sample ID: 140-10113-6

Matrix: Air | Lab File ID: RL07P113.D

Analysis Method: TO-15 | Date Collected: 12/06/2017 16:05

Sample wt/vol: 200(mL) | Date Analyzed: 12/08/2017 02:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 16561 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	NC		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10113-1

SDG No.:

Client Sample ID: 10605 Lab Sample ID: 140-10113-6

Matrix: Air Lab File ID: RL07P113.D

Analysis Method: TO-15 Date Collected: 12/06/2017 16:05

Sample wt/vol: 200(mL) Date Analyzed: 12/08/2017 02:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 16561 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10113-1

SDG No.:

Client Sample ID: 10605 Lab Sample ID: 140-10113-6

Matrix: Air Lab File ID: RL07P113.D

Analysis Method: TO-15 Date Collected: 12/06/2017 16:05

Sample wt/vol: 200(mL) Date Analyzed: 12/08/2017 02:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 16561 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6819.b\RL07P113.D
Lims ID: 140-10113-A-6
Client ID: 10605
Sample Type: Client
Inject. Date: 08-Dec-2017 02:02:30 ALS Bottle#: 13 Worklist Smp#: 20
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006819-020
Misc. Info.: 10605
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20171204-6819.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 08-Dec-2017 09:58:16 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK012

First Level Reviewer: tajh Date: 08-Dec-2017 09:44:31

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.746	7.751	-0.005	84	256876	4.00	
* 2 1,4-Difluorobenzene	114	9.886	9.887	-0.001	95	1516368	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.880	14.880	0.000	89	1315170	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.589	16.589	0.000	87	1025635	4.26	
12 Butane	43	3.912	3.885	0.027	91	3593	0.0448	
35 2-Methylpentane	43	6.290	6.372	-0.086	37	383	NC	
39 Hexane	56	7.163	7.153	0.010	84	1296	0.0177	
44 1,1,1-Trichloroethane	97	8.743	8.738	0.005	96	9280	0.0367	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

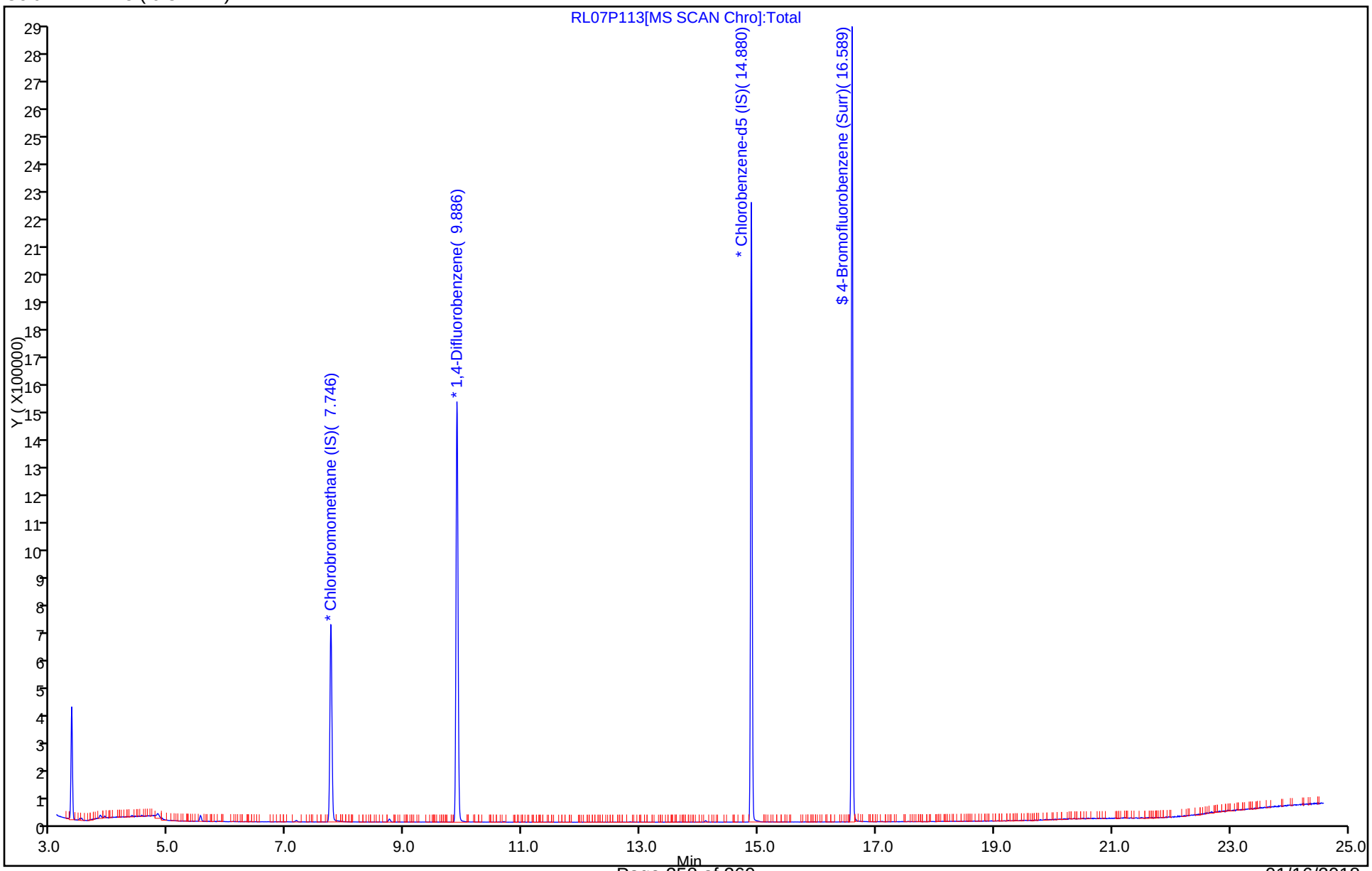
Report Date: 08-Dec-2017 09:58:51 Chrom Revision: 2.2 05-Dec-2017 07:36:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6819.b\RL07P113.D

Injection Date:	08-Dec-2017 02:02:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10113-A-6	Lab Sample ID:	140-10113-6	Worklist Smp#:	20
Client ID:	10605				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

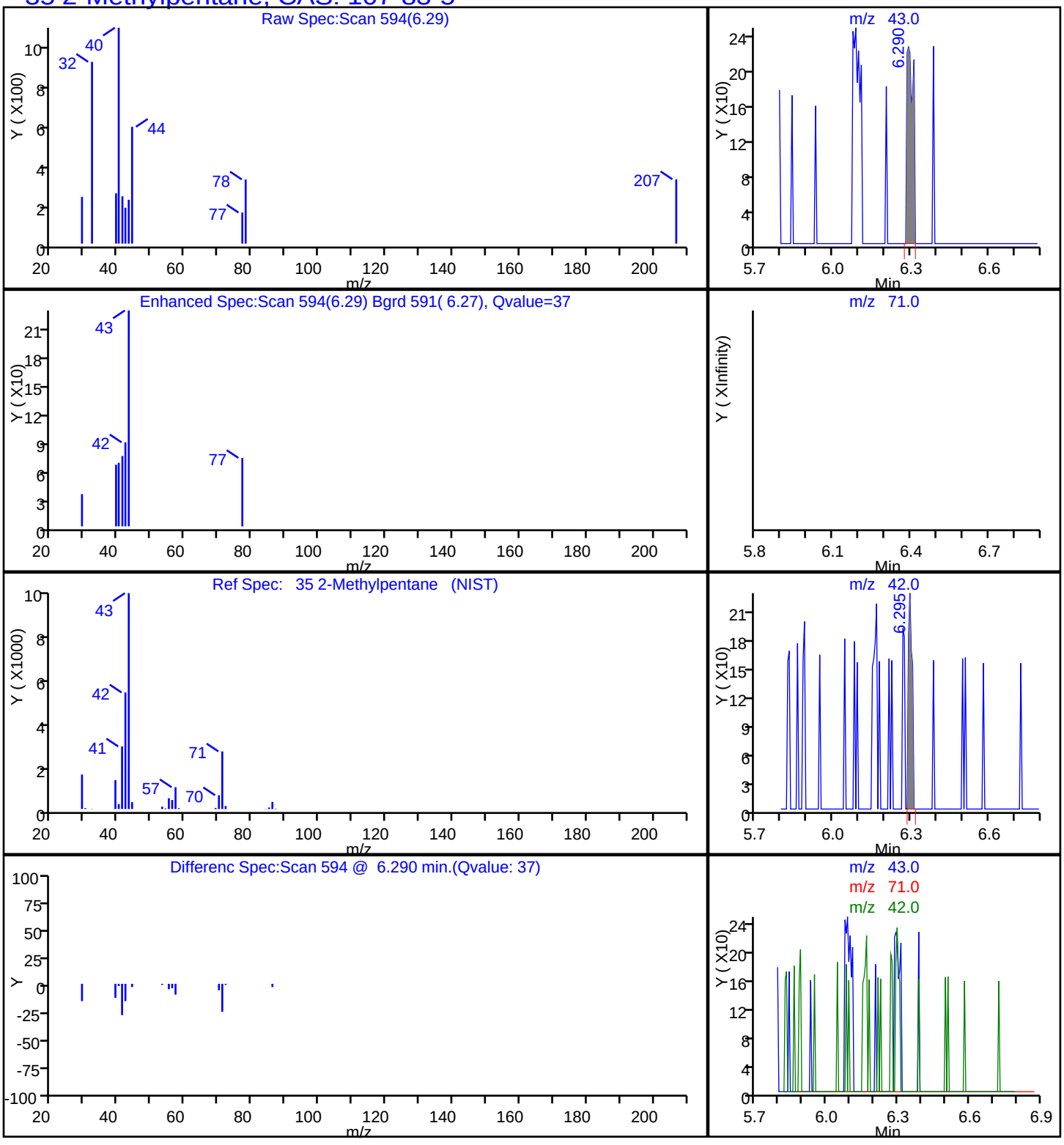


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171204-6819.b\RL07P113.D

Injection Date:	08-Dec-2017 02:02:30	Instrument ID:	MR
Lims ID:	140-10113-A-6	Lab Sample ID:	140-10113-6
Client ID:	10605		
Operator ID:		ALS Bottle#:	13 Worklist Smp#: 20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

35 2-Methylpentane, CAS: 107-83-5



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10117-1

SDG No.:

Client Sample ID: 11712 | Lab Sample ID: 140-10117-5

Matrix: Air | Lab File ID: LOT10117.D

Analysis Method: TO-15 | Date Collected: 12/07/2017 08:12

Sample wt/vol: 200(mL) | Date Analyzed: 12/08/2017 13:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 16602 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	NC		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10117-1

SDG No.:

Client Sample ID: 11712 Lab Sample ID: 140-10117-5

Matrix: Air Lab File ID: LOT10117.D

Analysis Method: TO-15 Date Collected: 12/07/2017 08:12

Sample wt/vol: 200(mL) Date Analyzed: 12/08/2017 13:21

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 16602 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10117-1

SDG No.:

Client Sample ID: 11712 | Lab Sample ID: 140-10117-5

Matrix: Air | Lab File ID: LOT10117.D

Analysis Method: TO-15 | Date Collected: 12/07/2017 08:12

Sample wt/vol: 200(mL) | Date Analyzed: 12/08/2017 13:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 16602 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171205-6830.b\LOT10117.D				
Lims ID:	140-10117-A-5				
Client ID:	11712				
Sample Type:	Client				
Inject. Date:	08-Dec-2017 13:21:30	ALS Bottle#:	2	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006830-005				
Misc. Info.:	11712				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20171205-6830.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	09-Dec-2017 14:47:40	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK017				
First Level Reviewer: barlozhetskayaa		Date:	09-Dec-2017 14:48:04		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.751	7.762	-0.011	83	238933	4.00	
* 2 1,4-Difluorobenzene	114	9.887	9.892	-0.005	95	1398059	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.880	14.885	-0.005	89	1202029	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.589	16.589	0.000	87	952778	4.33	
30 Methylene Chloride	84	5.546	5.540	0.006	89	13317	0.1369	
35 2-Methylpentane	43	6.312	6.363	-0.064	1	123	NC	
39 Hexane	56	7.174	7.163	0.011	83	2654	0.0390	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

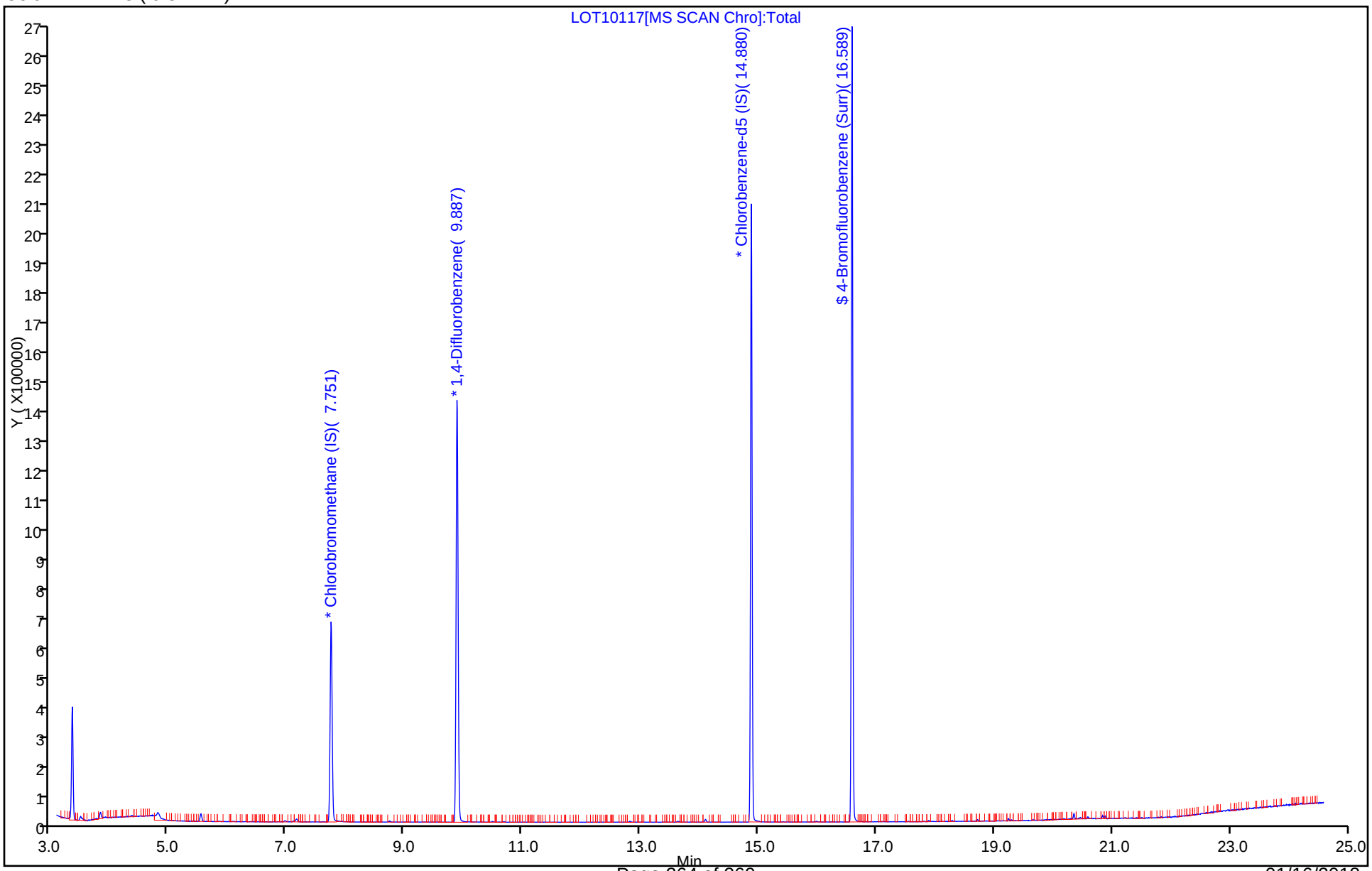
Report Date: 09-Dec-2017 14:48:05 Chrom Revision: 2.2 08-Dec-2017 11:41:26

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171205-6830.b\LOT10117.D

Injection Date:	08-Dec-2017 13:21:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10117-A-5	Lab Sample ID:	140-10117-5	Worklist Smp#:	5
Client ID:	11712				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

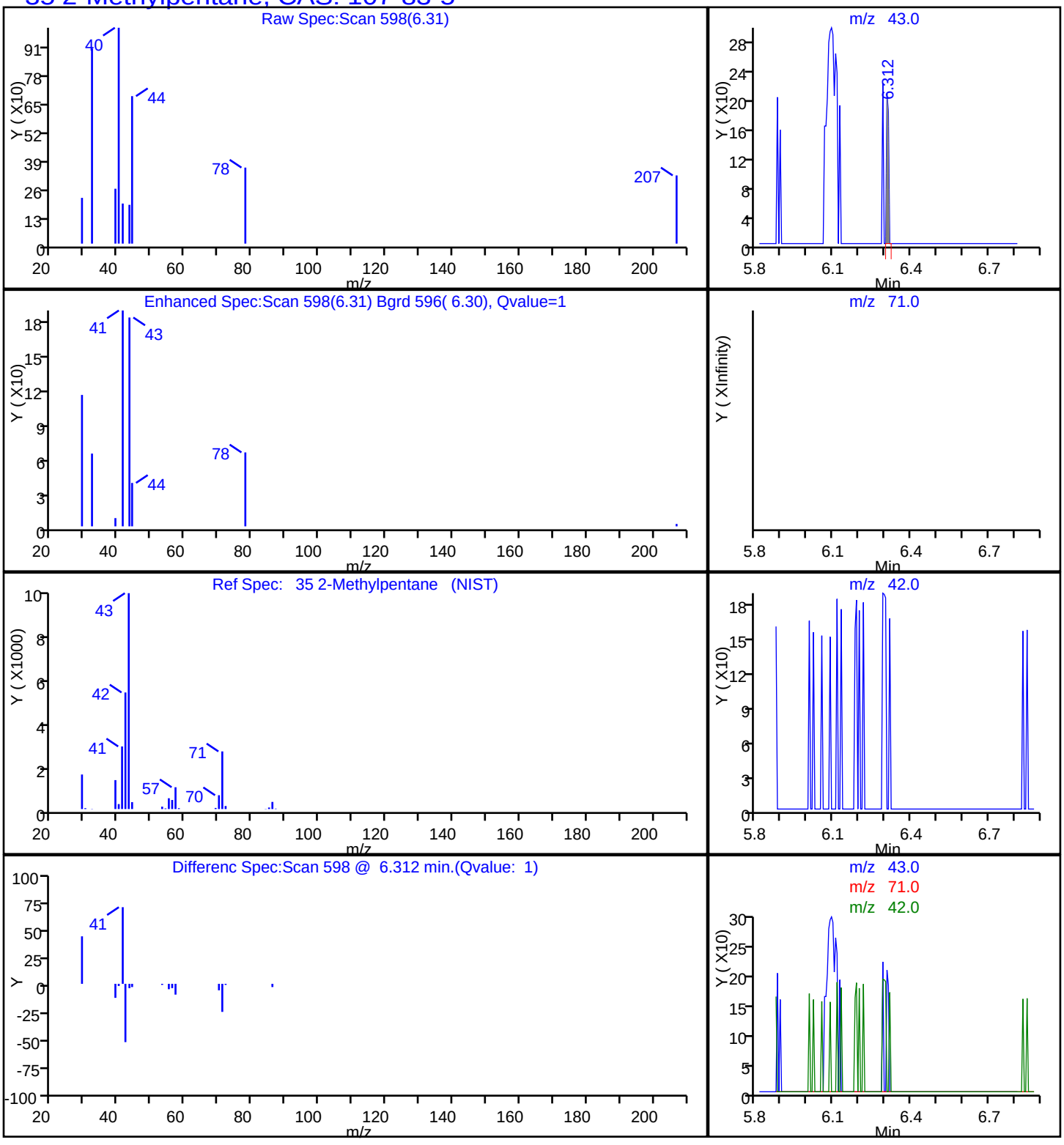


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171205-6830.b\LOT10117.D

Injection Date:	08-Dec-2017 13:21:30	Instrument ID:	MR
Lims ID:	140-10117-A-5	Lab Sample ID:	140-10117-5
Client ID:	11712		
Operator ID:		ALS Bottle#:	2 Worklist Smp#: 5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

35 2-Methylpentane, CAS: 107-83-5



Shipping and Receiving Documents

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information
Company: Tetra Tech
Address: 51 Franklin St.
City/State/Zip Annapolis, MD 21401
Phone:
FAX:
Project Name: LMC
Site/location: Bldg. A+C
PO # 117-0512140

Project Manager:
Phone:
Site Contact:
TAL Contact:

Analysis Turnaround Time
Standard (Specify)
Rush (Specify)

Sampled By: A. Edmunds

1 of 1 COCs

180325
BALTIMORE

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
C-Influent	1/9/18	1154	1156	-29.1	-4	09958	09643	X											
C-Mid Gac		1204	1205	-29.4	-4	09569	11639	X											
C-Effluent		1210	1211	-29.9	-4	10930	10334	X											
A-Influent		1253	1254	-29.3	-4	10614	11621	X											
A-Mid Gac		1237	1238	-29.3	-4	10104	10344	X											
A-Effluent		1246	1247	-29.3	-4	11594	11623	X											

Sampled by: AE

Temperature (Fahrenheit)

	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)

	Interior	Ambient	
Start			
Stop			

CUSTODY SEALS INTACT
RECEIVED AMBIENT RT 20.1/CT 21.0°C
BKD 1-10-18
1 COOLER FED X# 771178245702
6 CANS / 6 FLOWS (E)

Special Instructions/QC Requirements & Comments:
standard monthly method + analytes.

140-10405 Chain of Custody

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by: [signature]	Date/Time: 1-9-2018 / 1545	Received by: [signature]
Relinquished by: [signature]	Date/Time: 1/9/2018 16:39	Received by: [signature] 1-10-18 09:30 TA KNX

Loc: 140
10405

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST **Log In Number:**

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/			☐ **Containers, Broken**	
2. Were ambient air containers received intact?			/	☑ Checked in lab	
3. The coolers/containers custody seal if present, is it intact?	/			☐ Yes ☐ NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			/	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**	
5. Were all of the sample containers received intact?	/			☐ **Containers, Broken**	
6. Were samples received in appropriate containers?	/			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**	
8. Were all of the samples listed on the COC received?	/			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**	
9. Is the date/time of sample collection noted?	/			☐ **COC; No Date/Time; Client Contacted**	
10. Was the sampler identified on the COC?	/			☐ **Sampler Not Listed on COC**	**Labeling Verified by:** **Date:**
11. Is the client and project name/# identified?	/			☐ **COC Incorrect/Incomplete**	
12. Are tests/parameters listed for each sample?	/			☐ **COC No tests on COC**	**pH test strip lot number:**
13. Is the matrix of the samples noted?	/			☐ **COC Incorrect/Incomplete**	
14. Was COC relinquished? (Signed/Dated/Timed)	/			☐ **COC Incorrect/Incomplete**	
15. Were samples received within holding time?	/			☐ **Holding Time - Receipt**	
16. Were samples received with correct chemical preservative (excluding Encore)?			/	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**	
17. Were VOA samples received without headspace?			/	☐ **Headspace (VOA only)**	
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:_____			/	☐ **Residual Chlorine**	
19. For 1613B water samples is pH<9?			/	☐ If no, lab will adjust	
20. For rad samples was sample activity info. Provided?			/	☐ Project missing info	

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: 14062921 PM Instructions: _____

Sample Receiving Associate: _____ Date: 1-10-18

QA026R30.doc, 080916

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 1/10/2015

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
hmt	140-10405-a-1	09643	10113	B	1	-2.3	14:11	
hmt	140-10405-a-2	11639	10113	B	1	-1.9	14:12	
hmt	140-10405-a-3	10334	10117	B	1	-1.9	14:13	
hmt	140-10405-a-4	11621	10113	B	1	-1.2	14:14	
hmt	140-10405-a-5	10344	10113	B	1	-1.5	14:15	
hmt	140-10405-a-6	11623	10113	B	1	0.0	14:16	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

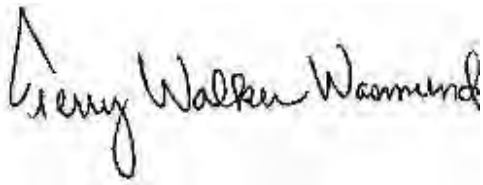
ANALYTICAL REPORT

Job Number: 140-10674-1

Job Description: LMC MRC - MRAS/BLDG-A

For:
Tetra Tech GEO
51 Franklin Street
Suite 400
Annapolis, MD 21401

Attention: Peter Rich



Approved for release.
Terry Walker Wasmund
Project Manager II
2/22/2018 12:08 PM

Terry Walker Wasmund, Project Manager II
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02/22/2018

cc: Belssi Chang
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Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-10674-1

Receipt
The samples were received on 2/10/2018 at 9:10 AM. The samples arrived in good condition and properly preserved.

Air - GC/MS VOA - Method TO-15 LL
EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

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

Comments
No additional comments.

Detection Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/BLDG-A

TestAmerica Job ID: 140-10674-1

Client Sample ID: BLDG-A EFFLUENT — Lab Sample ID: 140-10674-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	3.0		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.13	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	13		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.37	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	6.7		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.85		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	4.3		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	27		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.32	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.5		1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	2.1		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.16	J	0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	39		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.26		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Vinyl chloride	0.16	J	0.20	0.15	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.7		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	9.4		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.83	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	46		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.8	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	27		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	4.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	18		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	110		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	1.4	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	5.2		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	8.1		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.65	J	1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	220		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	1.4		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Vinyl chloride	0.40	J	0.51	0.37	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	7.2		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-A MID-GAC — Lab Sample ID: 140-10674-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	13		2.0	0.38	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.62	J	2.0	0.38	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	27		2.0	0.60	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.71	J	2.0	0.68	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	6.4		2.0	0.25	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	47		2.0	0.35	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	4.2	J	5.0	3.3	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.60	J	2.0	0.50	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	140		2.0	0.30	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	2.5	J	4.0	0.60	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	45		7.1	1.3	ug/m3	1		TO 15 LL	Total/NA
Chloroform	3.0	J	9.8	1.8	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BLDG-A MID-GAC (Continued) — Lab Sample ID: 140-10674-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	110		7.9	2.4	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	3.5	J	9.9	3.3	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	26		8.1	1.0	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	190		7.9	1.4	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	14	J	17	11	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	2.4	J	7.9	2.0	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	750		11	1.6	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	11	J	17	2.6	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-A INFLUENT — Lab Sample ID: 140-10674-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	5.0		2.0	0.58	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	9.1		2.0	0.38	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	18		2.0	0.60	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.73	J	2.0	0.68	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	3.3		2.0	0.25	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	31		2.0	0.35	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	4.0	J	5.0	3.3	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	77		2.0	0.30	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	190		1.0	0.35	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	16		6.4	1.8	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	32		7.1	1.3	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	70		7.9	2.4	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	3.6	J	9.9	3.3	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	13		8.1	1.0	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	120		7.9	1.4	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	14	J	17	11	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	420		11	1.6	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	1000		5.4	1.9	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BLDG-A EFFLUENT

Lab Sample ID: 140-10674-1

Date Collected: 02/09/18 11:19
Matrix: Air
Date Received: 02/10/18 09:10
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**3.0**		0.40	0.12	ppb v/v			02/20/18 00:08	1
Carbon tetrachloride	**0.13**	**J**	0.40	0.075	ppb v/v			02/20/18 00:08	1
Chlorodifluoromethane	**13**		0.40	0.075	ppb v/v			02/20/18 00:08	1
Chloroform	**0.37**	**J**	0.40	0.075	ppb v/v			02/20/18 00:08	1
cis-1,2-Dichloroethene	**6.7**		0.40	0.12	ppb v/v			02/20/18 00:08	1
Dichlorodifluoromethane	**0.85**		0.40	0.14	ppb v/v			02/20/18 00:08	1
1,1-Dichloroethane	**4.3**		0.40	0.050	ppb v/v			02/20/18 00:08	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/20/18 00:08	1
1,1-Dichloroethene	**27**		0.40	0.070	ppb v/v			02/20/18 00:08	1
Ethylbenzene	**0.32**	**J**	0.40	0.14	ppb v/v			02/20/18 00:08	1
Methylene Chloride	**1.5**		1.0	0.65	ppb v/v			02/20/18 00:08	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/20/18 00:08	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/20/18 00:08	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/20/18 00:08	1
Toluene	**2.1**		0.60	0.60	ppb v/v			02/20/18 00:08	1
trans-1,2-Dichloroethene	**0.16**	**J**	0.40	0.10	ppb v/v			02/20/18 00:08	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/20/18 00:08	1
1,1,1-Trichloroethane	**39**		0.40	0.060	ppb v/v			02/20/18 00:08	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/20/18 00:08	1
Trichloroethene	**0.26**		0.20	0.070	ppb v/v			02/20/18 00:08	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/20/18 00:08	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/20/18 00:08	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/20/18 00:08	1
Vinyl chloride	**0.16**	**J**	0.20	0.15	ppb v/v			02/20/18 00:08	1
Xylenes, Total	**1.7**		0.80	0.12	ppb v/v			02/20/18 00:08	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**9.4**		1.3	0.37	ug/m3			02/20/18 00:08	1
Carbon tetrachloride	**0.83**	**J**	2.5	0.47	ug/m3			02/20/18 00:08	1
Chlorodifluoromethane	**46**		1.4	0.27	ug/m3			02/20/18 00:08	1
Chloroform	**1.8**	**J**	2.0	0.37	ug/m3			02/20/18 00:08	1
cis-1,2-Dichloroethene	**27**		1.6	0.48	ug/m3			02/20/18 00:08	1
Dichlorodifluoromethane	**4.2**		2.0	0.67	ug/m3			02/20/18 00:08	1
1,1-Dichloroethane	**18**		1.6	0.20	ug/m3			02/20/18 00:08	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/20/18 00:08	1
1,1-Dichloroethene	**110**		1.6	0.28	ug/m3			02/20/18 00:08	1
Ethylbenzene	**1.4**	**J**	1.7	0.59	ug/m3			02/20/18 00:08	1
Methylene Chloride	**5.2**		3.5	2.3	ug/m3			02/20/18 00:08	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/20/18 00:08	1
Naphthalene	ND		1.0	1.0	ug/m3			02/20/18 00:08	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/20/18 00:08	1
Toluene	**8.1**		2.3	2.3	ug/m3			02/20/18 00:08	1
trans-1,2-Dichloroethene	**0.65**	**J**	1.6	0.40	ug/m3			02/20/18 00:08	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/20/18 00:08	1
1,1,1-Trichloroethane	**220**		2.2	0.33	ug/m3			02/20/18 00:08	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/20/18 00:08	1
Trichloroethene	**1.4**		1.1	0.38	ug/m3			02/20/18 00:08	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/20/18 00:08	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/20/18 00:08	1

Client Sample ID: BLDG-A EFFLUENT

Lab Sample ID: 140-10674-1

Date Collected: 02/09/18 11:19
Matrix: Air
Date Received: 02/10/18 09:10
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/20/18 00:08	1
Vinyl chloride	**0.40**	**J**	0.51	0.37	ug/m3			02/20/18 00:08	1
Xylenes, Total	**7.2**		3.5	0.52	ug/m3			02/20/18 00:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*60 - 140*		*02/20/18 00:08*	*1*

Client Sample ID: BLDG-A MID-GAC

Lab Sample ID: 140-10674-2

Date Collected: 02/09/18 11:23

Matrix: Air

Date Received: 02/10/18 09:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0	0.58	ppb v/v			02/20/18 00:48	1
Carbon tetrachloride	ND		2.0	0.38	ppb v/v			02/20/18 00:48	1
Chlorodifluoromethane	**13**		2.0	0.38	ppb v/v			02/20/18 00:48	1
Chloroform	**0.62**	**J**	2.0	0.38	ppb v/v			02/20/18 00:48	1
cis-1,2-Dichloroethene	**27**		2.0	0.60	ppb v/v			02/20/18 00:48	1
Dichlorodifluoromethane	**0.71**	**J**	2.0	0.68	ppb v/v			02/20/18 00:48	1
1,1-Dichloroethane	**6.4**		2.0	0.25	ppb v/v			02/20/18 00:48	1
1,2-Dichloroethane	ND		2.0	0.48	ppb v/v			02/20/18 00:48	1
1,1-Dichloroethene	**47**		2.0	0.35	ppb v/v			02/20/18 00:48	1
Ethylbenzene	ND		2.0	0.68	ppb v/v			02/20/18 00:48	1
Methylene Chloride	**4.2**	**J**	5.0	3.3	ppb v/v			02/20/18 00:48	1
Methyl tert-butyl ether	ND		10	1.7	ppb v/v			02/20/18 00:48	1
Naphthalene	ND		1.0	1.0	ppb v/v			02/20/18 00:48	1
Tetrachloroethene	ND		2.0	0.40	ppb v/v			02/20/18 00:48	1
Toluene	ND		3.0	3.0	ppb v/v			02/20/18 00:48	1
trans-1,2-Dichloroethene	**0.60**	**J**	2.0	0.50	ppb v/v			02/20/18 00:48	1
1,2,4-Trichlorobenzene	ND		2.0	0.98	ppb v/v			02/20/18 00:48	1
1,1,1-Trichloroethane	**140**		2.0	0.30	ppb v/v			02/20/18 00:48	1
1,1,2-Trichloroethane	ND		2.0	0.53	ppb v/v			02/20/18 00:48	1
Trichloroethene	ND		1.0	0.35	ppb v/v			02/20/18 00:48	1
1,2,3-Trimethylbenzene	ND		2.0	0.85	ppb v/v			02/20/18 00:48	1
1,2,4-Trimethylbenzene	ND		2.0	0.63	ppb v/v			02/20/18 00:48	1
1,3,5-Trimethylbenzene	ND		2.0	0.65	ppb v/v			02/20/18 00:48	1
Vinyl chloride	ND		1.0	0.73	ppb v/v			02/20/18 00:48	1
Xylenes, Total	**2.5**	**J**	4.0	0.60	ppb v/v			02/20/18 00:48	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		6.4	1.8	ug/m3			02/20/18 00:48	1
Carbon tetrachloride	ND		13	2.4	ug/m3			02/20/18 00:48	1
Chlorodifluoromethane	**45**		7.1	1.3	ug/m3			02/20/18 00:48	1
Chloroform	**3.0**	**J**	9.8	1.8	ug/m3			02/20/18 00:48	1
cis-1,2-Dichloroethene	**110**		7.9	2.4	ug/m3			02/20/18 00:48	1
Dichlorodifluoromethane	**3.5**	**J**	9.9	3.3	ug/m3			02/20/18 00:48	1
1,1-Dichloroethane	**26**		8.1	1.0	ug/m3			02/20/18 00:48	1
1,2-Dichloroethane	ND		8.1	1.9	ug/m3			02/20/18 00:48	1
1,1-Dichloroethene	**190**		7.9	1.4	ug/m3			02/20/18 00:48	1
Ethylbenzene	ND		8.7	2.9	ug/m3			02/20/18 00:48	1
Methylene Chloride	**14**	**J**	17	11	ug/m3			02/20/18 00:48	1
Methyl tert-butyl ether	ND		36	6.1	ug/m3			02/20/18 00:48	1
Naphthalene	ND		5.2	5.2	ug/m3			02/20/18 00:48	1
Tetrachloroethene	ND		14	2.7	ug/m3			02/20/18 00:48	1
Toluene	ND		11	11	ug/m3			02/20/18 00:48	1
trans-1,2-Dichloroethene	**2.4**	**J**	7.9	2.0	ug/m3			02/20/18 00:48	1
1,2,4-Trichlorobenzene	ND		15	7.2	ug/m3			02/20/18 00:48	1
1,1,1-Trichloroethane	**750**		11	1.6	ug/m3			02/20/18 00:48	1
1,1,2-Trichloroethane	ND		11	2.9	ug/m3			02/20/18 00:48	1
Trichloroethene	ND		5.4	1.9	ug/m3			02/20/18 00:48	1
1,2,3-Trimethylbenzene	ND		9.8	4.2	ug/m3			02/20/18 00:48	1
1,2,4-Trimethylbenzene	ND		9.8	3.1	ug/m3			02/20/18 00:48	1

Client Sample ID: BLDG-A MID-GAC

Date Collected: 02/09/18 11:23
Date Received: 02/10/18 09:10
Sample Container: Summa Canister 1L

Lab Sample ID: 140-10674-2

Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		9.8	3.2	ug/m3			02/20/18 00:48	1
Vinyl chloride	ND		2.6	1.9	ug/m3			02/20/18 00:48	1
Xylenes, Total	**11**	**J**	17	2.6	ug/m3			02/20/18 00:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*60 - 140*		*02/20/18 00:48*	*1*

Client Sample ID: BLDG-A INFLUENT

Lab Sample ID: 140-10674-3

Date Collected: 02/09/18 11:27

Matrix: Air

Date Received: 02/10/18 09:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**5.0**		2.0	0.58	ppb v/v			02/20/18 01:29	1
Carbon tetrachloride	ND		2.0	0.38	ppb v/v			02/20/18 01:29	1
Chlorodifluoromethane	**9.1**		2.0	0.38	ppb v/v			02/20/18 01:29	1
Chloroform	ND		2.0	0.38	ppb v/v			02/20/18 01:29	1
cis-1,2-Dichloroethene	**18**		2.0	0.60	ppb v/v			02/20/18 01:29	1
Dichlorodifluoromethane	**0.73**	**J**	2.0	0.68	ppb v/v			02/20/18 01:29	1
1,1-Dichloroethane	**3.3**		2.0	0.25	ppb v/v			02/20/18 01:29	1
1,2-Dichloroethane	ND		2.0	0.48	ppb v/v			02/20/18 01:29	1
1,1-Dichloroethene	**31**		2.0	0.35	ppb v/v			02/20/18 01:29	1
Ethylbenzene	ND		2.0	0.68	ppb v/v			02/20/18 01:29	1
Methylene Chloride	**4.0**	**J**	5.0	3.3	ppb v/v			02/20/18 01:29	1
Methyl tert-butyl ether	ND		10	1.7	ppb v/v			02/20/18 01:29	1
Naphthalene	ND		1.0	1.0	ppb v/v			02/20/18 01:29	1
Tetrachloroethene	ND		2.0	0.40	ppb v/v			02/20/18 01:29	1
Toluene	ND		3.0	3.0	ppb v/v			02/20/18 01:29	1
trans-1,2-Dichloroethene	ND		2.0	0.50	ppb v/v			02/20/18 01:29	1
1,2,4-Trichlorobenzene	ND		2.0	0.98	ppb v/v			02/20/18 01:29	1
1,1,1-Trichloroethane	**77**		2.0	0.30	ppb v/v			02/20/18 01:29	1
1,1,2-Trichloroethane	ND		2.0	0.53	ppb v/v			02/20/18 01:29	1
Trichloroethene	**190**		1.0	0.35	ppb v/v			02/20/18 01:29	1
1,2,3-Trimethylbenzene	ND		2.0	0.85	ppb v/v			02/20/18 01:29	1
1,2,4-Trimethylbenzene	ND		2.0	0.63	ppb v/v			02/20/18 01:29	1
1,3,5-Trimethylbenzene	ND		2.0	0.65	ppb v/v			02/20/18 01:29	1
Vinyl chloride	ND		1.0	0.73	ppb v/v			02/20/18 01:29	1
Xylenes, Total	ND		4.0	0.60	ppb v/v			02/20/18 01:29	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**16**		6.4	1.8	ug/m3			02/20/18 01:29	1
Carbon tetrachloride	ND		13	2.4	ug/m3			02/20/18 01:29	1
Chlorodifluoromethane	**32**		7.1	1.3	ug/m3			02/20/18 01:29	1
Chloroform	ND		9.8	1.8	ug/m3			02/20/18 01:29	1
cis-1,2-Dichloroethene	**70**		7.9	2.4	ug/m3			02/20/18 01:29	1
Dichlorodifluoromethane	**3.6**	**J**	9.9	3.3	ug/m3			02/20/18 01:29	1
1,1-Dichloroethane	**13**		8.1	1.0	ug/m3			02/20/18 01:29	1
1,2-Dichloroethane	ND		8.1	1.9	ug/m3			02/20/18 01:29	1
1,1-Dichloroethene	**120**		7.9	1.4	ug/m3			02/20/18 01:29	1
Ethylbenzene	ND		8.7	2.9	ug/m3			02/20/18 01:29	1
Methylene Chloride	**14**	**J**	17	11	ug/m3			02/20/18 01:29	1
Methyl tert-butyl ether	ND		36	6.1	ug/m3			02/20/18 01:29	1
Naphthalene	ND		5.2	5.2	ug/m3			02/20/18 01:29	1
Tetrachloroethene	ND		14	2.7	ug/m3			02/20/18 01:29	1
Toluene	ND		11	11	ug/m3			02/20/18 01:29	1
trans-1,2-Dichloroethene	ND		7.9	2.0	ug/m3			02/20/18 01:29	1
1,2,4-Trichlorobenzene	ND		15	7.2	ug/m3			02/20/18 01:29	1
1,1,1-Trichloroethane	**420**		11	1.6	ug/m3			02/20/18 01:29	1
1,1,2-Trichloroethane	ND		11	2.9	ug/m3			02/20/18 01:29	1
Trichloroethene	**1000**		5.4	1.9	ug/m3			02/20/18 01:29	1
1,2,3-Trimethylbenzene	ND		9.8	4.2	ug/m3			02/20/18 01:29	1
1,2,4-Trimethylbenzene	ND		9.8	3.1	ug/m3			02/20/18 01:29	1

Client Sample ID: BLDG-A INFLUENT

Lab Sample ID: 140-10674-3

Date Collected: 02/09/18 11:27
Matrix: Air
Date Received: 02/10/18 09:10
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		9.8	3.2	ug/m3			02/20/18 01:29	1
Vinyl chloride	ND		2.6	1.9	ug/m3			02/20/18 01:29	1
Xylenes, Total	ND		17	2.6	ug/m3			02/20/18 01:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*60 - 140*		*02/20/18 01:29*	*1*

Default Detection Limits

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/BLDG-A

TestAmerica Job ID: 140-10674-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.20	0.13	ppb v/v	TO 15 LL
Methylene Chloride	0.69	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/BLDG-A

TestAmerica Job ID: 140-10674-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)								
		BFB								
Lab Sample ID	Client Sample ID	(60-140)								
140-10674-1	BLDG-A EFFLUENT	96								
140-10674-2	BLDG-A MID-GAC	99								
140-10674-3	BLDG-A INFLUENT	98								
LCS 140-18252/1002	Lab Control Sample	110								
MB 140-18252/4	Method Blank	99								

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-18252/4
Matrix: Air
Analysis Batch: 18252

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			02/19/18 11:11	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			02/19/18 11:11	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			02/19/18 11:11	1
Chloroform	ND		0.080	0.015	ppb v/v			02/19/18 11:11	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			02/19/18 11:11	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			02/19/18 11:11	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			02/19/18 11:11	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			02/19/18 11:11	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			02/19/18 11:11	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			02/19/18 11:11	1
Methylene Chloride	ND		0.20	0.13	ppb v/v			02/19/18 11:11	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			02/19/18 11:11	1
Naphthalene	ND		0.040	0.040	ppb v/v			02/19/18 11:11	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			02/19/18 11:11	1
Toluene	ND		0.12	0.12	ppb v/v			02/19/18 11:11	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			02/19/18 11:11	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			02/19/18 11:11	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			02/19/18 11:11	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			02/19/18 11:11	1
Trichloroethene	ND		0.040	0.014	ppb v/v			02/19/18 11:11	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			02/19/18 11:11	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			02/19/18 11:11	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			02/19/18 11:11	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			02/19/18 11:11	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			02/19/18 11:11	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.26	0.073	ug/m3			02/19/18 11:11	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			02/19/18 11:11	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			02/19/18 11:11	1
Chloroform	ND		0.39	0.073	ug/m3			02/19/18 11:11	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			02/19/18 11:11	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			02/19/18 11:11	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			02/19/18 11:11	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			02/19/18 11:11	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			02/19/18 11:11	1
Ethylbenzene	ND		0.35	0.12	ug/m3			02/19/18 11:11	1
Methylene Chloride	ND		0.69	0.45	ug/m3			02/19/18 11:11	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			02/19/18 11:11	1
Naphthalene	ND		0.21	0.21	ug/m3			02/19/18 11:11	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			02/19/18 11:11	1
Toluene	ND		0.45	0.45	ug/m3			02/19/18 11:11	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			02/19/18 11:11	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			02/19/18 11:11	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			02/19/18 11:11	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			02/19/18 11:11	1
Trichloroethene	ND		0.21	0.075	ug/m3			02/19/18 11:11	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			02/19/18 11:11	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-18252/4
Matrix: Air
Analysis Batch: 18252

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			02/19/18 11:11	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			02/19/18 11:11	1
Vinyl chloride	ND		0.10	0.074	ug/m3			02/19/18 11:11	1
Xylenes, Total	ND		0.69	0.10	ug/m3			02/19/18 11:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*60 - 140*		*02/19/18 11:11*	*1*

Lab Sample ID: LCS 140-18252/1002
Matrix: Air
Analysis Batch: 18252

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2.00	1.87		ppb v/v		94	70 - 130
Carbon tetrachloride	2.00	1.86		ppb v/v		93	70 - 130
Chlorodifluoromethane	2.00	2.49		ppb v/v		125	60 - 140
Chloroform	2.00	2.22		ppb v/v		111	70 - 130
cis-1,2-Dichloroethene	2.00	2.00		ppb v/v		100	70 - 130
Dichlorodifluoromethane	2.00	2.42		ppb v/v		121	60 - 140
1,1-Dichloroethane	2.00	2.29		ppb v/v		114	70 - 130
1,2-Dichloroethane	2.00	2.12		ppb v/v		106	70 - 130
1,1-Dichloroethene	2.00	2.02		ppb v/v		101	70 - 130
Ethylbenzene	2.00	1.88		ppb v/v		94	70 - 130
Methylene Chloride	2.00	1.90		ppb v/v		95	70 - 130
Methyl tert-butyl ether	2.00	2.24		ppb v/v		112	60 - 140
Naphthalene	2.00	1.64		ppb v/v		82	60 - 140
Tetrachloroethene	2.00	1.73		ppb v/v		86	70 - 130
Toluene	2.00	1.83		ppb v/v		91	70 - 130
trans-1,2-Dichloroethene	2.00	2.03		ppb v/v		101	70 - 130
1,2,4-Trichlorobenzene	2.00	1.68		ppb v/v		84	60 - 140
1,1,1-Trichloroethane	2.00	2.25		ppb v/v		112	70 - 130
1,1,2-Trichloroethane	2.00	1.92		ppb v/v		96	70 - 130
Trichloroethene	2.00	1.70		ppb v/v		85	70 - 130
1,2,3-Trimethylbenzene	2.00	1.84		ppb v/v		92	70 - 130
1,2,4-Trimethylbenzene	2.00	1.89		ppb v/v		95	70 - 130
1,3,5-Trimethylbenzene	2.00	1.76		ppb v/v		88	70 - 130
Vinyl chloride	2.00	2.34		ppb v/v		117	70 - 130
Xylenes, Total	6.00	5.83		ppb v/v		97	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	5.98		ug/m3		94	70 - 130
Carbon tetrachloride	13	11.7		ug/m3		93	70 - 130
Chlorodifluoromethane	7.1	8.81		ug/m3		125	60 - 140
Chloroform	9.8	10.8		ug/m3		111	70 - 130
cis-1,2-Dichloroethene	7.9	7.92		ug/m3		100	70 - 130
Dichlorodifluoromethane	9.9	12.0		ug/m3		121	60 - 140
1,1-Dichloroethane	8.1	9.27		ug/m3		114	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-18252/1002
Matrix: Air
Analysis Batch: 18252

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	8.1	8.59		ug/m3		106	70 - 130
1,1-Dichloroethene	7.9	8.01		ug/m3		101	70 - 130
Ethylbenzene	8.7	8.16		ug/m3		94	70 - 130
Methylene Chloride	6.9	6.60		ug/m3		95	70 - 130
Methyl tert-butyl ether	7.2	8.09		ug/m3		112	60 - 140
Naphthalene	10	8.58		ug/m3		82	60 - 140
Tetrachloroethene	14	11.7		ug/m3		86	70 - 130
Toluene	7.5	6.89		ug/m3		91	70 - 130
trans-1,2-Dichloroethene	7.9	8.04		ug/m3		101	70 - 130
1,2,4-Trichlorobenzene	15	12.5		ug/m3		84	60 - 140
1,1,1-Trichloroethane	11	12.3		ug/m3		112	70 - 130
1,1,2-Trichloroethane	11	10.5		ug/m3		96	70 - 130
Trichloroethene	11	9.16		ug/m3		85	70 - 130
1,2,3-Trimethylbenzene	9.8	9.06		ug/m3		92	70 - 130
1,2,4-Trimethylbenzene	9.8	9.31		ug/m3		95	70 - 130
1,3,5-Trimethylbenzene	9.8	8.65		ug/m3		88	70 - 130
Vinyl chloride	5.1	5.99		ug/m3		117	70 - 130
Xylenes, Total	26	25.3		ug/m3		97	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*60 - 140*

QC Association Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/BLDG-A

TestAmerica Job ID: 140-10674-1

Air - GC/MS VOA

Analysis Batch: 18252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-10674-1	BLDG-A EFFLUENT	Total/NA	Air	TO 15 LL	
140-10674-2	BLDG-A MID-GAC	Total/NA	Air	TO 15 LL	
140-10674-3	BLDG-A INFLUENT	Total/NA	Air	TO 15 LL	
MB 140-18252/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-18252/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/BLDG-A

TestAmerica Job ID: 140-10674-1

Client Sample ID: BLDG-A EFFLUENT
Lab Sample ID: 140-10674-1
Date Collected: 02/09/18 11:19
Matrix: Air
Date Received: 02/10/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	18252	02/20/18 00:08	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: BLDG-A MID-GAC
Lab Sample ID: 140-10674-2
Date Collected: 02/09/18 11:23
Matrix: Air
Date Received: 02/10/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	20 mL	500 mL	18252	02/20/18 00:48	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: BLDG-A INFLUENT
Lab Sample ID: 140-10674-3
Date Collected: 02/09/18 11:27
Matrix: Air
Date Received: 02/10/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	20 mL	500 mL	18252	02/20/18 01:29	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-18252/4
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	18252	02/19/18 11:11	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-18252/1002
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	18252	02/19/18 09:20	HMT	TAL KNX
	Instrument ID: MG									

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/BLDG-A

TestAmerica Job ID: 140-10674-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/BLDG-A

TestAmerica Job ID: 140-10674-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-10674-1	BLDG-A EFFLUENT	Air	02/09/18 11:19	02/10/18 09:10
140-10674-2	BLDG-A MID-GAC	Air	02/09/18 11:23	02/10/18 09:10
140-10674-3	BLDG-A INFLUENT	Air	02/09/18 11:27	02/10/18 09:10

Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
BLDG-A EFFLUENT	140-10674-1	96
BLDG-A MID-GAC	140-10674-2	99
BLDG-A INFLUENT	140-10674-3	98
	MB 140-18252/4	99
	LCS 140-18252/1002	110

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1

SDG No.:

Matrix: Air Level: Low Lab File ID: GCCVB19-LCS.d

Lab ID: LCS 140-18252/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.87	94	70-130	
Carbon tetrachloride	2.00	1.86	93	70-130	
Chlorodifluoromethane	2.00	2.49	125	60-140	
Chloroform	2.00	2.22	111	70-130	
cis-1,2-Dichloroethene	2.00	2.00	100	70-130	
Dichlorodifluoromethane	2.00	2.42	121	60-140	
1,1-Dichloroethane	2.00	2.29	114	70-130	
1,2-Dichloroethane	2.00	2.12	106	70-130	
1,1-Dichloroethene	2.00	2.02	101	70-130	
Ethylbenzene	2.00	1.88	94	70-130	
Methylene Chloride	2.00	1.90	95	70-130	
Methyl tert-butyl ether	2.00	2.24	112	60-140	
Naphthalene	2.00	1.64	82	60-140	
Tetrachloroethene	2.00	1.73	86	70-130	
Toluene	2.00	1.83	91	70-130	
trans-1,2-Dichloroethene	2.00	2.03	101	70-130	
1,2,4-Trichlorobenzene	2.00	1.68	84	60-140	
1,1,1-Trichloroethane	2.00	2.25	112	70-130	
1,1,2-Trichloroethane	2.00	1.92	96	70-130	
Trichloroethene	2.00	1.70	85	70-130	
1,2,3-Trimethylbenzene	2.00	1.84	92	70-130	
1,2,4-Trimethylbenzene	2.00	1.89	95	70-130	
1,3,5-Trimethylbenzene	2.00	1.76	88	70-130	
Vinyl chloride	2.00	2.34	117	70-130	
Xylenes, Total	6.00	5.83	97	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1

SDG No.:

Lab File ID: G500BB19.D Lab Sample ID: MB 140-18252/4

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MG Date Analyzed: 02/19/2018 11:11

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-18252/1002	GCCVB19-LCS.d	02/19/2018 09:20
BLDG-A EFFLUENT	140-10674-1	GB19P115.D	02/20/2018 00:08
BLDG-A MID-GAC	140-10674-2	GB19P116.D	02/20/2018 00:48
BLDG-A INFLUENT	140-10674-3	GB19P201.D	02/20/2018 01:29

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1

SDG No.:

Lab File ID: GBFBK13.D BFB Injection Date: 11/13/2017

Instrument ID: MG BFB Injection Time: 14:59

Analysis Batch No.: 15917

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.3	
75	30.0 - 60.0 % of mass 95	51.8	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	82.0	
175	5.0 - 9.0 % of mass 174	5.6	(6.8) 1
176	95.0 - 101.0 % of mass 174	79.5	(97.0) 1
177	5.0 - 9.0 % of mass 176	5.2	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-15917/3	GK13IC01.D	11/13/2017	16:15
	IC 140-15917/4	GK13IC02.D	11/13/2017	16:57
	IC 140-15917/5	GK13IC03.D	11/13/2017	17:39
	IC 140-15917/6	GK13IC04.D	11/13/2017	18:22
	IC 140-15917/7	GK13IC05.D	11/13/2017	19:05
	IC 140-15917/8	GK13IC06.D	11/13/2017	19:47
	ICIS 140-15917/9	GK13IC07.D	11/13/2017	20:29
	IC 140-15917/10	GK13IC08.D	11/13/2017	21:11
	IC 140-15917/11	GK13IC09.D	11/13/2017	21:54
	IC 140-15917/12	GK13IC10.D	11/13/2017	22:37
	ICV 140-15917/14	GICVK13.D	11/14/2017	00:02

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1

SDG No.:

Lab File ID: GBFBB19.D BFB Injection Date: 02/19/2018

Instrument ID: MG BFB Injection Time: 08:47

Analysis Batch No.: 18252

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.6	
75	30.0 - 60.0 % of mass 95	54.0	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	75.5	
175	5.0 - 9.0 % of mass 174	5.3	(7.0) 1
176	95.0 - 101.0 % of mass 174	72.1	(95.4) 1
177	5.0 - 9.0 % of mass 176	4.8	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-18252/2	GCCVB19.D	02/19/2018	09:20
	LCS 140-18252/1002	GCCVB19-LCS.d	02/19/2018	09:20
	MB 140-18252/4	G500BB19.D	02/19/2018	11:11
BLDG-A EFFLUENT	140-10674-1	GB19P115.D	02/20/2018	00:08
BLDG-A MID-GAC	140-10674-2	GB19P116.D	02/20/2018	00:48
BLDG-A INFLUENT	140-10674-3	GB19P201.D	02/20/2018	01:29

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1

SDG No.:

Sample No.: ICIS 140-15917/9 Date Analyzed: 11/13/2017 20:29

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): GK13IC07.D Heated Purge: (Y/N) N

Calibration ID: 1337

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		485567	7.62	2785396	9.76	2750264	14.71
UPPER LIMIT		679794	7.95	3899554	10.09	3850370	15.04
LOWER LIMIT		291340	7.29	1671238	9.43	1650158	14.38
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-15917/14		572242	7.61	3126736	9.75	3200010	14.70

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1

SDG No.:

Sample No.: CCVIS 140-18252/2 Date Analyzed: 02/19/2018 09:20

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): GCCVB19.D Heated Purge: (Y/N) N

Calibration ID: 1337

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		280634	7.57	1767087	9.71	1720815	14.67
UPPER LIMIT		392888	7.90	2473922	10.04	2409141	15.00
LOWER LIMIT		168380	7.24	1060252	9.38	1032489	14.34
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-18252/1002		280634	7.57	1767087	9.71	1720815	14.67
MB 140-18252/4		316429	7.58	1986147	9.71	1795132	14.67
140-10674-1	BLDG-A EFFLUENT	276636	7.56	1600077	9.70	1553297	14.66
140-10674-2	BLDG-A MID-GAC	312902	7.56	1631145	9.70	1561286	14.66
140-10674-3	BLDG-A INFLUENT	324981	7.56	1583110	9.70	1538356	14.66

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10674-1

SDG No.:

Client Sample ID: BLDG-A EFFLUENT | Lab Sample ID: 140-10674-1

Matrix: Air | Lab File ID: GB19P115.D

Analysis Method: TO 15 LL | Date Collected: 02/09/2018 11:19

Sample wt/vol: 100(mL) | Date Analyzed: 02/20/2018 00:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18252 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	3.0		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.13	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	13		0.40	0.075
67-66-3	Chloroform	119.38	0.37	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	6.7		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.85		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	4.3		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	27		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.32	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.5		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.16	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	39		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.26		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	0.16	J	0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.7		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10674-1

SDG No.:

Client Sample ID: BLDG-A EFFLUENT | Lab Sample ID: 140-10674-1

Matrix: Air | Lab File ID: GB19P115.D

Analysis Method: TO 15 LL | Date Collected: 02/09/2018 11:19

Sample wt/vol: 100(mL) | Date Analyzed: 02/20/2018 00:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18252 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	9.4		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.83	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	46		1.4	0.27
67-66-3	Chloroform	119.38	1.8	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	27		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	4.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	18		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	110		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.4	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	5.2		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	8.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	0.65	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	220		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.4		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	0.40	J	0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P115.D
Lims ID: 140-10674-A-1
Client ID: BLDG-A EFFLUENT
Sample Type: Client
Inject. Date: 20-Feb-2018 00:08:30 ALS Bottle#: 15 Worklist Smp#: 21
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007419-021
Misc. Info.: 140-10674-a-1
Operator ID: 7126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 20-Feb-2018 10:50:48 Calib Date: 13-Nov-2017 22:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 20-Feb-2018 10:44:08

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.555	7.566	-0.011	97	276636	4.00	
* 2 1,4-Difluorobenzene	114	9.696	9.706	-0.010	96	1600077	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.662	14.667	-0.005	88	1553297	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.350	16.355	-0.005	89	1112042	3.84	
6 Chlorodifluoromethane	67	3.289	3.300	-0.011	96	71667	2.59	
8 Dichlorodifluoromethane	85	3.338	3.349	-0.011	99	46847	0.1697	
11 Vinyl chloride	62	3.608	3.613	-0.005	36	3432	0.0316	
27 1,1-Dichloroethene	96	5.026	5.037	-0.011	96	534133	5.49	
31 Methylene Chloride	84	5.306	5.322	-0.016	95	29239	0.2969	
34 trans-1,2-Dichloroethene	96	6.007	6.023	-0.016	90	3242	0.0329	
36 1,1-Dichloroethane	63	6.374	6.390	-0.016	99	170051	0.8678	
41 cis-1,2-Dichloroethene	96	7.258	7.280	-0.022	98	137876	1.34	
43 Chloroform	83	7.582	7.598	-0.016	95	16503	0.0731	
45 1,1,1-Trichloroethane	97	8.542	8.552	-0.010	95	1877098	7.90	
47 Benzene	78	9.113	9.124	-0.011	97	186135	0.5912	
49 Carbon tetrachloride	117	9.151	9.156	-0.005	96	6454	0.0265	
56 Trichloroethene	130	10.445	10.456	-0.011	91	7597	0.0515	
65 Toluene	91	12.624	12.629	-0.005	93	147996	0.4286	
76 Ethylbenzene	91	15.029	15.034	-0.005	99	28766	0.0649	
78 m-Xylene & p-Xylene	91	15.196	15.207	-0.011	99	83478	0.2484	
82 o-Xylene	91	15.735	15.735	0.000	99	33133	0.0927	
S 119 Xylenes, Total	100				0		0.3411	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

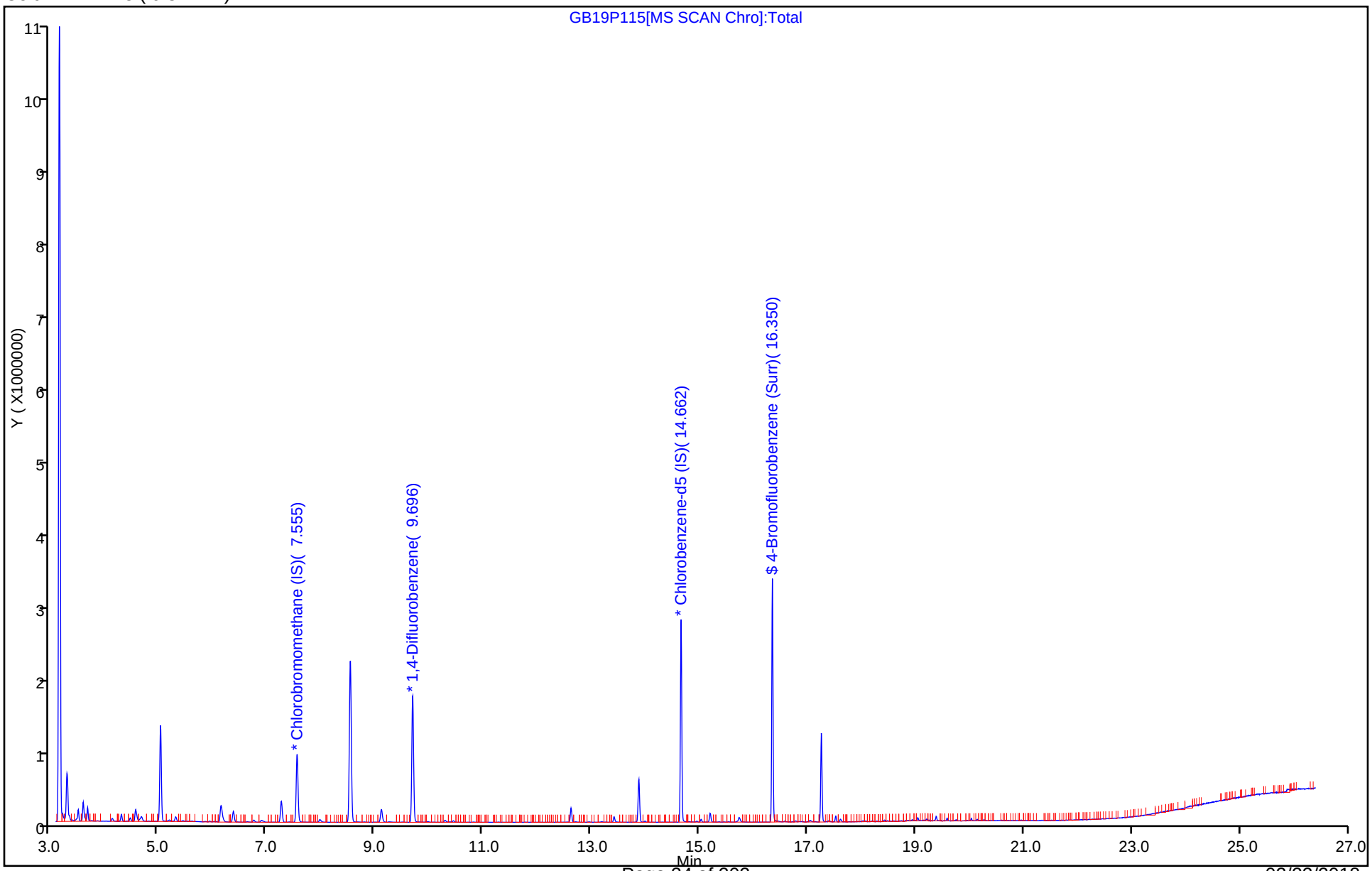
Report Date: 20-Feb-2018 10:51:38 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P115.D

Injection Date:	20-Feb-2018 00:08:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-10674-A-1	Lab Sample ID:	140-10674-1	Worklist Smp#:	21
Client ID:	BLDG-A EFFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P115.D				
Lims ID:	140-10674-A-1				
Client ID:	BLDG-A EFFLUENT				
Sample Type:	Client				
Inject. Date:	20-Feb-2018 00:08:30	ALS Bottle#:	15	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007419-021				
Misc. Info.:	140-10674-a-1				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Feb-2018 10:50:48	Calib Date:	13-Nov-2017 22:37:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				

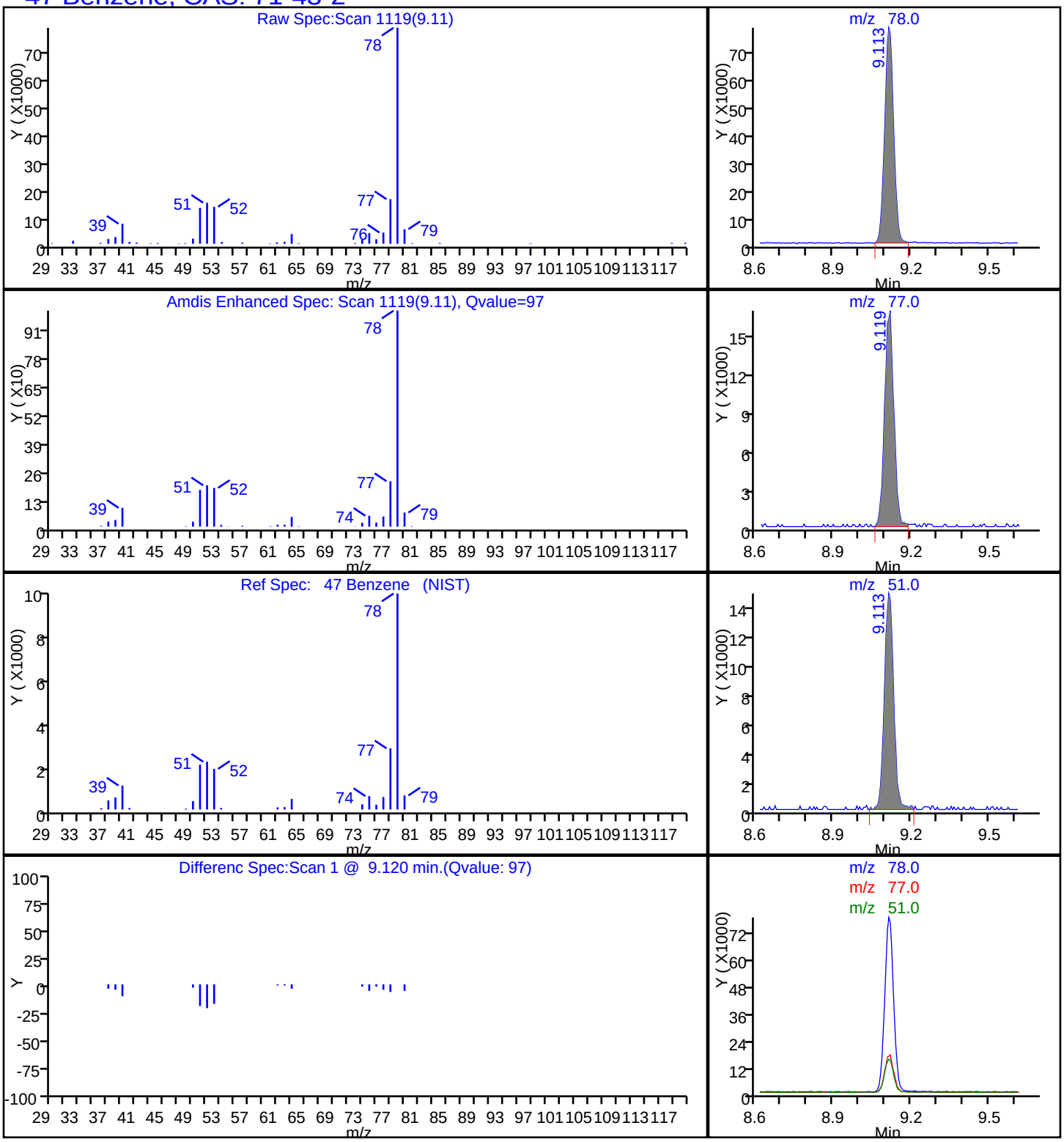
First Level Reviewer: tajh Date: 20-Feb-2018 10:44:08

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.84	95.92

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P115.D		
Injection Date:	20-Feb-2018 00:08:30	Instrument ID:	MG
Lims ID:	140-10674-A-1	Lab Sample ID:	140-10674-1
Client ID:	BLDG-A EFFLUENT		
Operator ID:	7126	ALS Bottle#:	15 Worklist Smp#: 21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

47 Benzene, CAS: 71-43-2

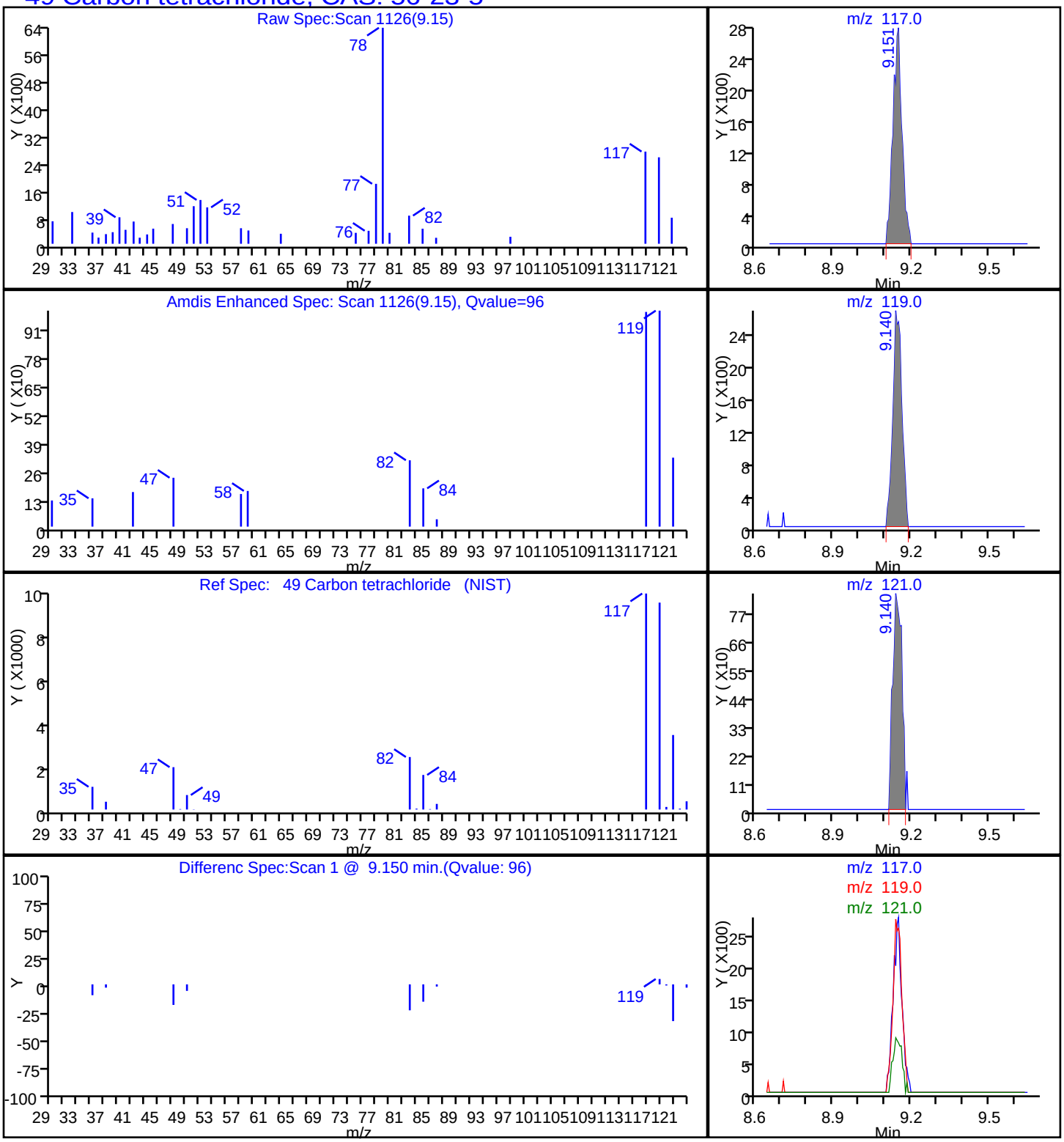


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P115.D

Injection Date:	20-Feb-2018 00:08:30	Instrument ID:	MG		
Lims ID:	140-10674-A-1	Lab Sample ID:	140-10674-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	15	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

49 Carbon tetrachloride, CAS: 56-23-5



TestAmerica Knoxville

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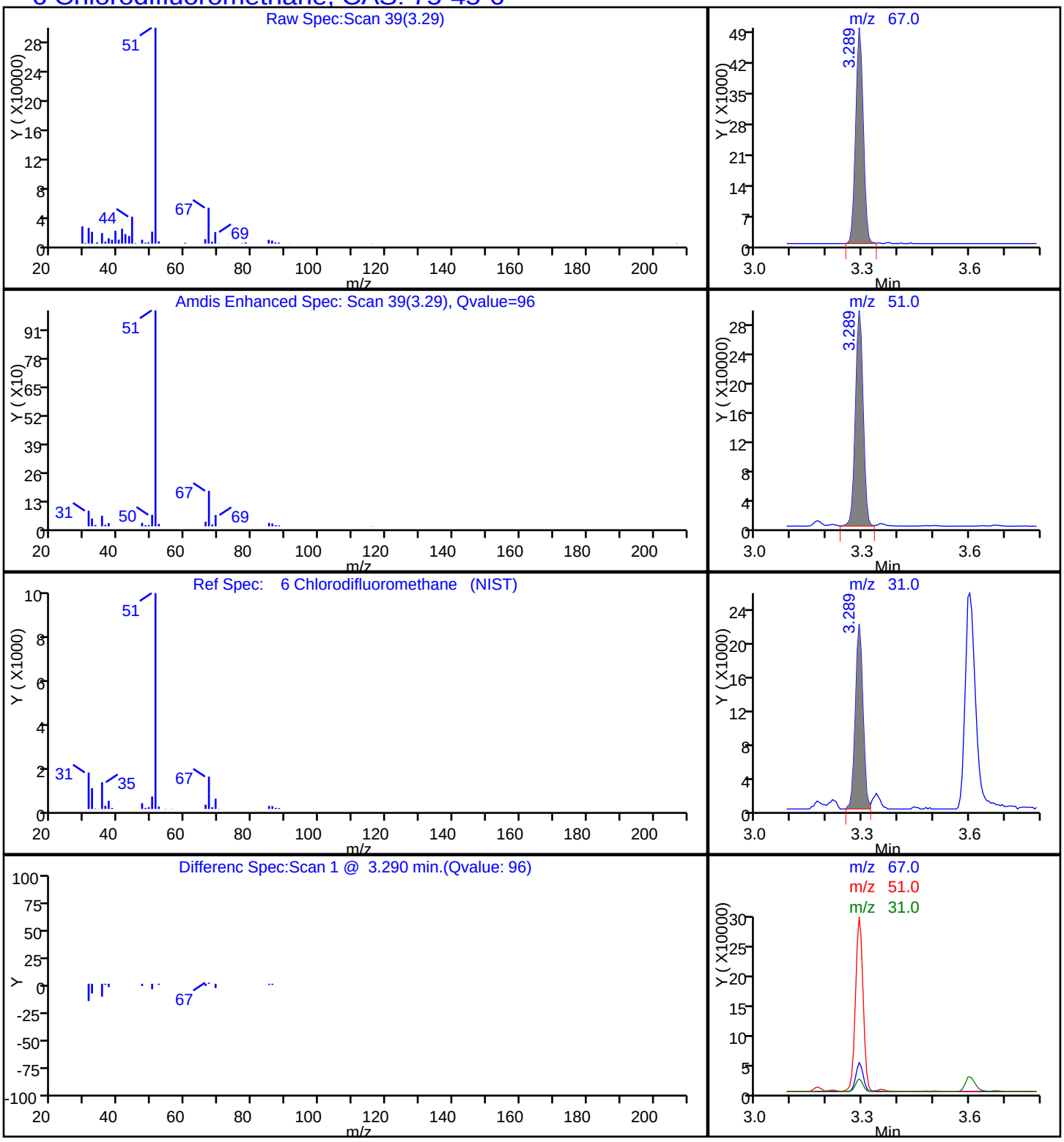
Injection Date:	20-Feb-2018 00:08:30	Instrument ID:	MG		
Lims ID:	140-10674-A-1	Lab Sample ID:	140-10674-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	15	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

6 Chlorodifluoromethane, CAS: 75-45-6

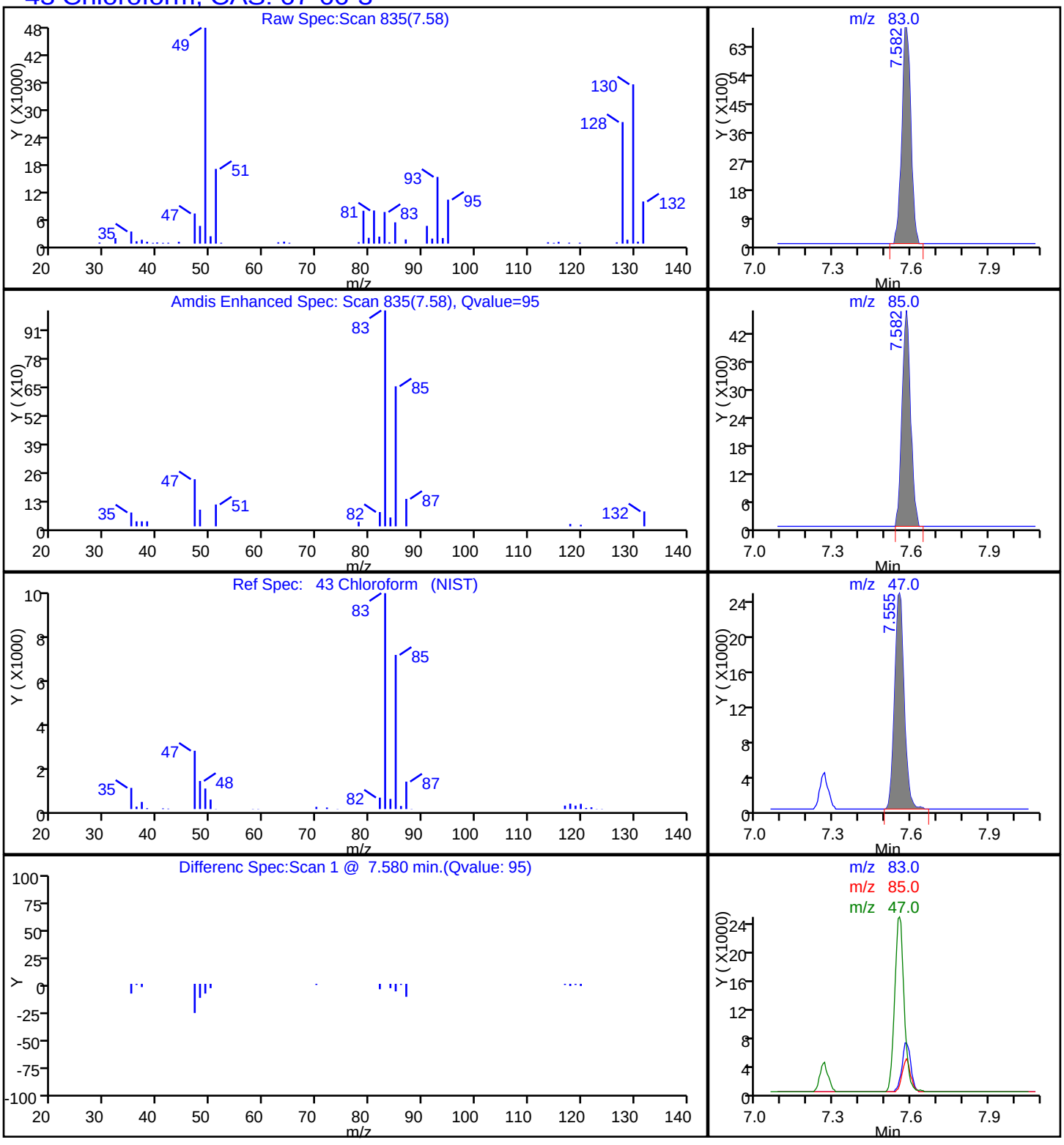


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P115.D

Injection Date:	20-Feb-2018 00:08:30	Instrument ID:	MG		
Lims ID:	140-10674-A-1	Lab Sample ID:	140-10674-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	15	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

43 Chloroform, CAS: 67-66-3

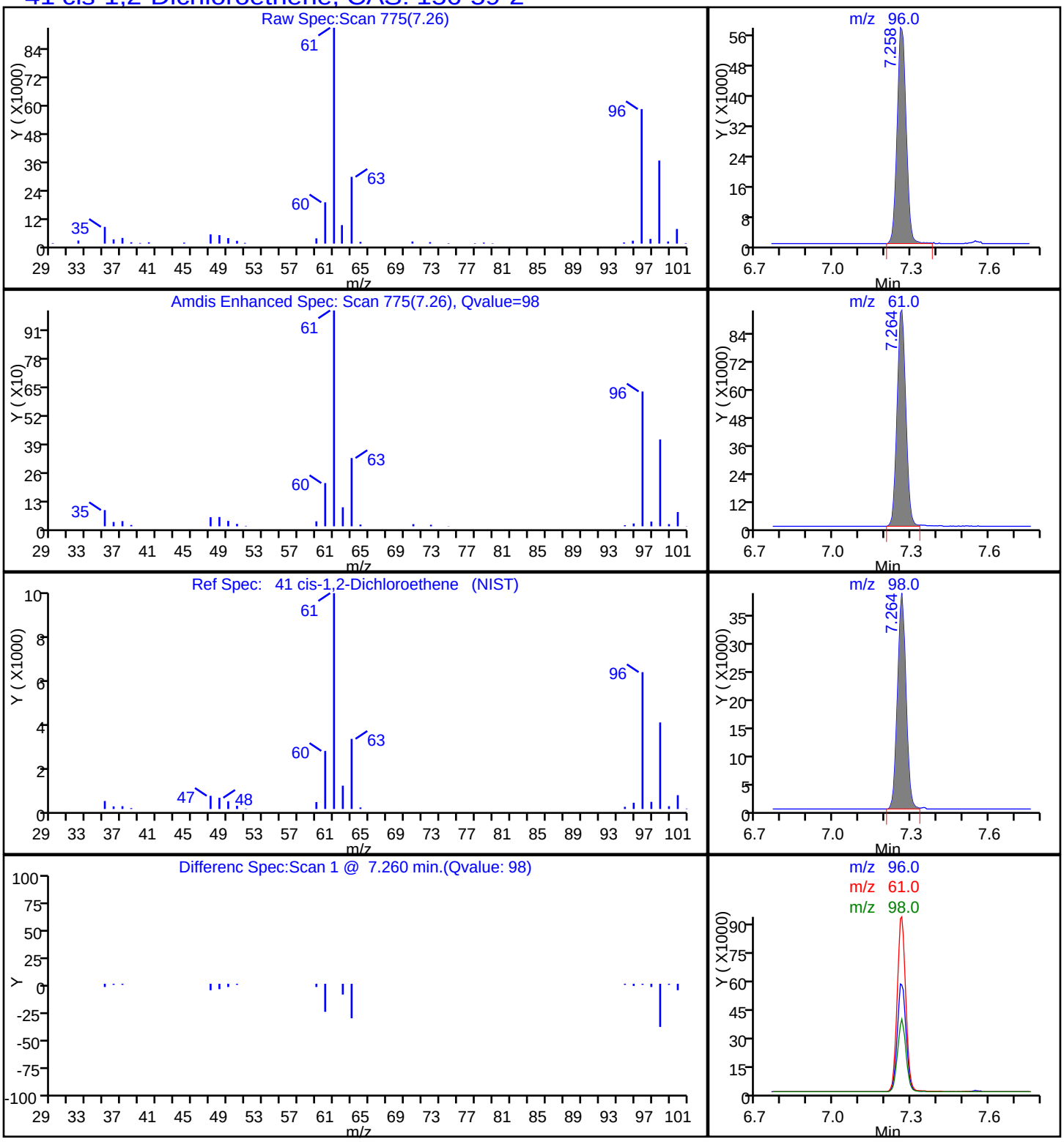


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P115.D

Injection Date:	20-Feb-2018 00:08:30	Instrument ID:	MG
Lims ID:	140-10674-A-1	Lab Sample ID:	140-10674-1
Client ID:	BLDG-A EFFLUENT		
Operator ID:	7126	ALS Bottle#:	15 Worklist Smp#: 21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

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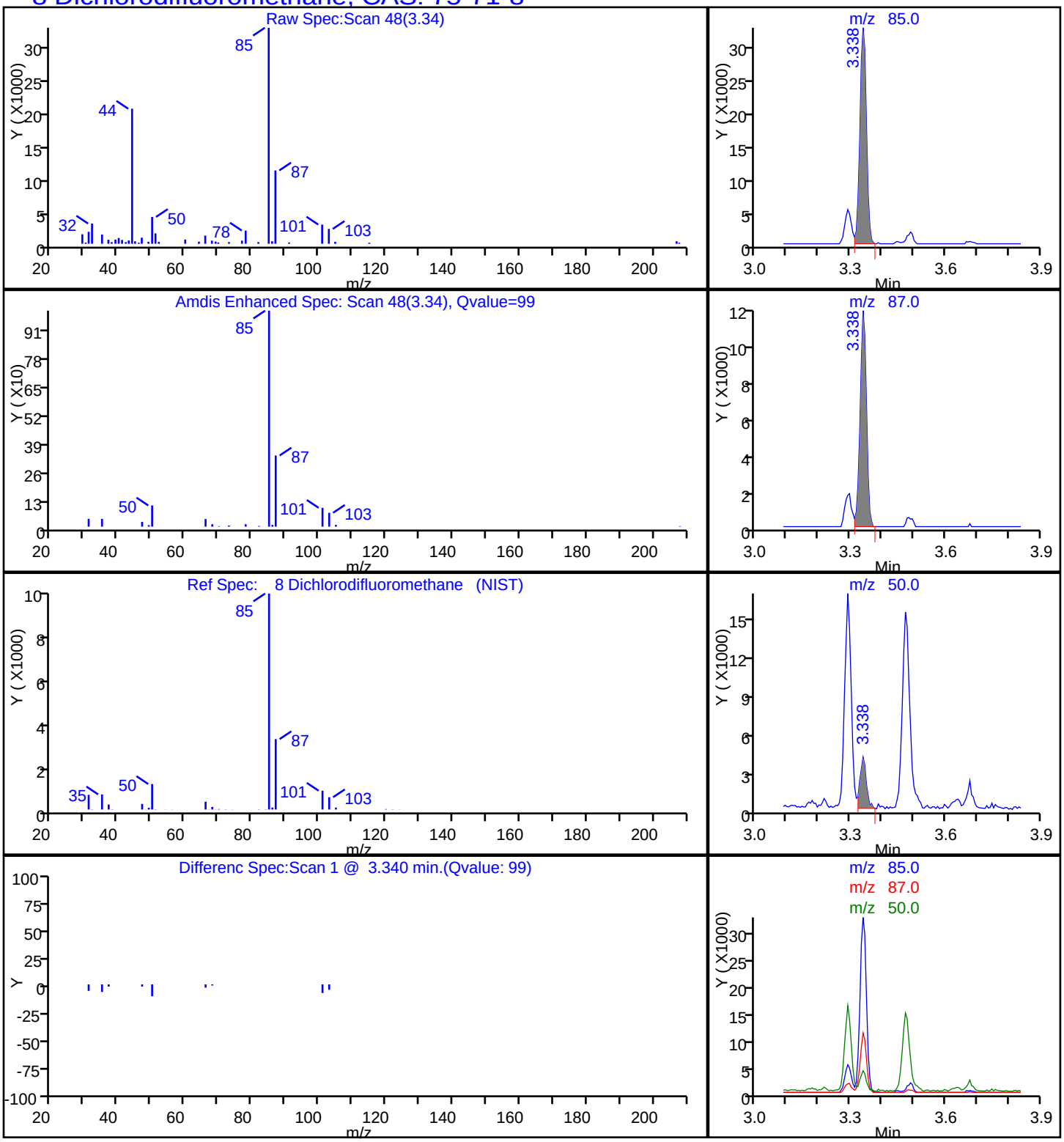
Injection Date:	20-Feb-2018 00:08:30	Instrument ID:	MG
Lims ID:	140-10674-A-1	Lab Sample ID:	140-10674-1
Client ID:	BLDG-A EFFLUENT		
Operator ID:	7126	ALS Bottle#:	15 Worklist Smp#: 21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

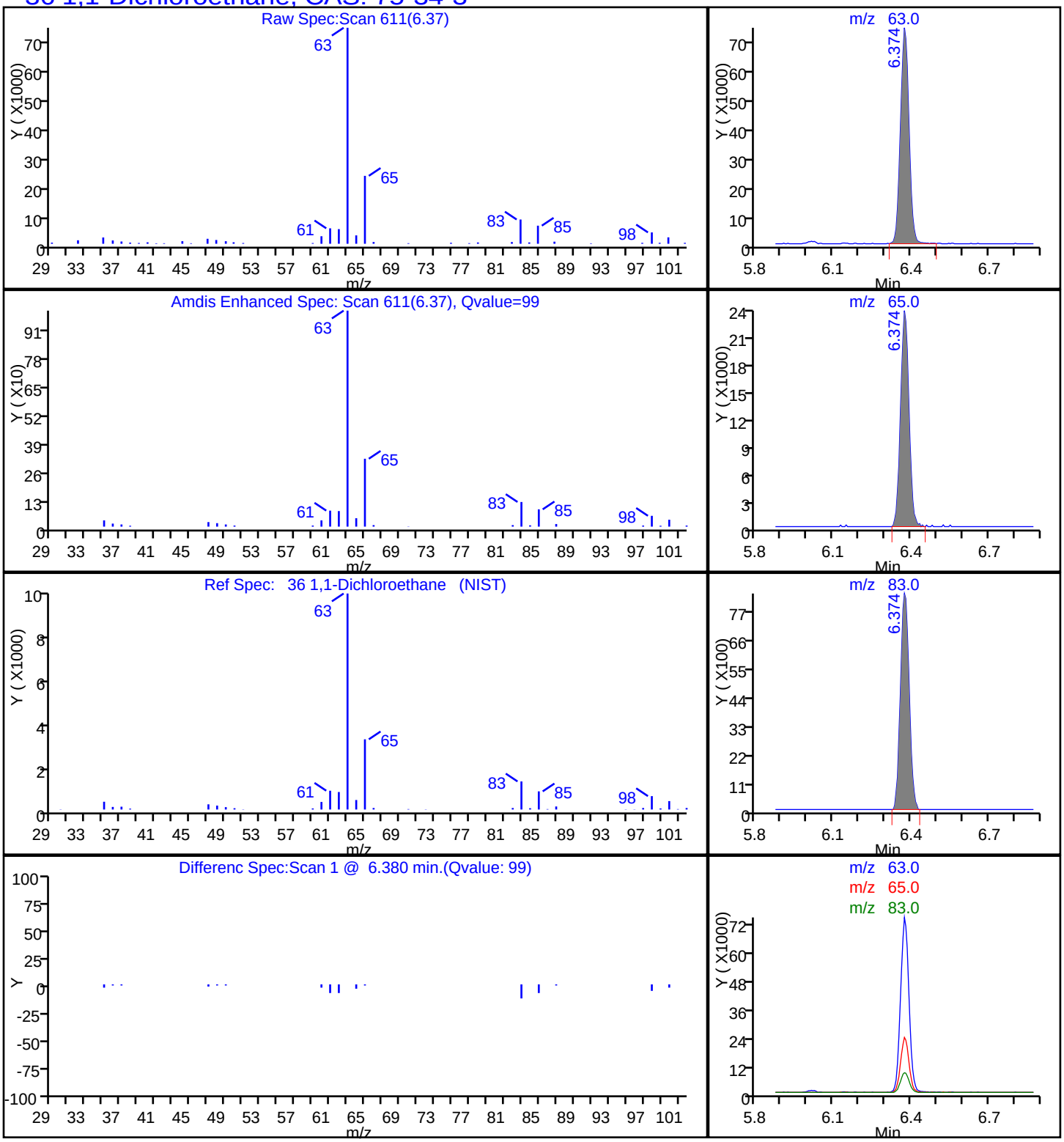
8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P115.D		
Injection Date:	20-Feb-2018 00:08:30	Instrument ID:	MG
Lims ID:	140-10674-A-1	Lab Sample ID:	140-10674-1
Client ID:	BLDG-A EFFLUENT		
Operator ID:	7126	ALS Bottle#:	15 Worklist Smp#: 21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

36 1,1-Dichloroethane, CAS: 75-34-3

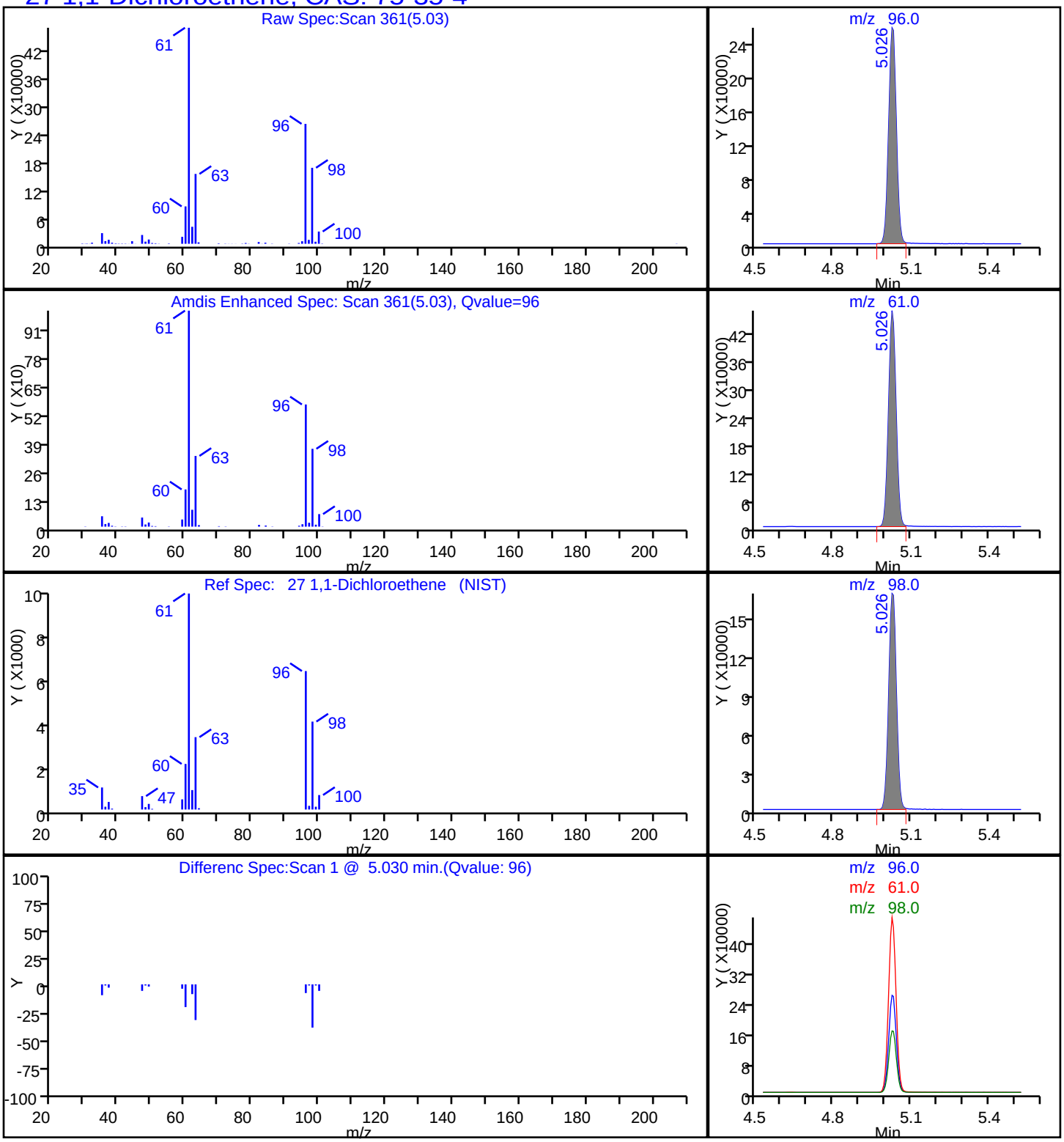


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P115.D

Injection Date:	20-Feb-2018 00:08:30	Instrument ID:	MG		
Lims ID:	140-10674-A-1	Lab Sample ID:	140-10674-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	15	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

27 1,1-Dichloroethene, CAS: 75-35-4



Report Date: 20-Feb-2018 10:51:39 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

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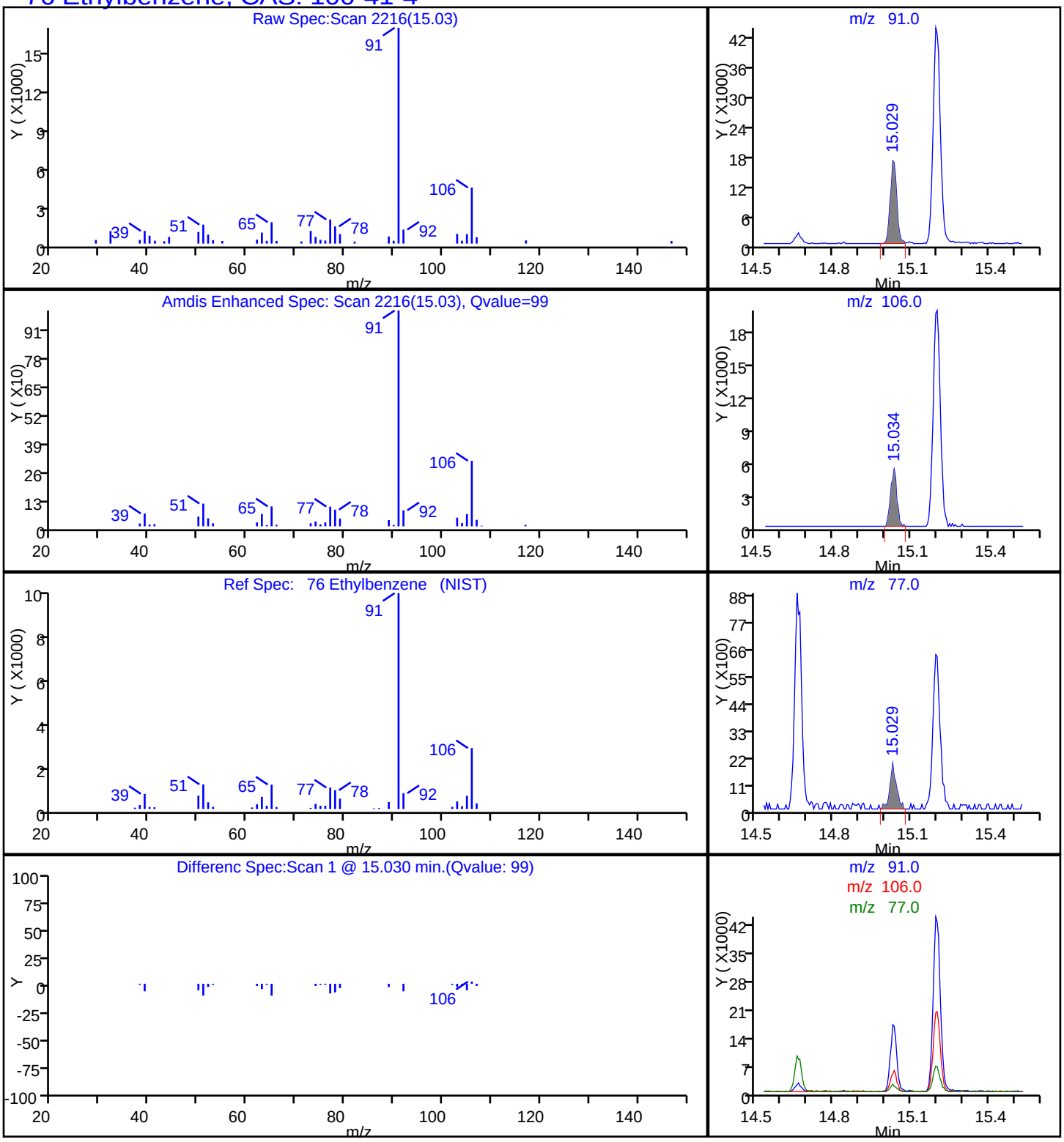
Injection Date:	20-Feb-2018 00:08:30	Instrument ID:	MG
Lims ID:	140-10674-A-1	Lab Sample ID:	140-10674-1
Client ID:	BLDG-A EFFLUENT		
Operator ID:	7126	ALS Bottle#:	15 Worklist Smp#: 21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

76 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

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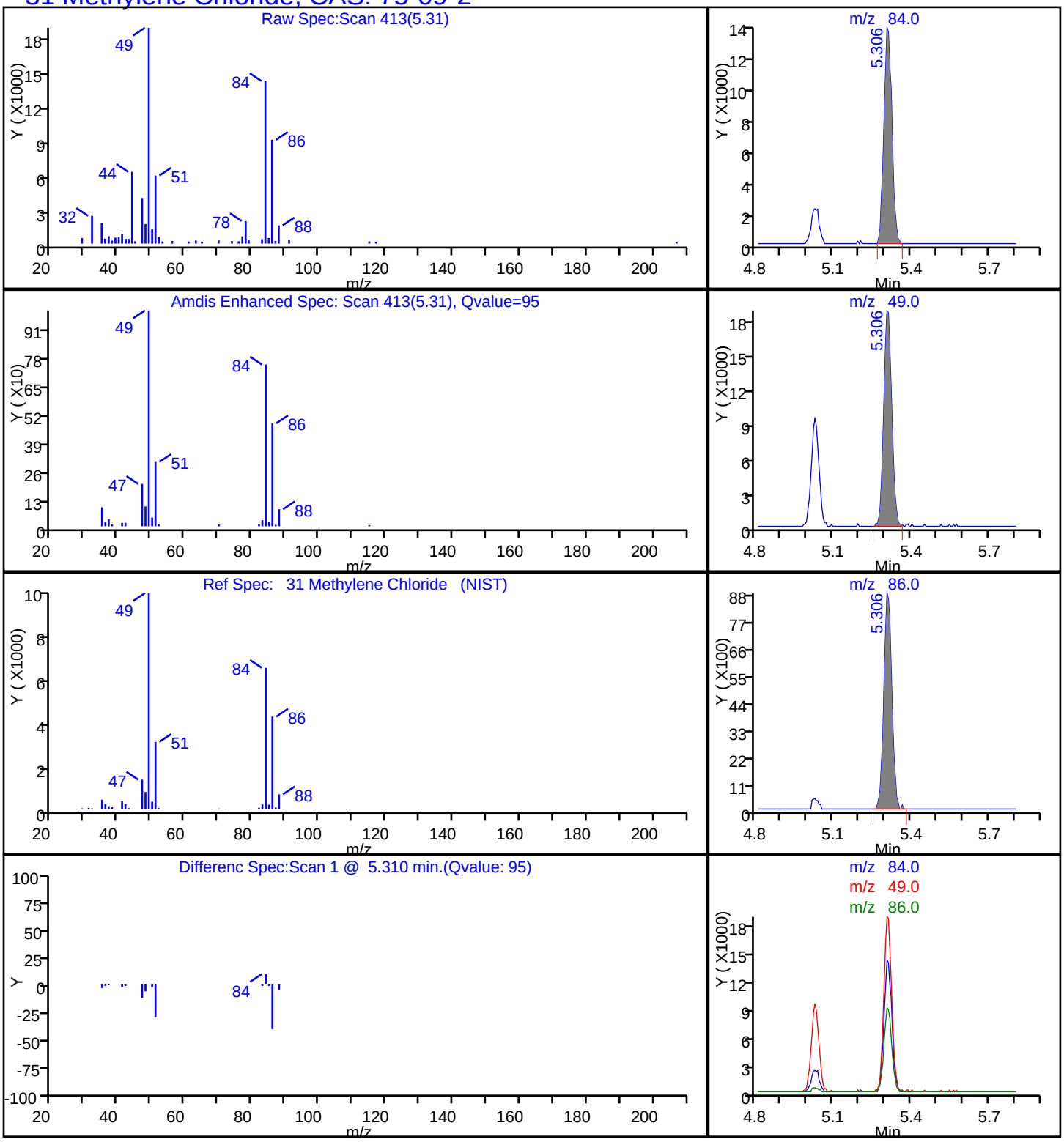
Injection Date:	20-Feb-2018 00:08:30	Instrument ID:	MG		
Lims ID:	140-10674-A-1	Lab Sample ID:	140-10674-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	15	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

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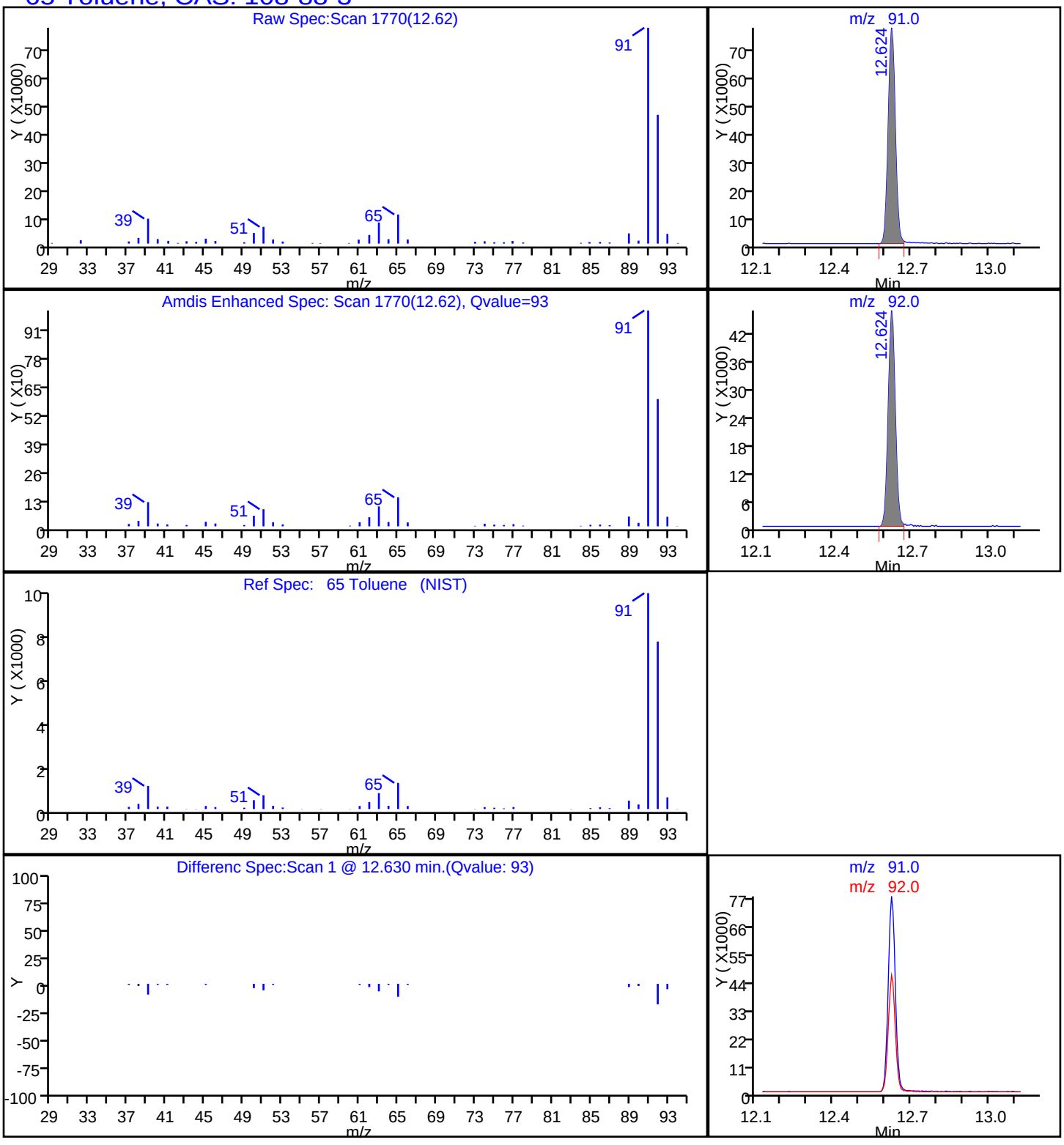
Injection Date:	20-Feb-2018 00:08:30	Instrument ID:	MG
Lims ID:	140-10674-A-1	Lab Sample ID:	140-10674-1
Client ID:	BLDG-A EFFLUENT		
Operator ID:	7126	ALS Bottle#:	15 Worklist Smp#: 21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

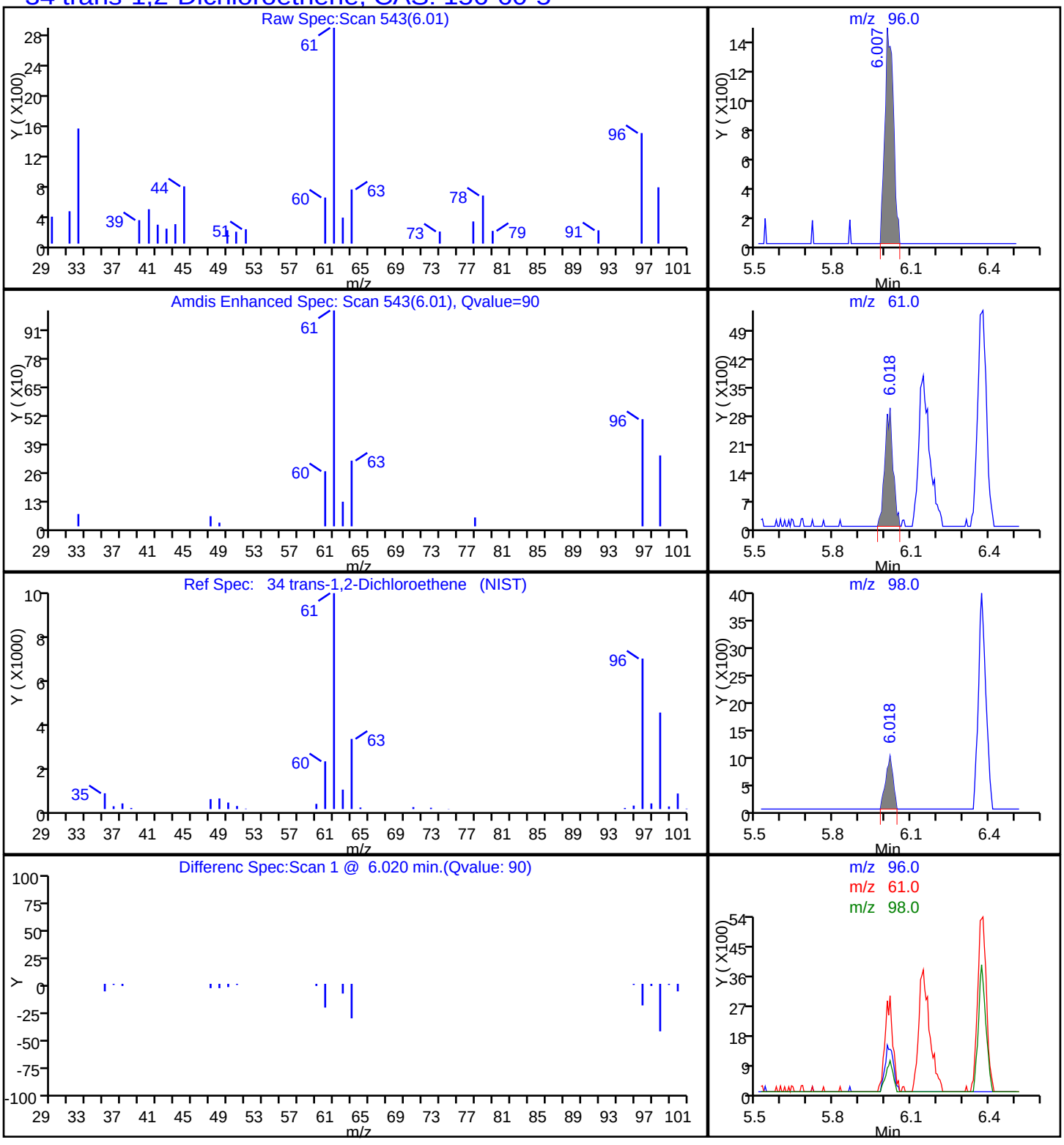
65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P115.D				
Injection Date:	20-Feb-2018 00:08:30	Instrument ID:	MG		
Lims ID:	140-10674-A-1	Lab Sample ID:	140-10674-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	15	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

34 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

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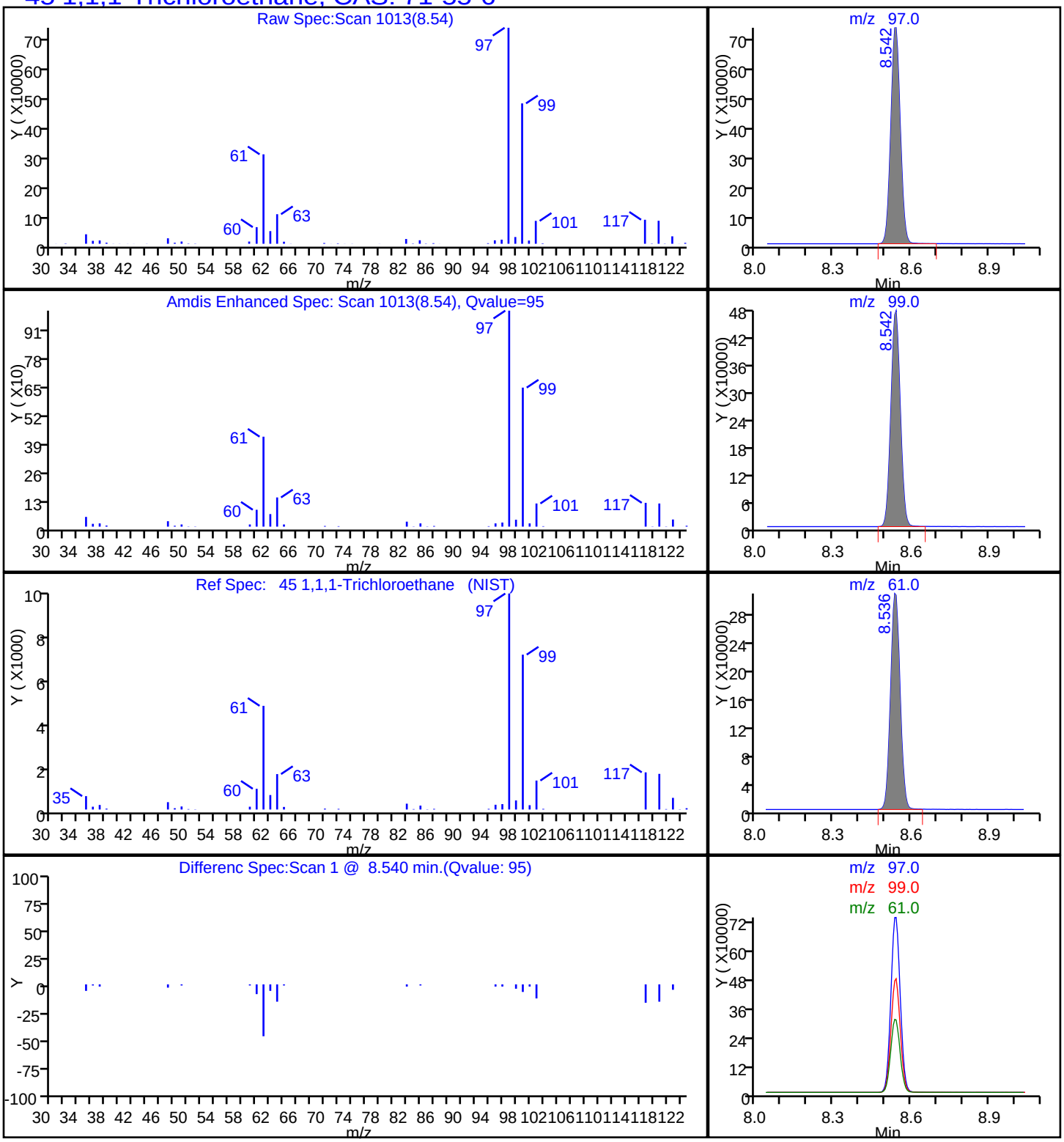
Injection Date:	20-Feb-2018 00:08:30	Instrument ID:	MG		
Lims ID:	140-10674-A-1	Lab Sample ID:	140-10674-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	15	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

45 1,1,1-Trichloroethane, CAS: 71-55-6

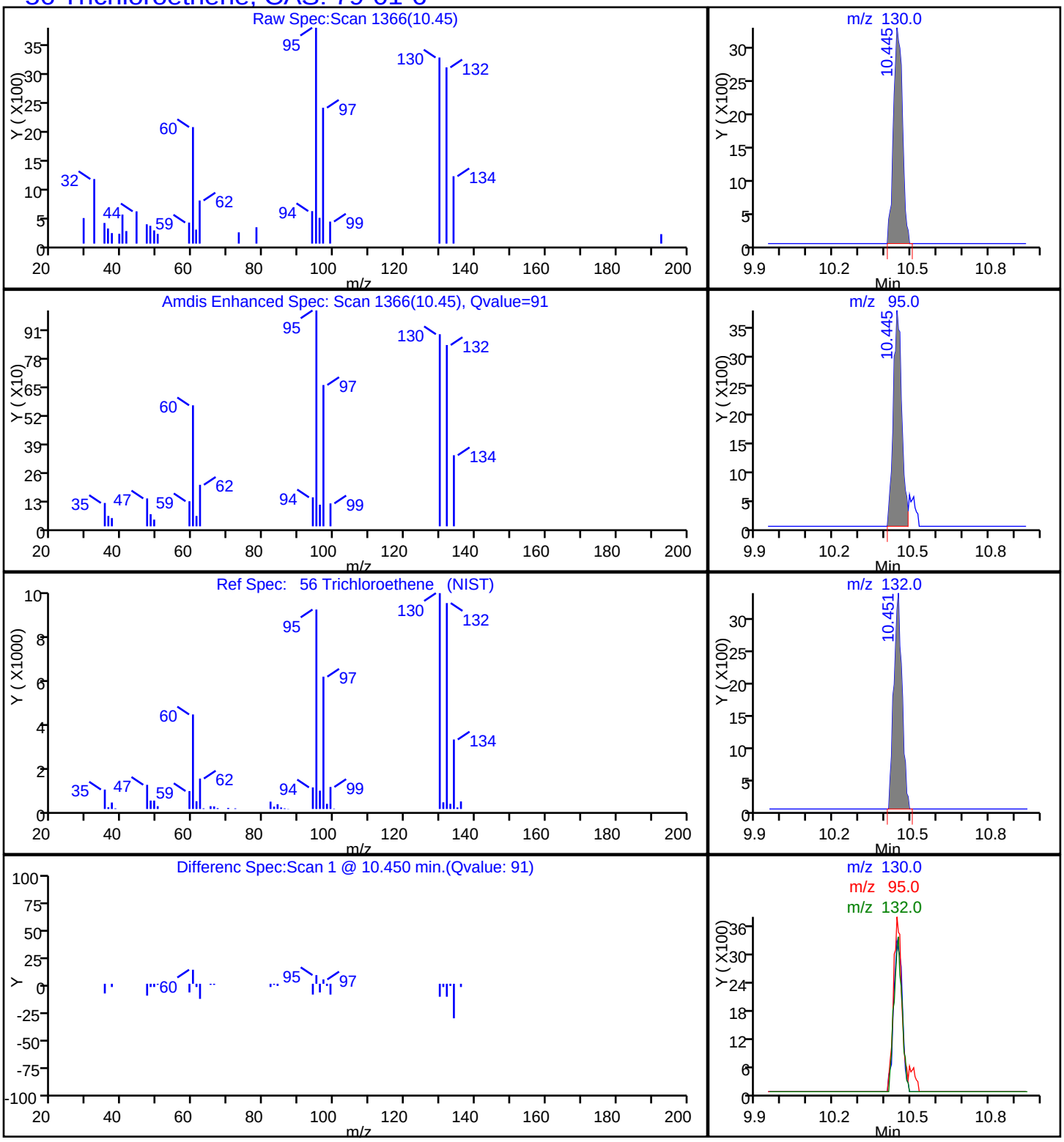


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P115.D

Injection Date:	20-Feb-2018 00:08:30	Instrument ID:	MG
Lims ID:	140-10674-A-1	Lab Sample ID:	140-10674-1
Client ID:	BLDG-A EFFLUENT		
Operator ID:	7126	ALS Bottle#:	15 Worklist Smp#: 21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

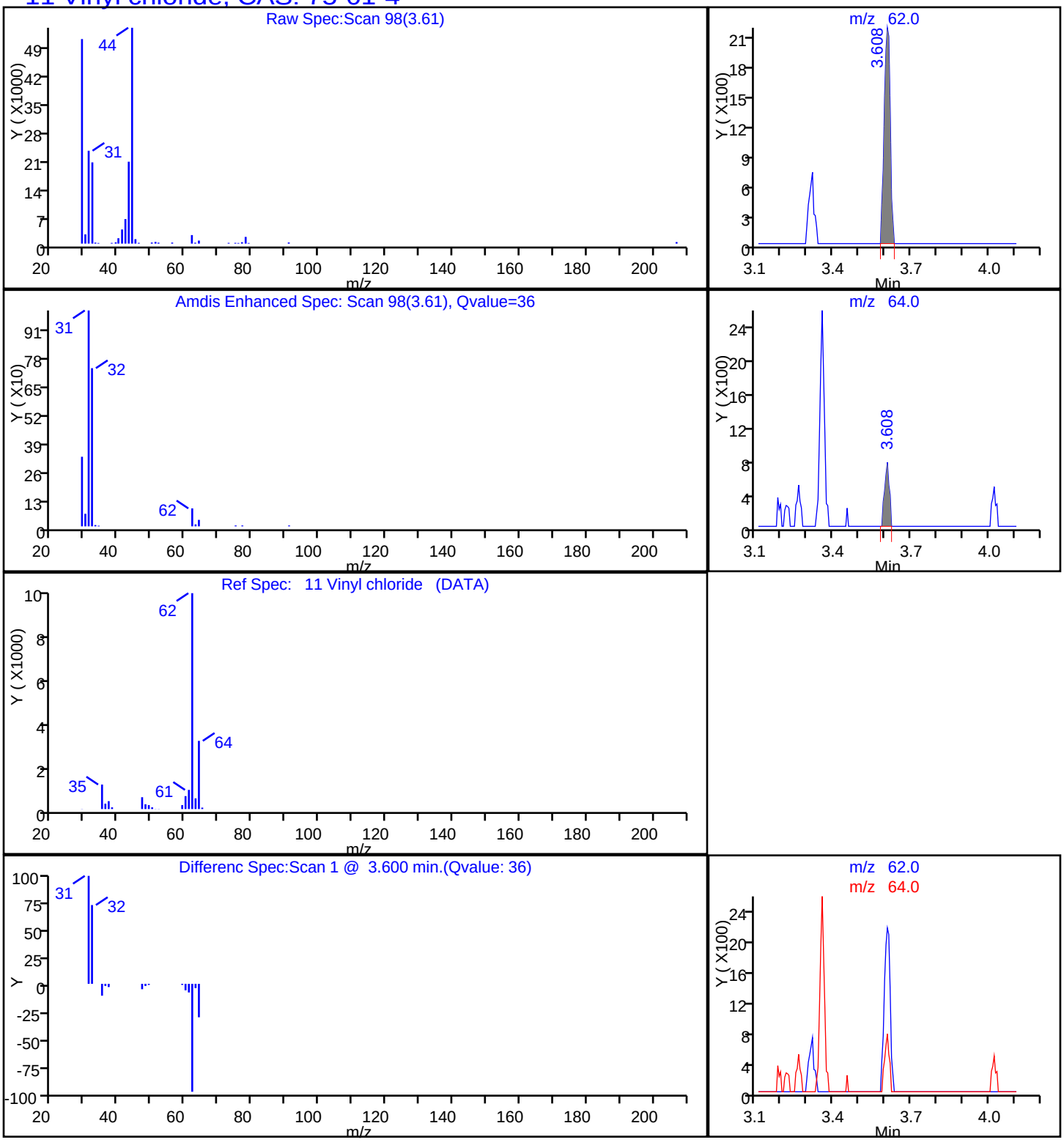
56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P115.D		
Injection Date:	20-Feb-2018 00:08:30	Instrument ID:	MG
Lims ID:	140-10674-A-1	Lab Sample ID:	140-10674-1
Client ID:	BLDG-A EFFLUENT		
Operator ID:	7126	ALS Bottle#:	15 Worklist Smp#: 21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

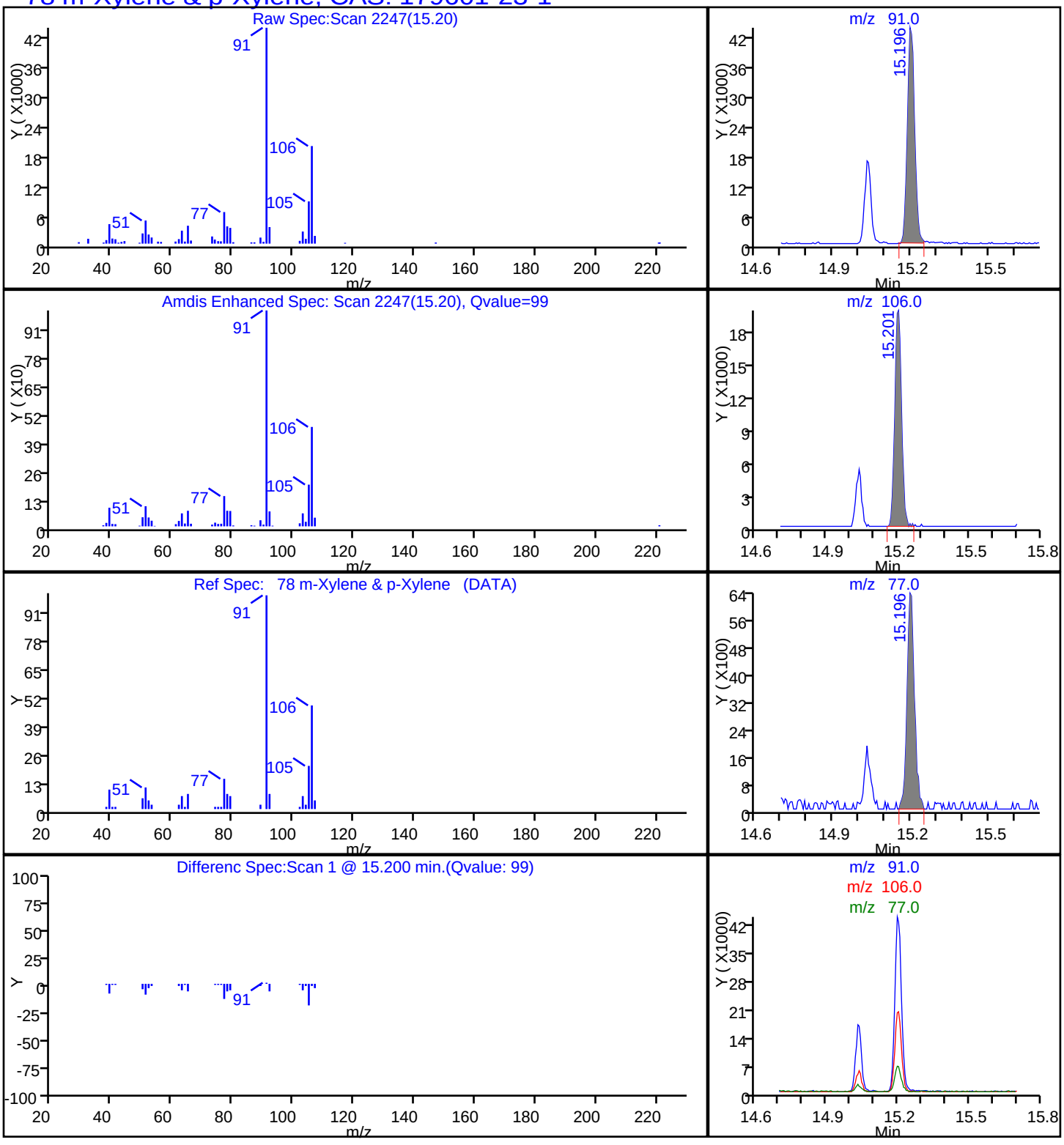
11 Vinyl chloride, CAS: 75-01-4



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P115.D				
Injection Date:	20-Feb-2018 00:08:30	Instrument ID:	MG		
Lims ID:	140-10674-A-1	Lab Sample ID:	140-10674-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	15	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

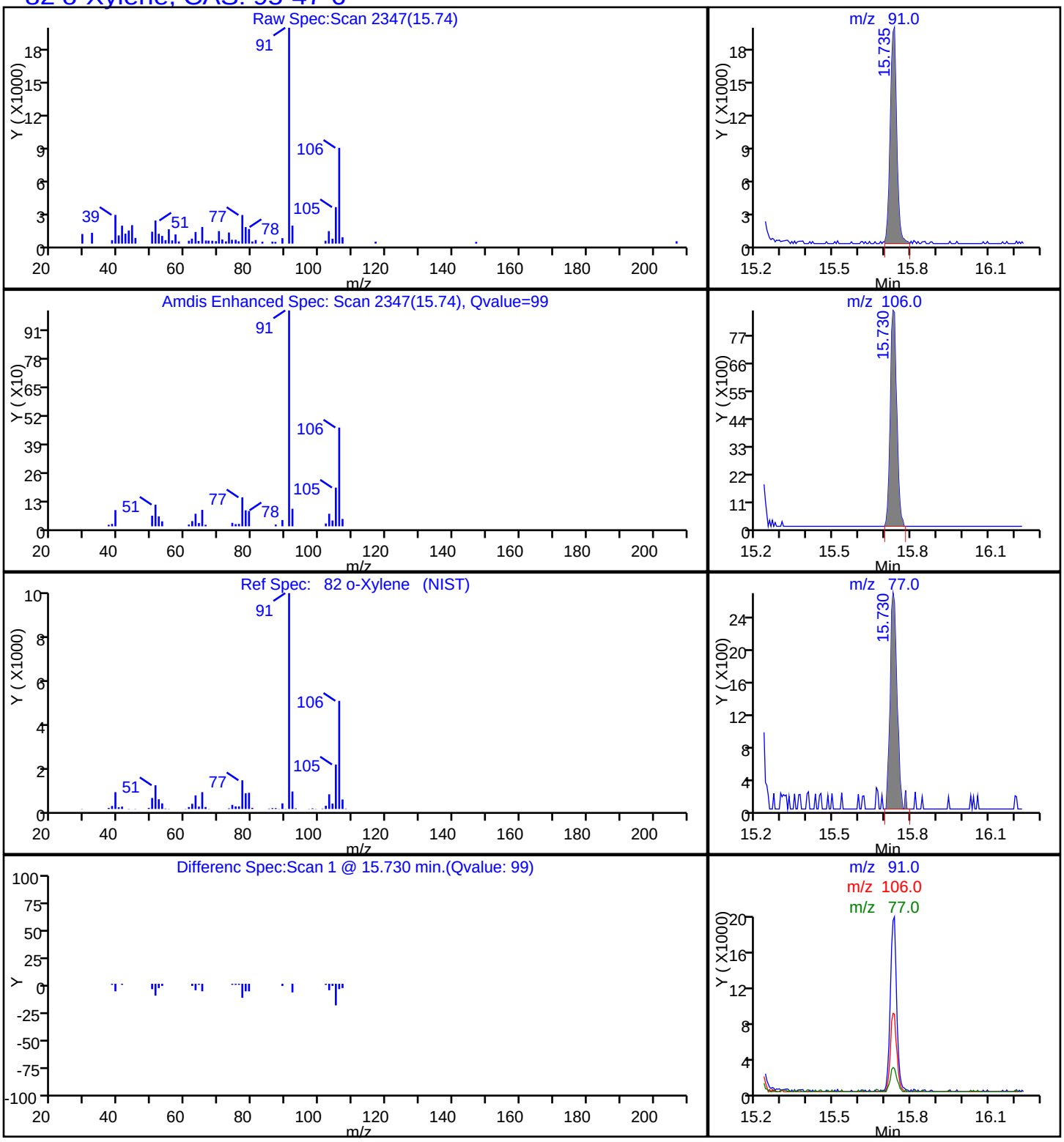
78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P115.D		
Injection Date:	20-Feb-2018 00:08:30	Instrument ID:	MG
Lims ID:	140-10674-A-1	Lab Sample ID:	140-10674-1
Client ID:	BLDG-A EFFLUENT		
Operator ID:	7126	ALS Bottle#:	15 Worklist Smp#: 21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

82 o-Xylene, CAS: 95-47-6



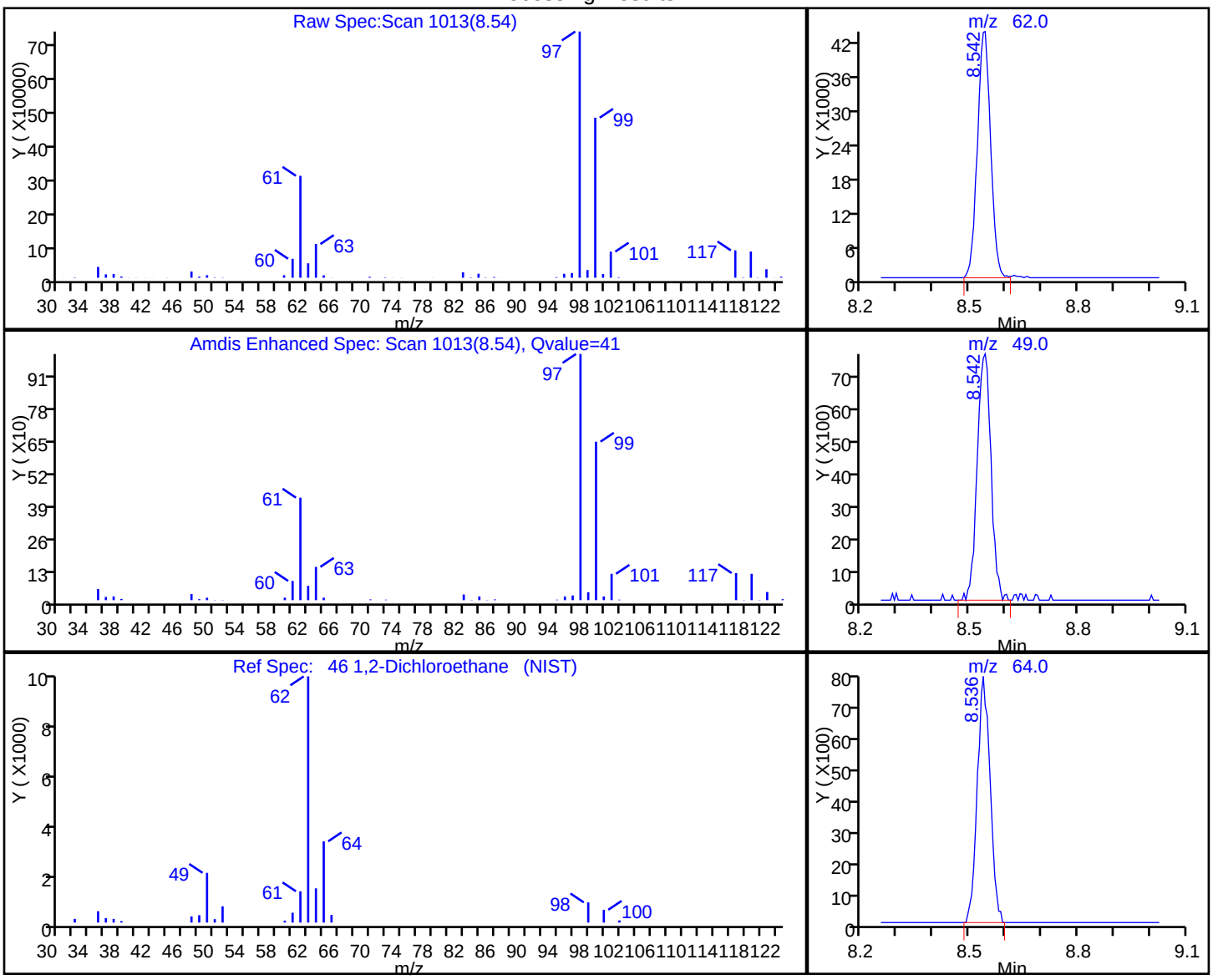
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P115.D				
Injection Date:	20-Feb-2018 00:08:30	Instrument ID:	MG		
Lims ID:	140-10674-A-1	Lab Sample ID:	140-10674-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	15	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

46 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
8.54	62.00	110448	0.685393
8.54	49.00	20393	
8.54	64.00	19871	

Reviewer: tajh, 20-Feb-2018 10:44:08

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10674-1

SDG No.:

Client Sample ID: BLDG-A MID-GAC | Lab Sample ID: 140-10674-2

Matrix: Air | Lab File ID: GB19P116.D

Analysis Method: TO 15 LL | Date Collected: 02/09/2018 11:23

Sample wt/vol: 20(mL) | Date Analyzed: 02/20/2018 00:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18252 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		2.0	0.58
56-23-5	Carbon tetrachloride	153.81	ND		2.0	0.38
75-45-6	Chlorodifluoromethane	86.47	13		2.0	0.38
67-66-3	Chloroform	119.38	0.62	J	2.0	0.38
156-59-2	cis-1,2-Dichloroethene	96.94	27		2.0	0.60
75-71-8	Dichlorodifluoromethane	120.91	0.71	J	2.0	0.68
75-34-3	1,1-Dichloroethane	98.96	6.4		2.0	0.25
107-06-2	1,2-Dichloroethane	98.96	ND		2.0	0.48
75-35-4	1,1-Dichloroethene	96.94	47		2.0	0.35
100-41-4	Ethylbenzene	106.17	ND		2.0	0.68
75-09-2	Methylene Chloride	84.93	4.2	J	5.0	3.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		10	1.7
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.0	0.40
108-88-3	Toluene	92.14	ND		3.0	3.0
156-60-5	trans-1,2-Dichloroethene	96.94	0.60	J	2.0	0.50
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		2.0	0.98
71-55-6	1,1,1-Trichloroethane	133.41	140		2.0	0.30
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.0	0.53
79-01-6	Trichloroethene	131.39	ND		1.0	0.35
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.85
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.63
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.65
75-01-4	Vinyl chloride	62.50	ND		1.0	0.73
1330-20-7	Xylenes, Total	106.17	2.5	J	4.0	0.60

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10674-1

SDG No.:

Client Sample ID: BLDG-A MID-GAC | Lab Sample ID: 140-10674-2

Matrix: Air | Lab File ID: GB19P116.D

Analysis Method: TO 15 LL | Date Collected: 02/09/2018 11:23

Sample wt/vol: 20(mL) | Date Analyzed: 02/20/2018 00:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18252 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		6.4	1.8
56-23-5	Carbon tetrachloride	153.81	ND		13	2.4
75-45-6	Chlorodifluoromethane	86.47	45		7.1	1.3
67-66-3	Chloroform	119.38	3.0	J	9.8	1.8
156-59-2	cis-1,2-Dichloroethene	96.94	110		7.9	2.4
75-71-8	Dichlorodifluoromethane	120.91	3.5	J	9.9	3.3
75-34-3	1,1-Dichloroethane	98.96	26		8.1	1.0
107-06-2	1,2-Dichloroethane	98.96	ND		8.1	1.9
75-35-4	1,1-Dichloroethene	96.94	190		7.9	1.4
100-41-4	Ethylbenzene	106.17	ND		8.7	2.9
75-09-2	Methylene Chloride	84.93	14	J	17	11
1634-04-4	Methyl tert-butyl ether	88.15	ND		36	6.1
91-20-3	Naphthalene	128.17	ND		5.2	5.2
127-18-4	Tetrachloroethene	165.83	ND		14	2.7
108-88-3	Toluene	92.14	ND		11	11
156-60-5	trans-1,2-Dichloroethene	96.94	2.4	J	7.9	2.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		15	7.2
71-55-6	1,1,1-Trichloroethane	133.41	750		11	1.6
79-00-5	1,1,2-Trichloroethane	133.41	ND		11	2.9
79-01-6	Trichloroethene	131.39	ND		5.4	1.9
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		9.8	4.2
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		9.8	3.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		9.8	3.2
75-01-4	Vinyl chloride	62.50	ND		2.6	1.9
1330-20-7	Xylenes, Total	106.17	11	J	17	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P116.D				
Lims ID:	140-10674-A-2				
Client ID:	BLDG-A MID-GAC				
Sample Type:	Client				
Inject. Date:	20-Feb-2018 00:48:30	ALS Bottle#:	16	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007419-022				
Misc. Info.:	140-10674-a-2				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Feb-2018 10:50:48	Calib Date:	13-Nov-2017 22:37:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				
First Level Reviewer: tajh		Date:	20-Feb-2018 10:45:05		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.555	7.566	-0.011	97	312902	4.00	
* 2 1,4-Difluorobenzene	114	9.696	9.706	-0.010	96	1631145	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.662	14.667	-0.005	89	1561286	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.350	16.355	-0.005	86	1148031	3.94	
6 Chlorodifluoromethane	67	3.295	3.300	-0.005	96	15789	0.5043	
8 Dichlorodifluoromethane	85	3.338	3.349	-0.011	98	8866	0.0284	
27 1,1-Dichloroethene	96	5.026	5.037	-0.011	95	208729	1.90	
31 Methylene Chloride	84	5.312	5.322	-0.010	98	18572	0.1667	
34 trans-1,2-Dichloroethene	96	6.018	6.023	-0.005	97	2670	0.0240	
36 1,1-Dichloroethane	63	6.374	6.390	-0.016	100	56303	0.2540	
41 cis-1,2-Dichloroethene	96	7.264	7.280	-0.016	98	127267	1.10	
43 Chloroform	83	7.576	7.598	-0.022	88	6300	0.0247	
45 1,1,1-Trichloroethane	97	8.536	8.552	-0.016	95	1477889	5.50	
65 Toluene	91	12.629	12.629	0.000	93	36448	0.1050	
78 m-Xylene & p-Xylene	91	15.196	15.207	-0.011	98	23690	0.0701	
82 o-Xylene	91	15.735	15.735	0.000	96	9886	0.0275	
S 119 Xylenes, Total	100				0		0.0977	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

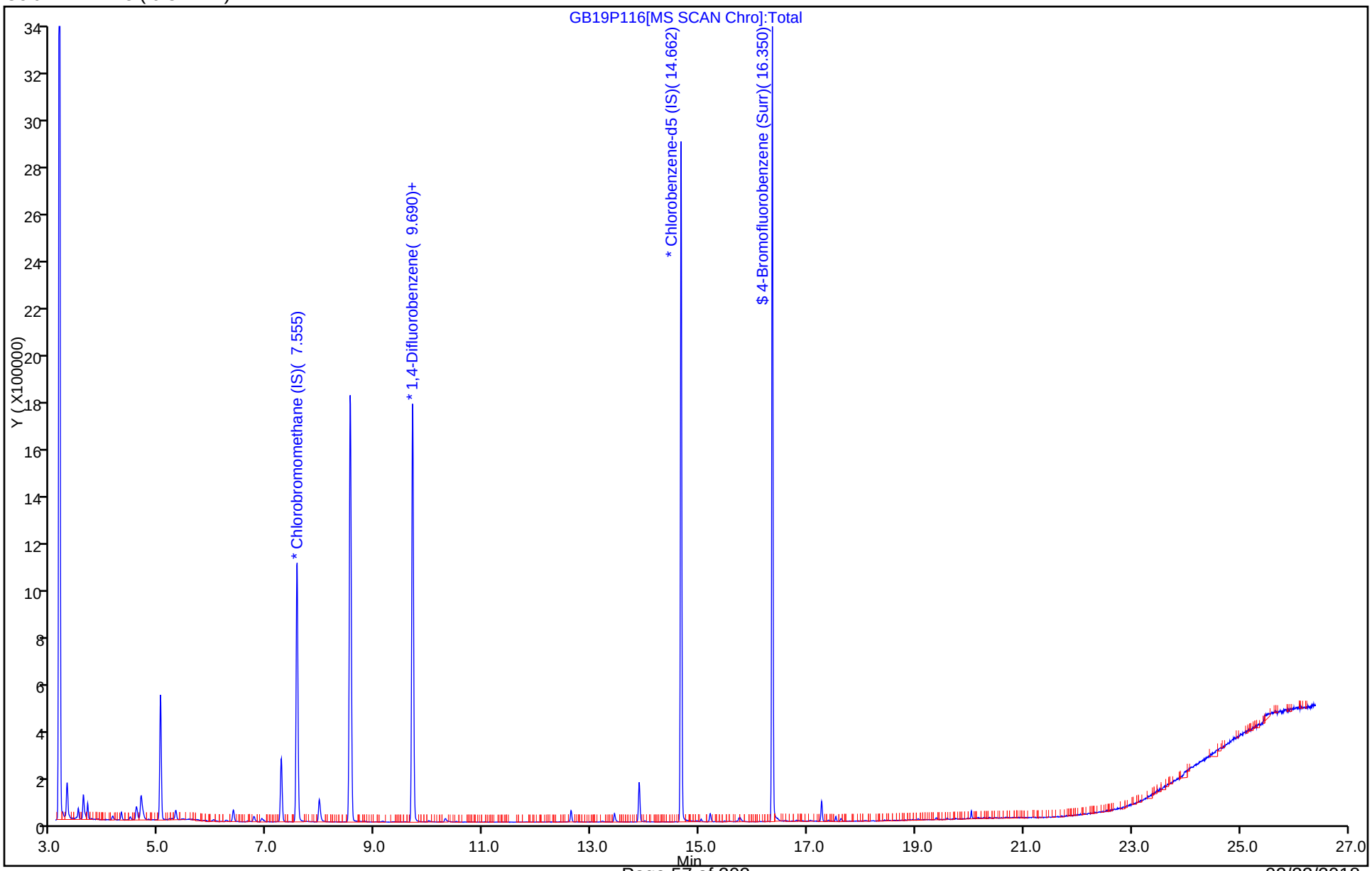
Report Date: 20-Feb-2018 10:51:40 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P116.D

Injection Date:	20-Feb-2018 00:48:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-10674-A-2	Lab Sample ID:	140-10674-2	Worklist Smp#:	22
Client ID:	BLDG-A MID-GAC				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P116.D				
Lims ID:	140-10674-A-2				
Client ID:	BLDG-A MID-GAC				
Sample Type:	Client				
Inject. Date:	20-Feb-2018 00:48:30	ALS Bottle#:	16	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007419-022				
Misc. Info.:	140-10674-a-2				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Feb-2018 10:50:48	Calib Date:	13-Nov-2017 22:37:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				

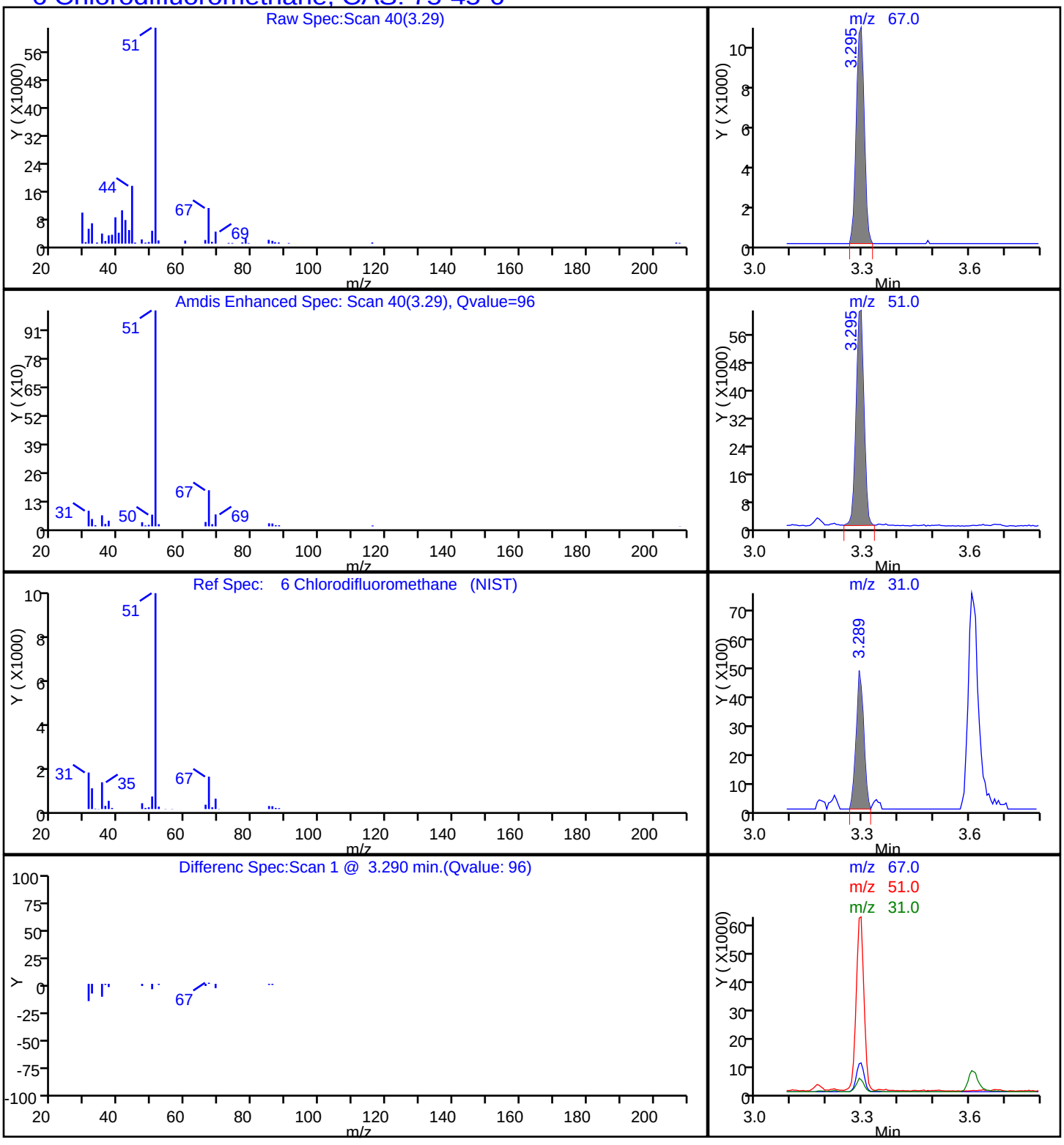
First Level Reviewer: tajh Date: 20-Feb-2018 10:45:05

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.94	98.52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P116.D				
Injection Date:	20-Feb-2018 00:48:30	Instrument ID:	MG		
Lims ID:	140-10674-A-2	Lab Sample ID:	140-10674-2		
Client ID:	BLDG-A MID-GAC				
Operator ID:	7126	ALS Bottle#:	16	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

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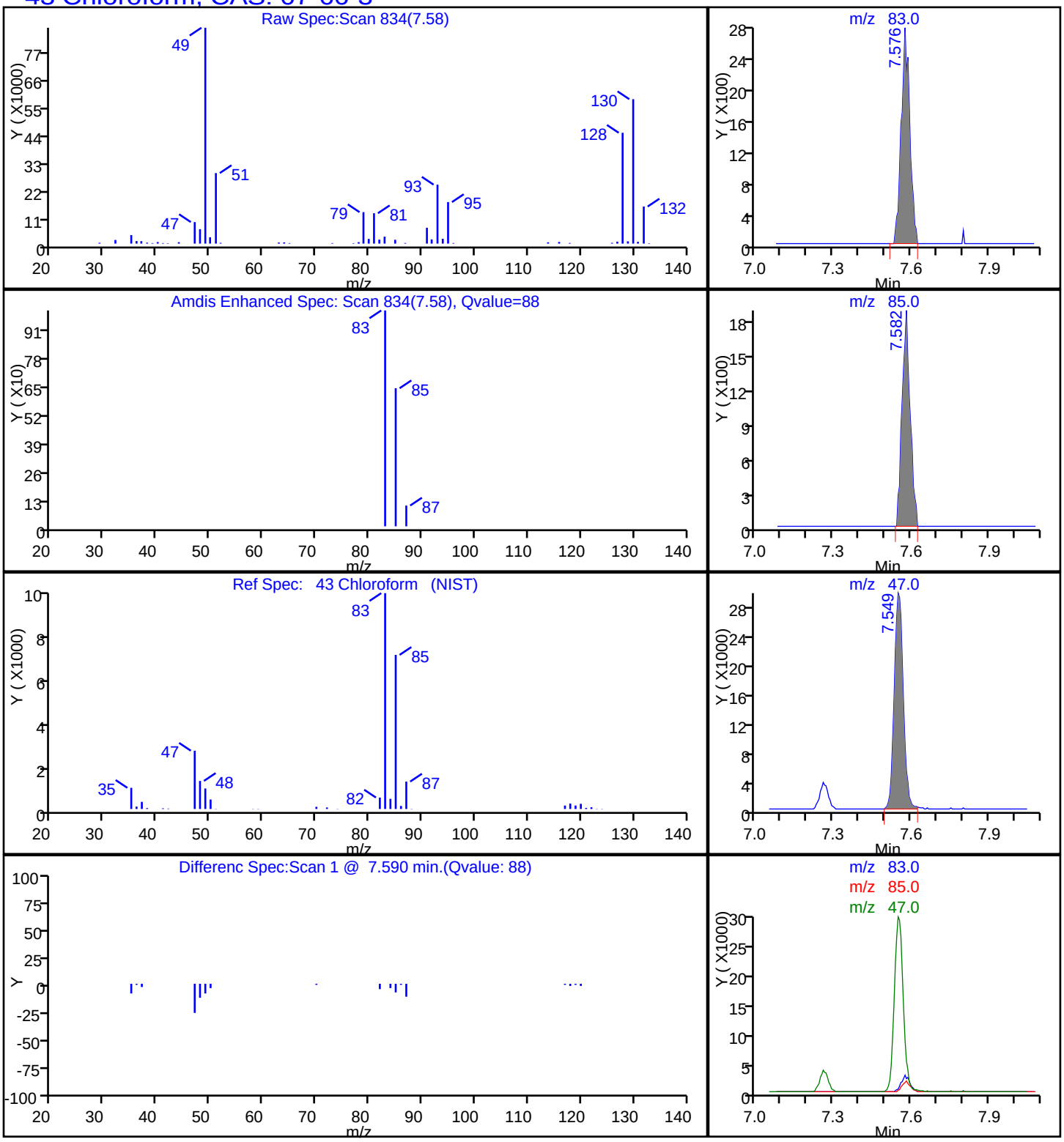
Lims ID:	140-10674-A-2	Lab Sample ID:	140-10674-2
Client ID:	BLDG-A MID-GAC		
Operator ID:	7126	ALS Bottle#:	16 Worklist Smp#: 22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

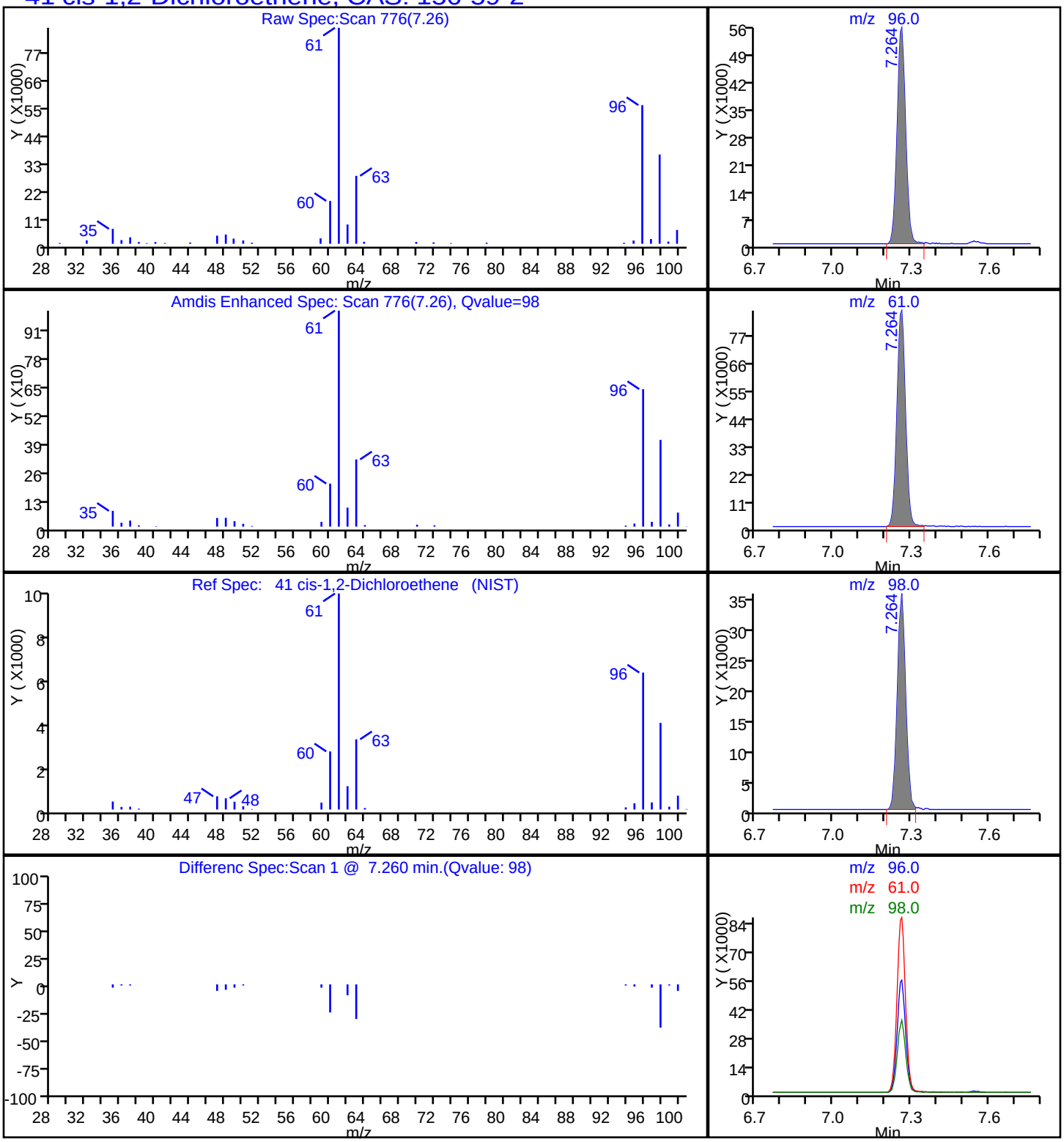
43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P116.D		
Injection Date:	20-Feb-2018 00:48:30	Instrument ID:	MG
Lims ID:	140-10674-A-2	Lab Sample ID:	140-10674-2
Client ID:	BLDG-A MID-GAC		
Operator ID:	7126	ALS Bottle#:	16 Worklist Smp#: 22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

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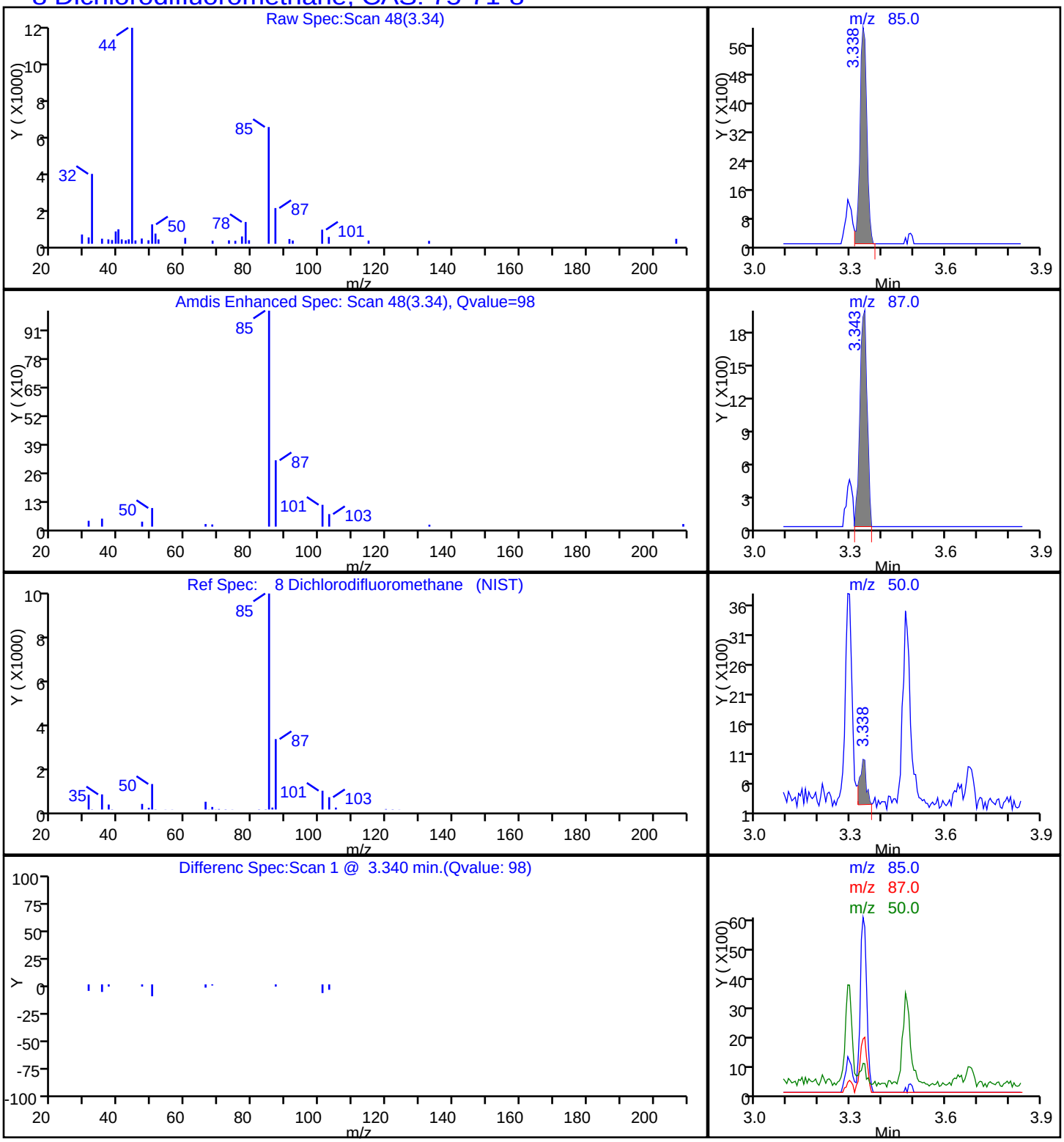
Lims ID:	140-10674-A-2	Lab Sample ID:	140-10674-2		
Client ID:	BLDG-A MID-GAC				
Operator ID:	7126	ALS Bottle#:	16	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

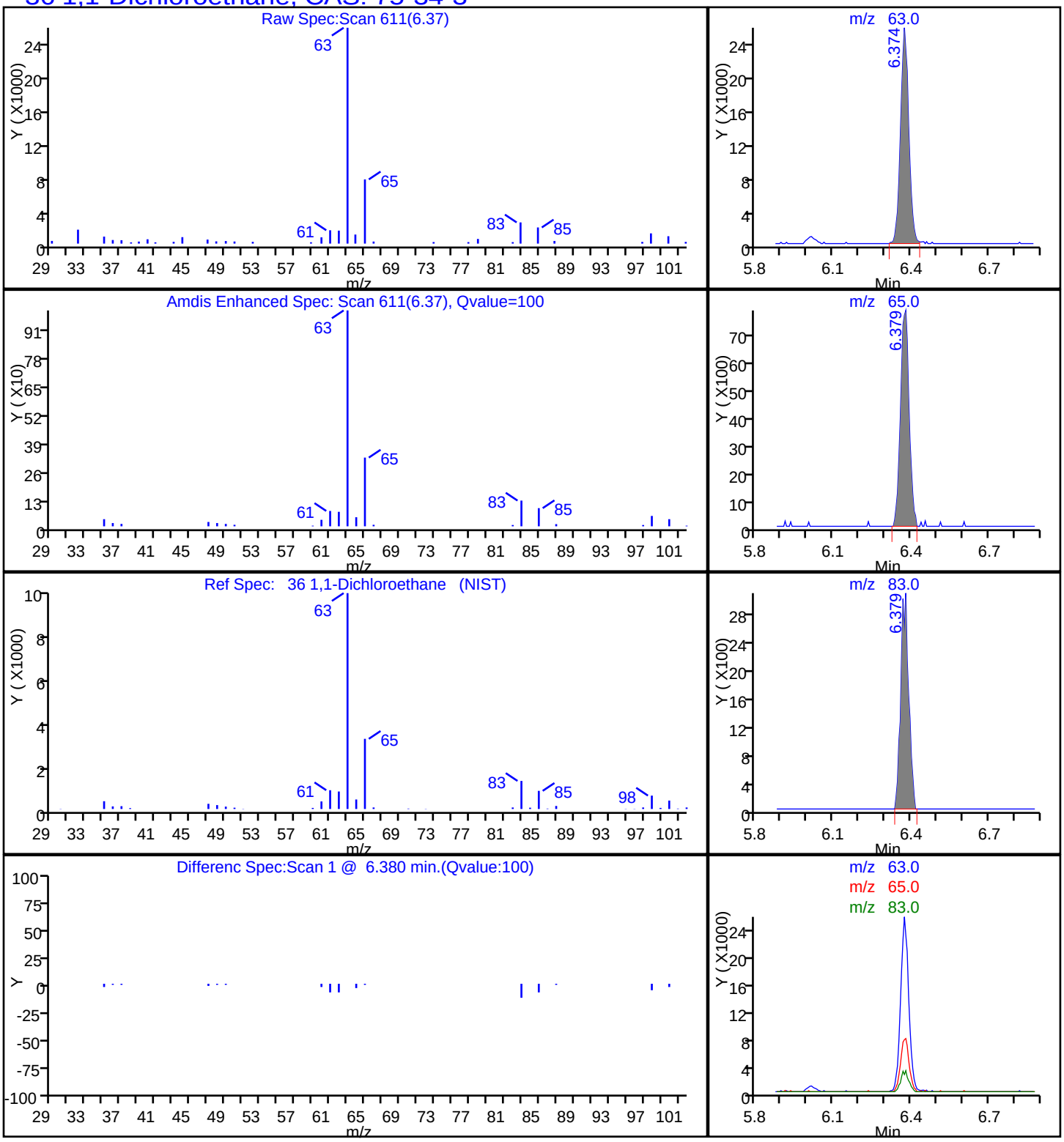
8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P116.D		
Injection Date:	20-Feb-2018 00:48:30	Instrument ID:	MG
Lims ID:	140-10674-A-2	Lab Sample ID:	140-10674-2
Client ID:	BLDG-A MID-GAC		
Operator ID:	7126	ALS Bottle#:	16 Worklist Smp#: 22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

36 1,1-Dichloroethane, CAS: 75-34-3

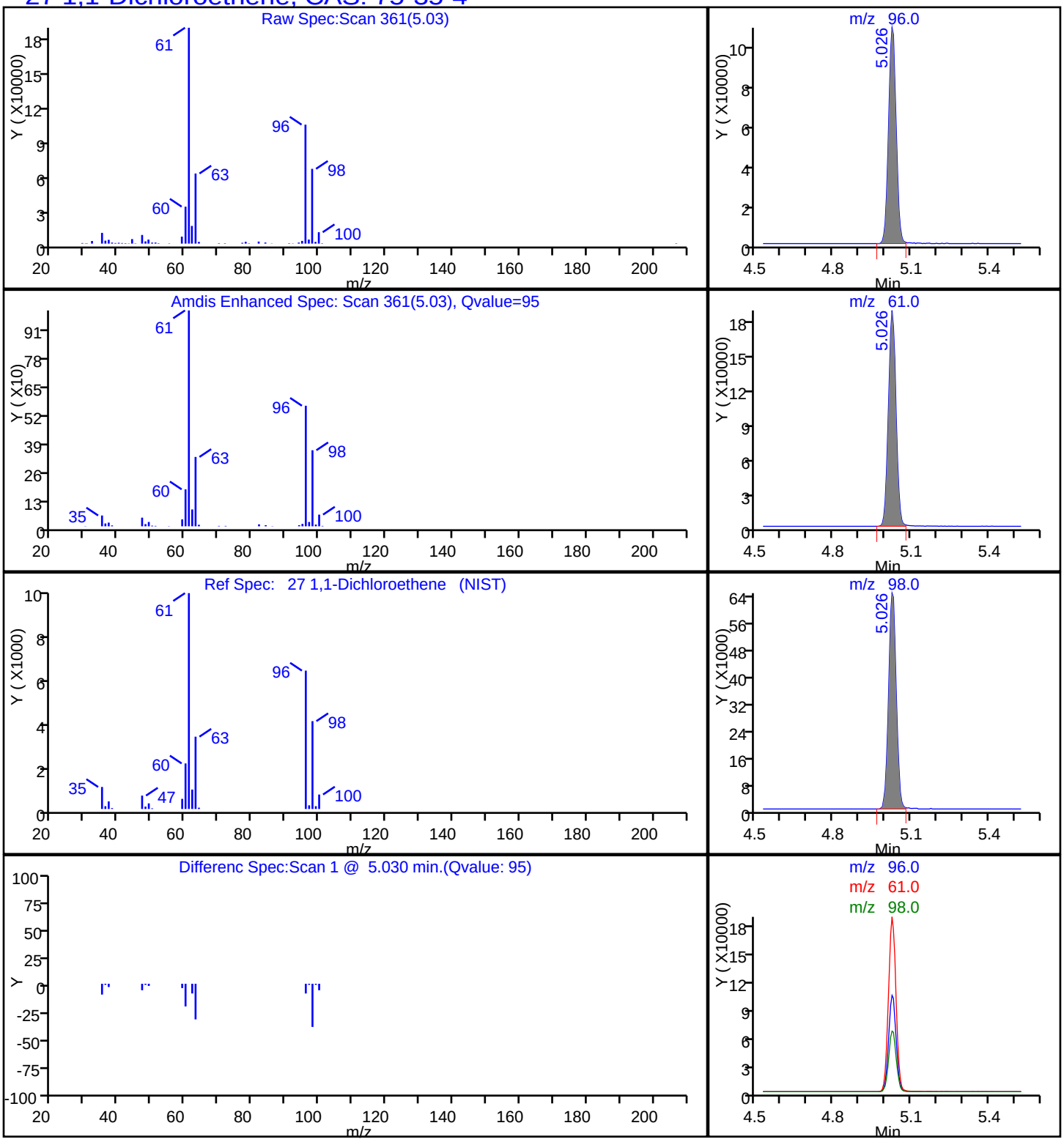


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P116.D

Injection Date:	20-Feb-2018 00:48:30	Instrument ID:	MG
Lims ID:	140-10674-A-2	Lab Sample ID:	140-10674-2
Client ID:	BLDG-A MID-GAC		
Operator ID:	7126	ALS Bottle#:	16 Worklist Smp#: 22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

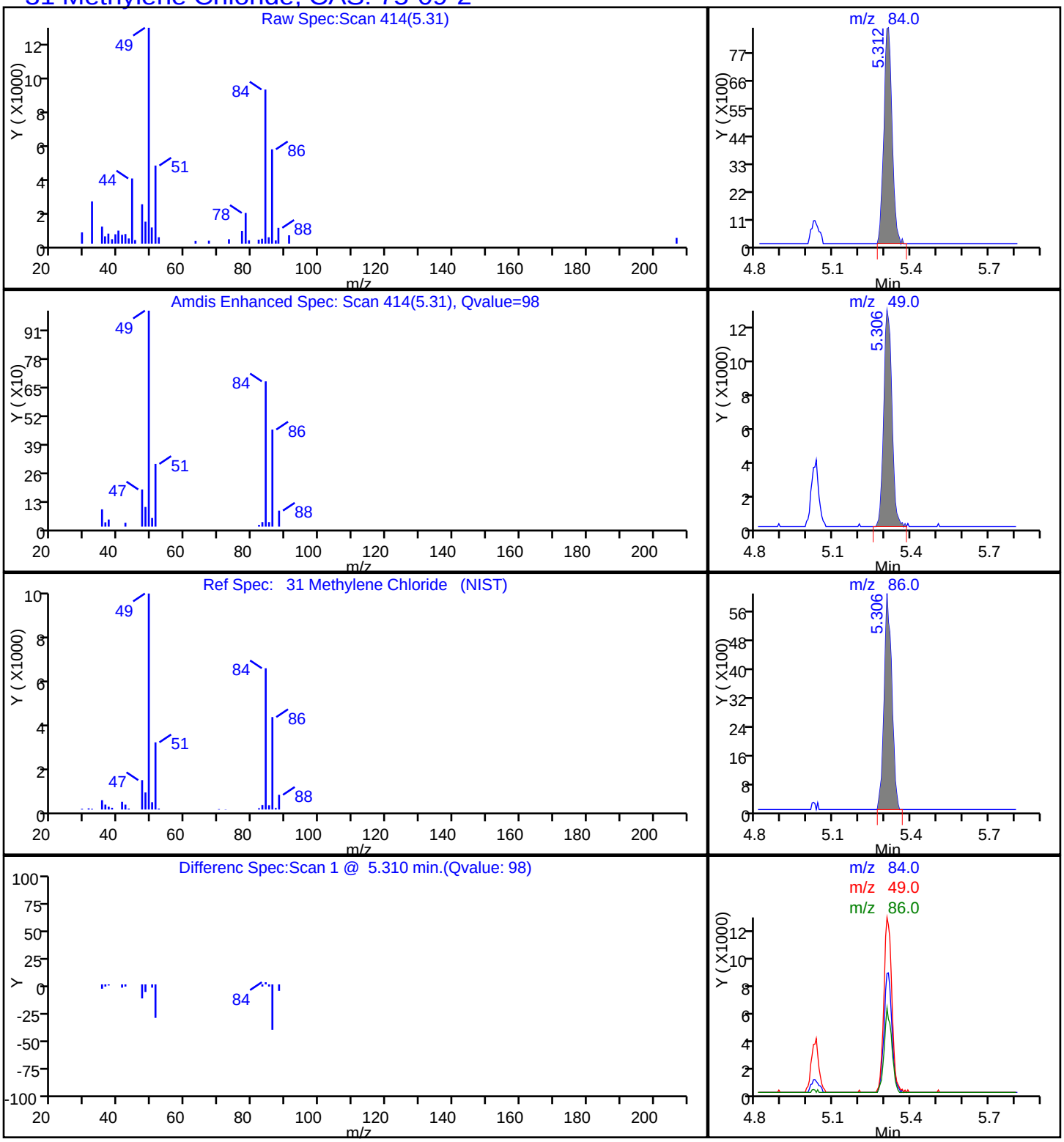
27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P116.D		
Injection Date:	20-Feb-2018 00:48:30	Instrument ID:	MG
Lims ID:	140-10674-A-2	Lab Sample ID:	140-10674-2
Client ID:	BLDG-A MID-GAC		
Operator ID:	7126	ALS Bottle#:	16 Worklist Smp#: 22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

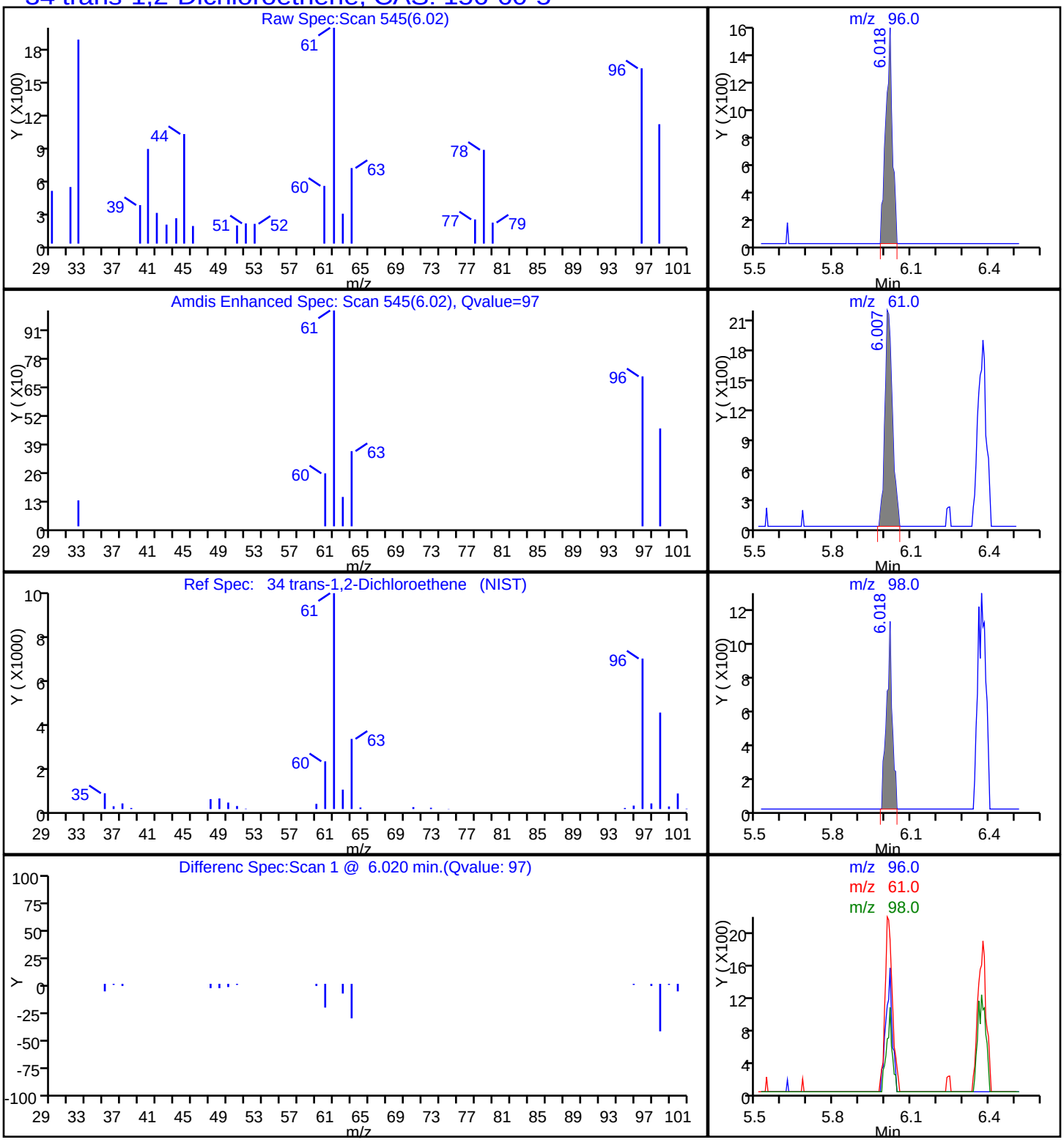
31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P116.D				
Injection Date:	20-Feb-2018 00:48:30	Instrument ID:	MG		
Lims ID:	140-10674-A-2	Lab Sample ID:	140-10674-2		
Client ID:	BLDG-A MID-GAC				
Operator ID:	7126	ALS Bottle#:	16	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

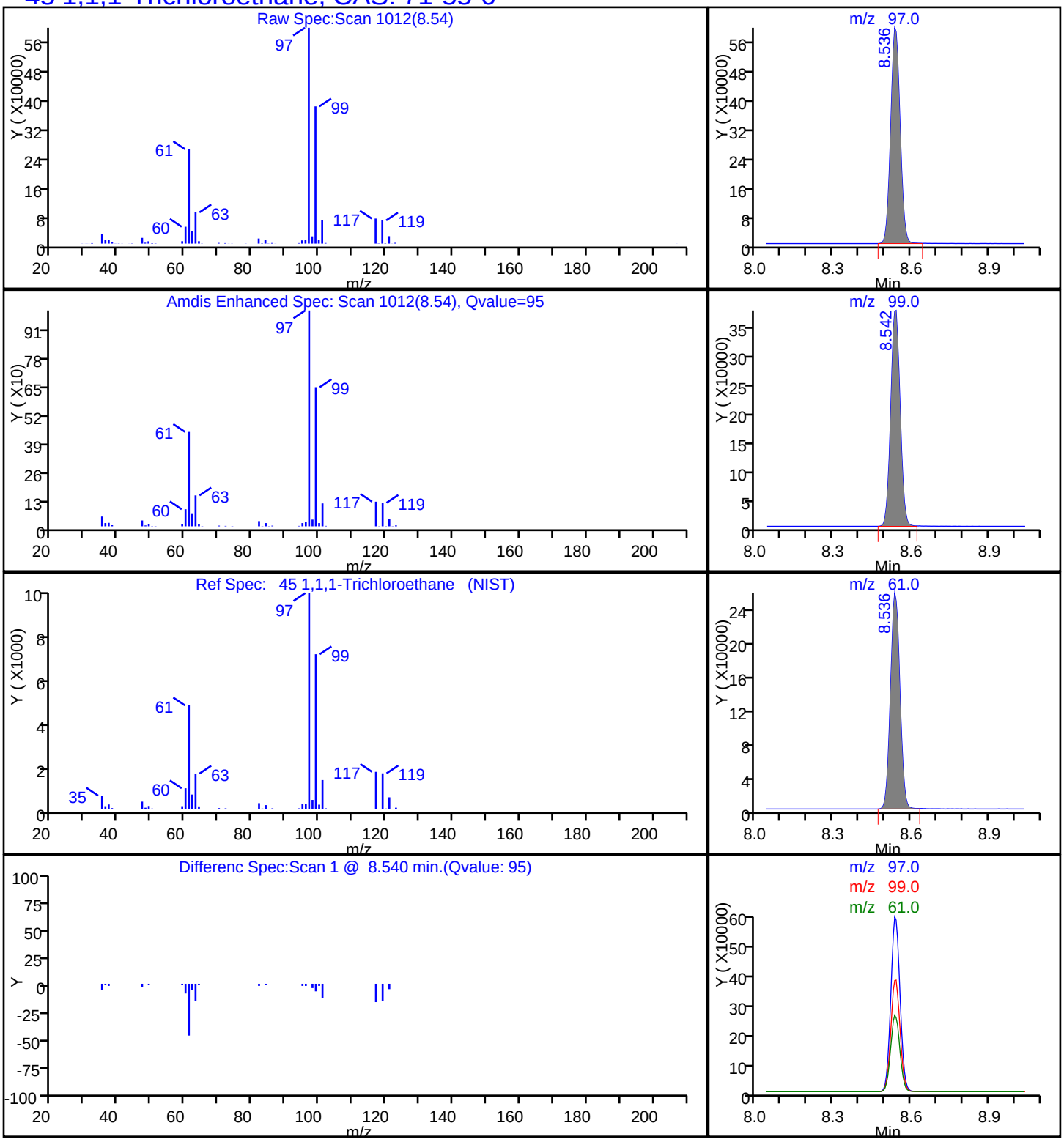
34 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P116.D				
Injection Date:	20-Feb-2018 00:48:30	Instrument ID:	MG		
Lims ID:	140-10674-A-2	Lab Sample ID:	140-10674-2		
Client ID:	BLDG-A MID-GAC				
Operator ID:	7126	ALS Bottle#:	16	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

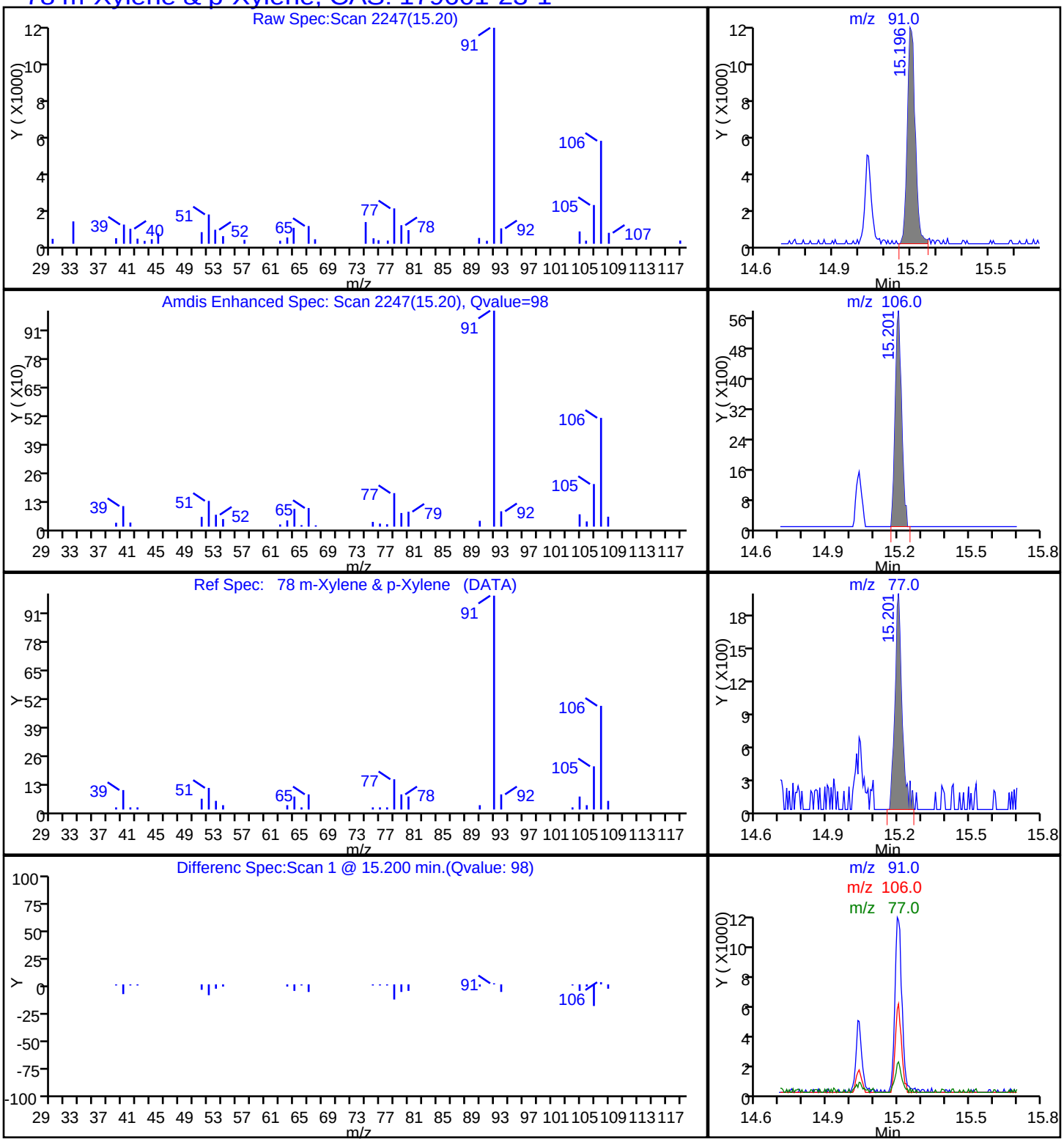
45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P116.D				
Injection Date:	20-Feb-2018 00:48:30	Instrument ID:	MG		
Lims ID:	140-10674-A-2	Lab Sample ID:	140-10674-2		
Client ID:	BLDG-A MID-GAC				
Operator ID:	7126	ALS Bottle#:	16	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

78 m-Xylene & p-Xylene, CAS: 179601-23-1

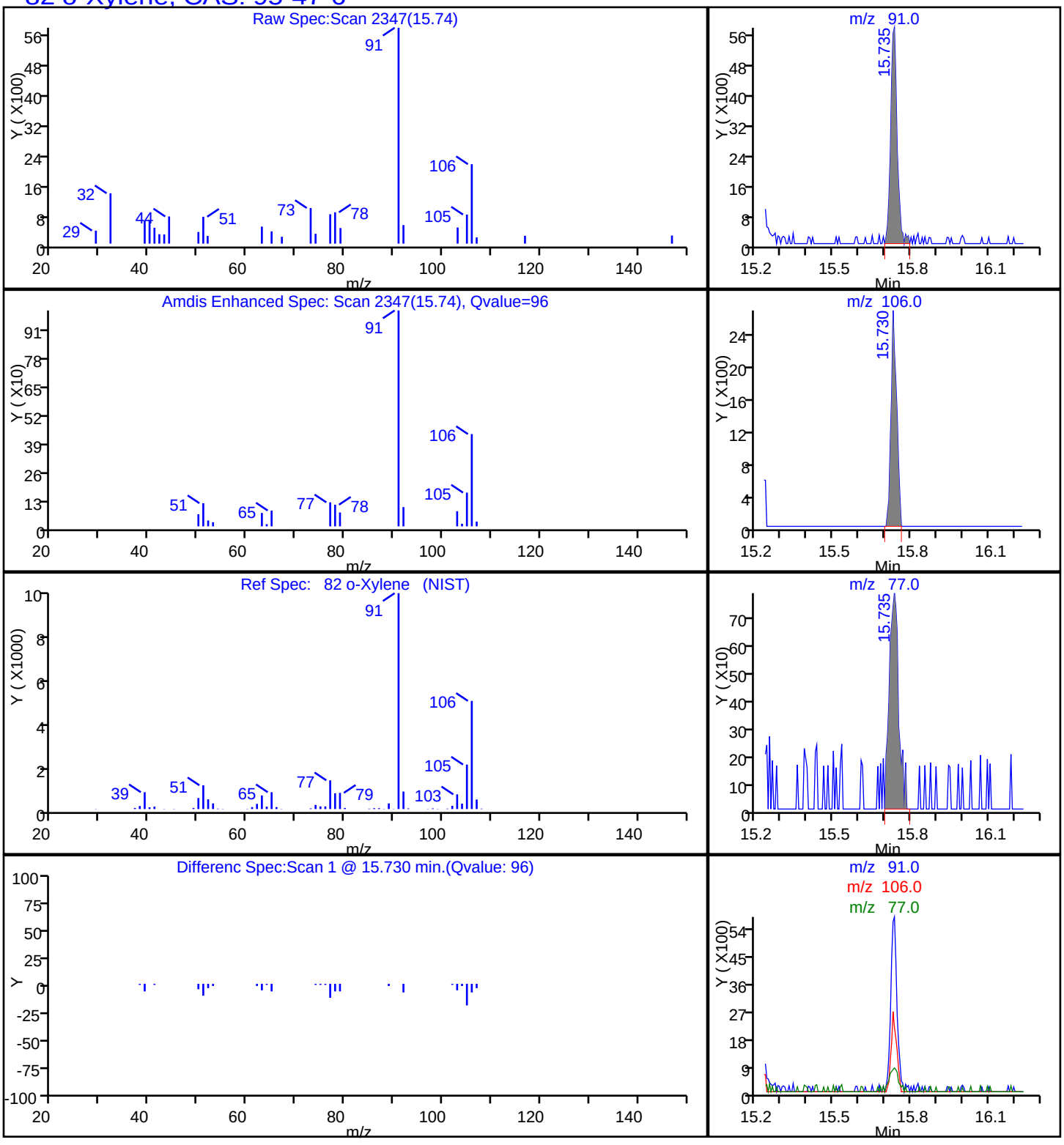


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P116.D

Injection Date:	20-Feb-2018 00:48:30	Instrument ID:	MG
Lims ID:	140-10674-A-2	Lab Sample ID:	140-10674-2
Client ID:	BLDG-A MID-GAC		
Operator ID:	7126	ALS Bottle#:	16 Worklist Smp#: 22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

82 o-Xylene, CAS: 95-47-6



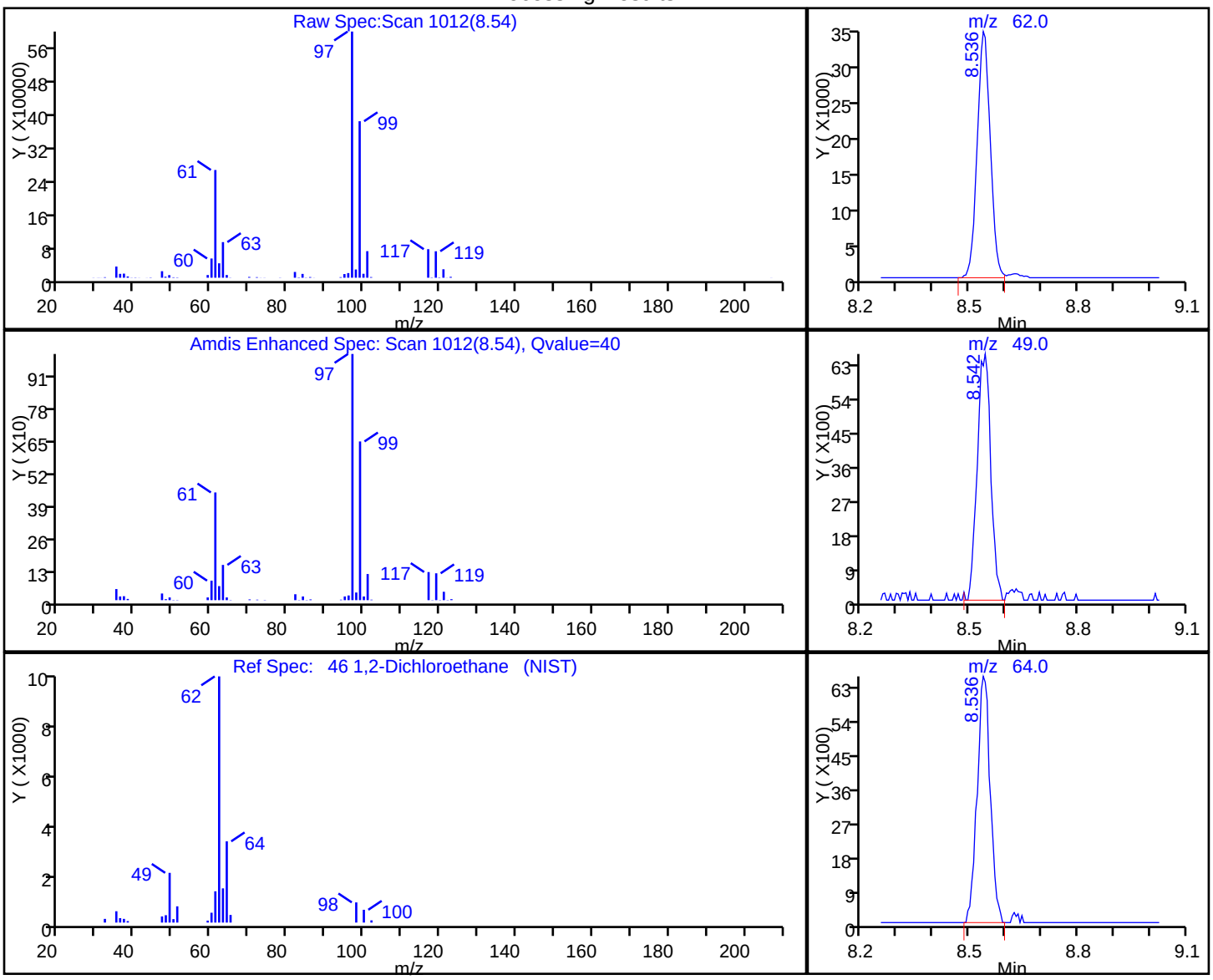
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P116.D				
Injection Date:	20-Feb-2018 00:48:30	Instrument ID:	MG		
Lims ID:	140-10674-A-2	Lab Sample ID:	140-10674-2		
Client ID:	BLDG-A MID-GAC				
Operator ID:	7126	ALS Bottle#:	16	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

46 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
8.54	62.00	87884	0.534983
8.54	49.00	17321	
8.54	64.00	16549	

Reviewer: tajh, 20-Feb-2018 10:45:05

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

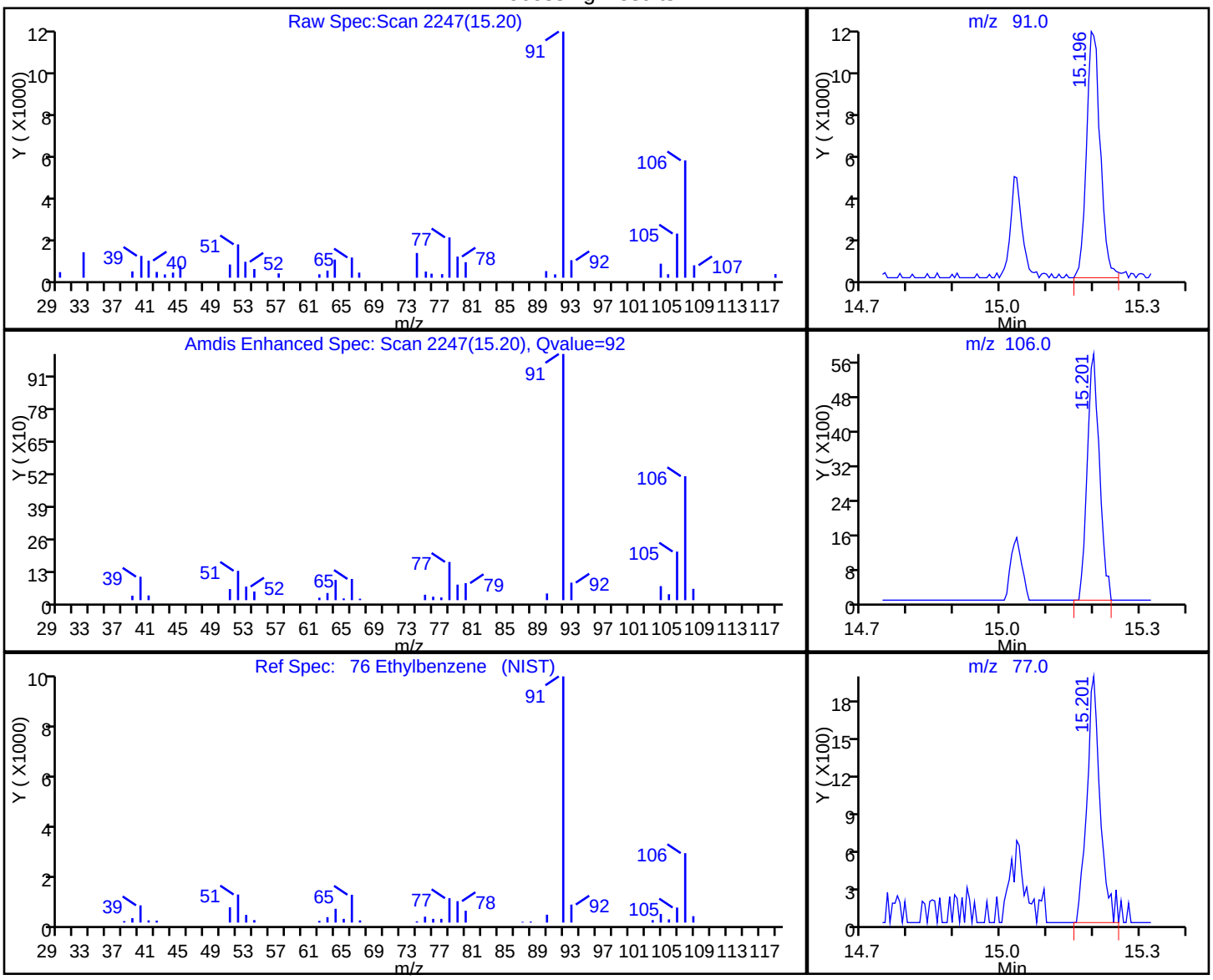
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P116.D				
Injection Date:	20-Feb-2018 00:48:30	Instrument ID:	MG		
Lims ID:	140-10674-A-2	Lab Sample ID:	140-10674-2		
Client ID:	BLDG-A MID-GAC				
Operator ID:	7126	ALS Bottle#:	16	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

76 Ethylbenzene, CAS: 100-41-4

Processing Results



RT	Mass	Response	Amount
15.20	91.00	23546	0.052884
15.20	106.00	10573	
15.20	77.00	3966	

Reviewer: tajh, 20-Feb-2018 10:45:05

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1

SDG No.:

Client Sample ID: BLDG-A INFLUENT Lab Sample ID: 140-10674-3

Matrix: Air Lab File ID: GB19P201.D

Analysis Method: TO 15 LL Date Collected: 02/09/2018 11:27

Sample wt/vol: 20(mL) Date Analyzed: 02/20/2018 01:29

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18252 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	5.0		2.0	0.58
56-23-5	Carbon tetrachloride	153.81	ND		2.0	0.38
75-45-6	Chlorodifluoromethane	86.47	9.1		2.0	0.38
67-66-3	Chloroform	119.38	ND		2.0	0.38
156-59-2	cis-1,2-Dichloroethene	96.94	18		2.0	0.60
75-71-8	Dichlorodifluoromethane	120.91	0.73	J	2.0	0.68
75-34-3	1,1-Dichloroethane	98.96	3.3		2.0	0.25
107-06-2	1,2-Dichloroethane	98.96	ND		2.0	0.48
75-35-4	1,1-Dichloroethene	96.94	31		2.0	0.35
100-41-4	Ethylbenzene	106.17	ND		2.0	0.68
75-09-2	Methylene Chloride	84.93	4.0	J	5.0	3.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		10	1.7
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.0	0.40
108-88-3	Toluene	92.14	ND		3.0	3.0
156-60-5	trans-1,2-Dichloroethene	96.94	ND		2.0	0.50
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		2.0	0.98
71-55-6	1,1,1-Trichloroethane	133.41	77		2.0	0.30
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.0	0.53
79-01-6	Trichloroethene	131.39	190		1.0	0.35
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.85
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.63
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.65
75-01-4	Vinyl chloride	62.50	ND		1.0	0.73
1330-20-7	Xylenes, Total	106.17	ND		4.0	0.60

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1

SDG No.:

Client Sample ID: BLDG-A INFLUENT Lab Sample ID: 140-10674-3

Matrix: Air Lab File ID: GB19P201.D

Analysis Method: TO 15 LL Date Collected: 02/09/2018 11:27

Sample wt/vol: 20(mL) Date Analyzed: 02/20/2018 01:29

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18252 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	16		6.4	1.8
56-23-5	Carbon tetrachloride	153.81	ND		13	2.4
75-45-6	Chlorodifluoromethane	86.47	32		7.1	1.3
67-66-3	Chloroform	119.38	ND		9.8	1.8
156-59-2	cis-1,2-Dichloroethene	96.94	70		7.9	2.4
75-71-8	Dichlorodifluoromethane	120.91	3.6	J	9.9	3.3
75-34-3	1,1-Dichloroethane	98.96	13		8.1	1.0
107-06-2	1,2-Dichloroethane	98.96	ND		8.1	1.9
75-35-4	1,1-Dichloroethene	96.94	120		7.9	1.4
100-41-4	Ethylbenzene	106.17	ND		8.7	2.9
75-09-2	Methylene Chloride	84.93	14	J	17	11
1634-04-4	Methyl tert-butyl ether	88.15	ND		36	6.1
91-20-3	Naphthalene	128.17	ND		5.2	5.2
127-18-4	Tetrachloroethene	165.83	ND		14	2.7
108-88-3	Toluene	92.14	ND		11	11
156-60-5	trans-1,2-Dichloroethene	96.94	ND		7.9	2.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		15	7.2
71-55-6	1,1,1-Trichloroethane	133.41	420		11	1.6
79-00-5	1,1,2-Trichloroethane	133.41	ND		11	2.9
79-01-6	Trichloroethene	131.39	1000		5.4	1.9
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		9.8	4.2
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		9.8	3.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		9.8	3.2
75-01-4	Vinyl chloride	62.50	ND		2.6	1.9
1330-20-7	Xylenes, Total	106.17	ND		17	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P201.D				
Lims ID:	140-10674-A-3				
Client ID:	BLDG-A INFLUENT				
Sample Type:	Client				
Inject. Date:	20-Feb-2018 01:29:30	ALS Bottle#:	17	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007419-023				
Misc. Info.:	140-10674-a-3				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Feb-2018 10:50:48	Calib Date:	13-Nov-2017 22:37:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				
First Level Reviewer: tajh		Date:	20-Feb-2018 10:45:32		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.555	7.566	-0.011	97	324981	4.00	
* 2 1,4-Difluorobenzene	114	9.696	9.706	-0.010	96	1583110	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.662	14.667	-0.005	89	1538356	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.350	16.355	-0.005	86	1127931	3.93	
6 Chlorodifluoromethane	67	3.290	3.300	-0.010	96	11809	0.3632	
8 Dichlorodifluoromethane	85	3.338	3.349	-0.011	98	9439	0.0291	
27 1,1-Dichloroethene	96	5.026	5.037	-0.011	95	139790	1.22	
31 Methylene Chloride	84	5.312	5.322	-0.010	96	18305	0.1582	
36 1,1-Dichloroethane	63	6.374	6.390	-0.016	99	30613	0.1330	
41 cis-1,2-Dichloroethene	96	7.264	7.280	-0.016	98	84710	0.7030	
45 1,1,1-Trichloroethane	97	8.542	8.552	-0.010	95	855425	3.06	
47 Benzene	78	9.113	9.124	-0.011	97	61969	0.1989	
56 Trichloroethene	130	10.445	10.456	-0.011	95	1126149	7.72	
65 Toluene	91	12.629	12.629	0.000	93	35831	0.1048	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

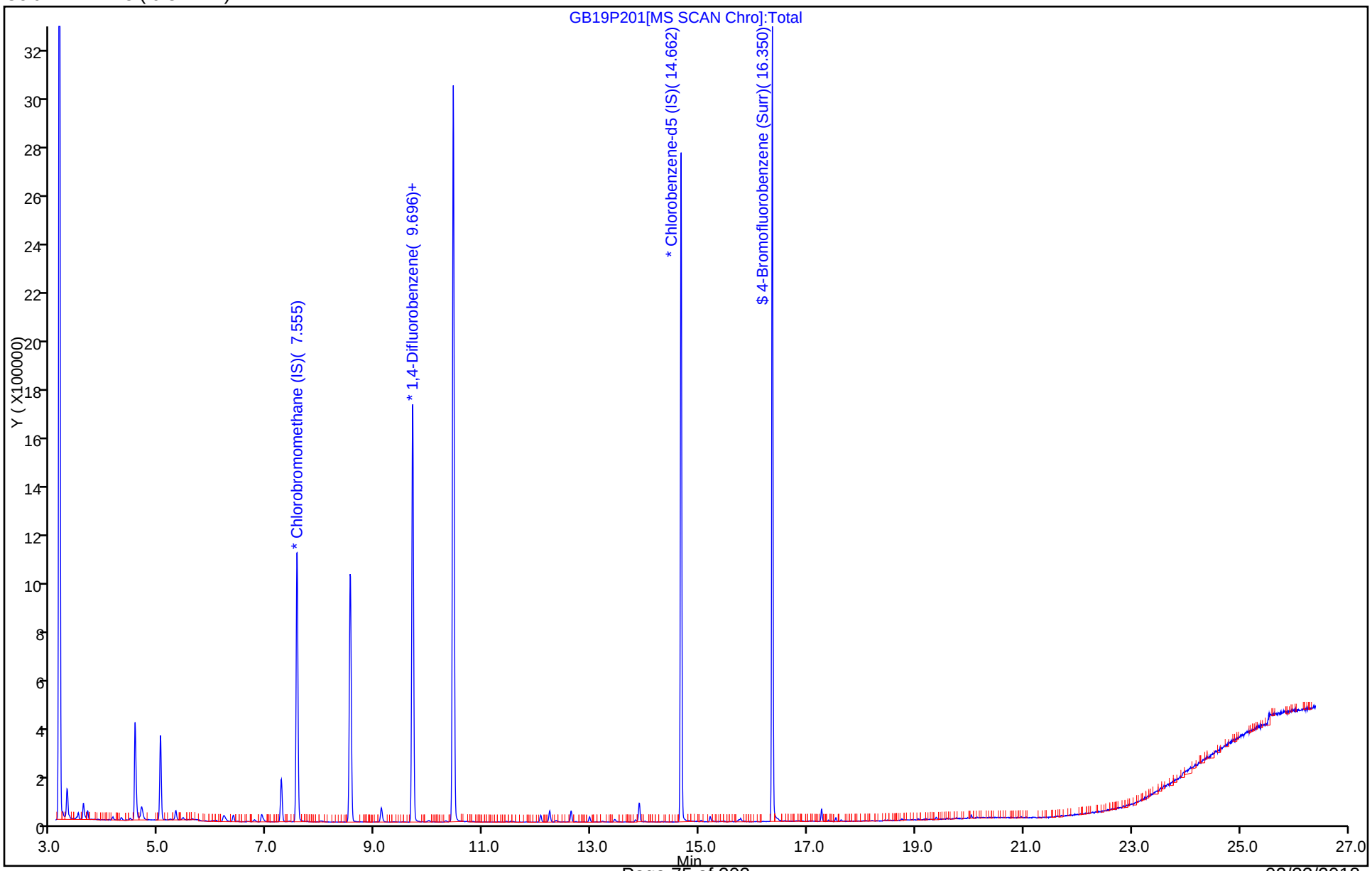
Report Date: 20-Feb-2018 10:51:42 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P201.D

Injection Date:	20-Feb-2018 01:29:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-10674-A-3	Lab Sample ID:	140-10674-3	Worklist Smp#:	23
Client ID:	BLDG-A INFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

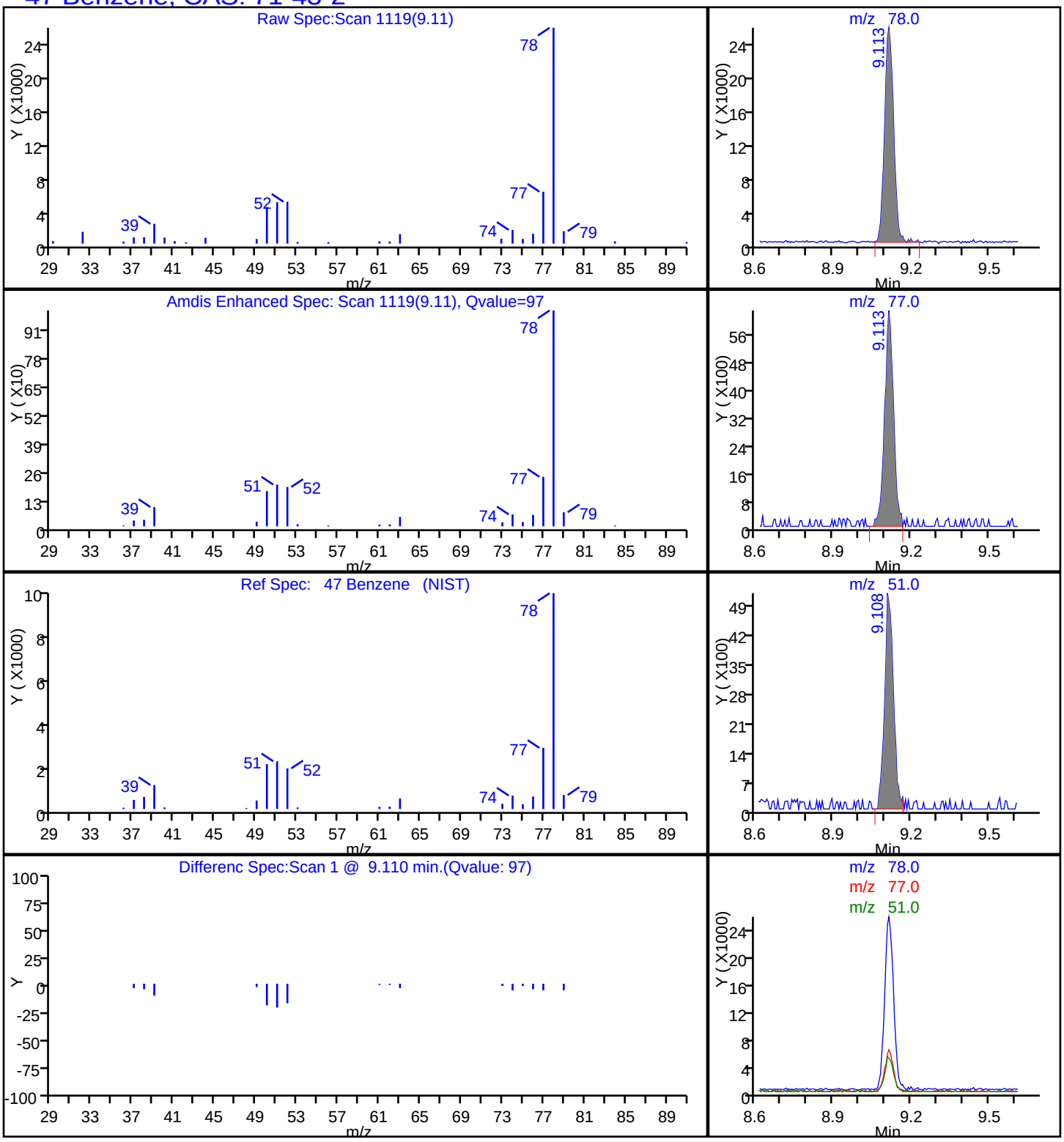
Data File:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P201.D				
Lims ID:	140-10674-A-3				
Client ID:	BLDG-A INFLUENT				
Sample Type:	Client				
Inject. Date:	20-Feb-2018 01:29:30	ALS Bottle#:	17	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007419-023				
Misc. Info.:	140-10674-a-3				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Feb-2018 10:50:48	Calib Date:	13-Nov-2017 22:37:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				
First Level Reviewer: tajh		Date:	20-Feb-2018 10:45:32		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.93	98.24

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P201.D		
Injection Date:	20-Feb-2018 01:29:30	Instrument ID:	MG
Lims ID:	140-10674-A-3	Lab Sample ID:	140-10674-3
Client ID:	BLDG-A INFLUENT		
Operator ID:	7126	ALS Bottle#:	17 Worklist Smp#: 23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

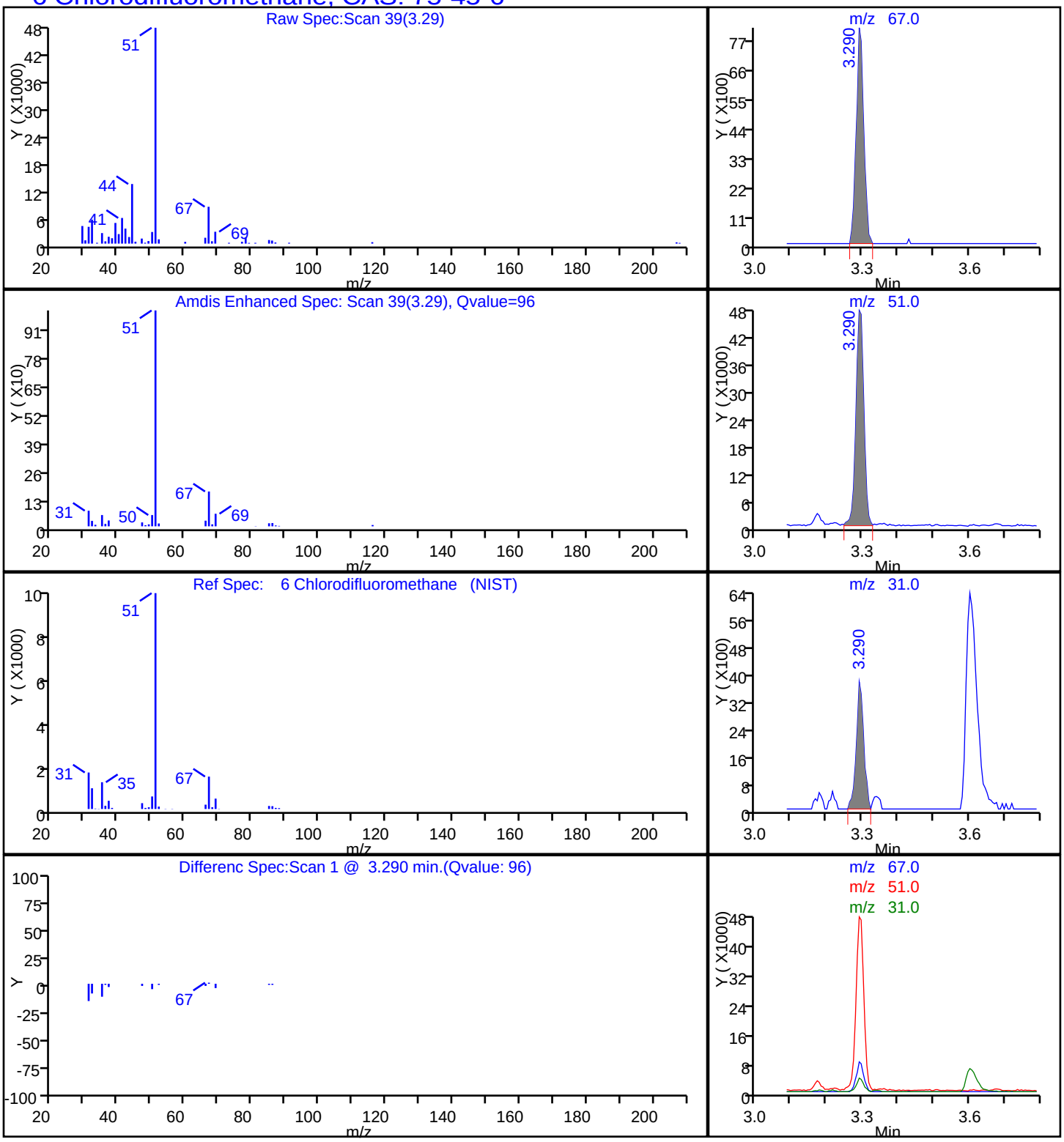
47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P201.D				
Injection Date:	20-Feb-2018 01:29:30	Instrument ID:	MG		
Lims ID:	140-10674-A-3	Lab Sample ID:	140-10674-3		
Client ID:	BLDG-A INFLUENT				
Operator ID:	7126	ALS Bottle#:	17	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

6 Chlorodifluoromethane, CAS: 75-45-6

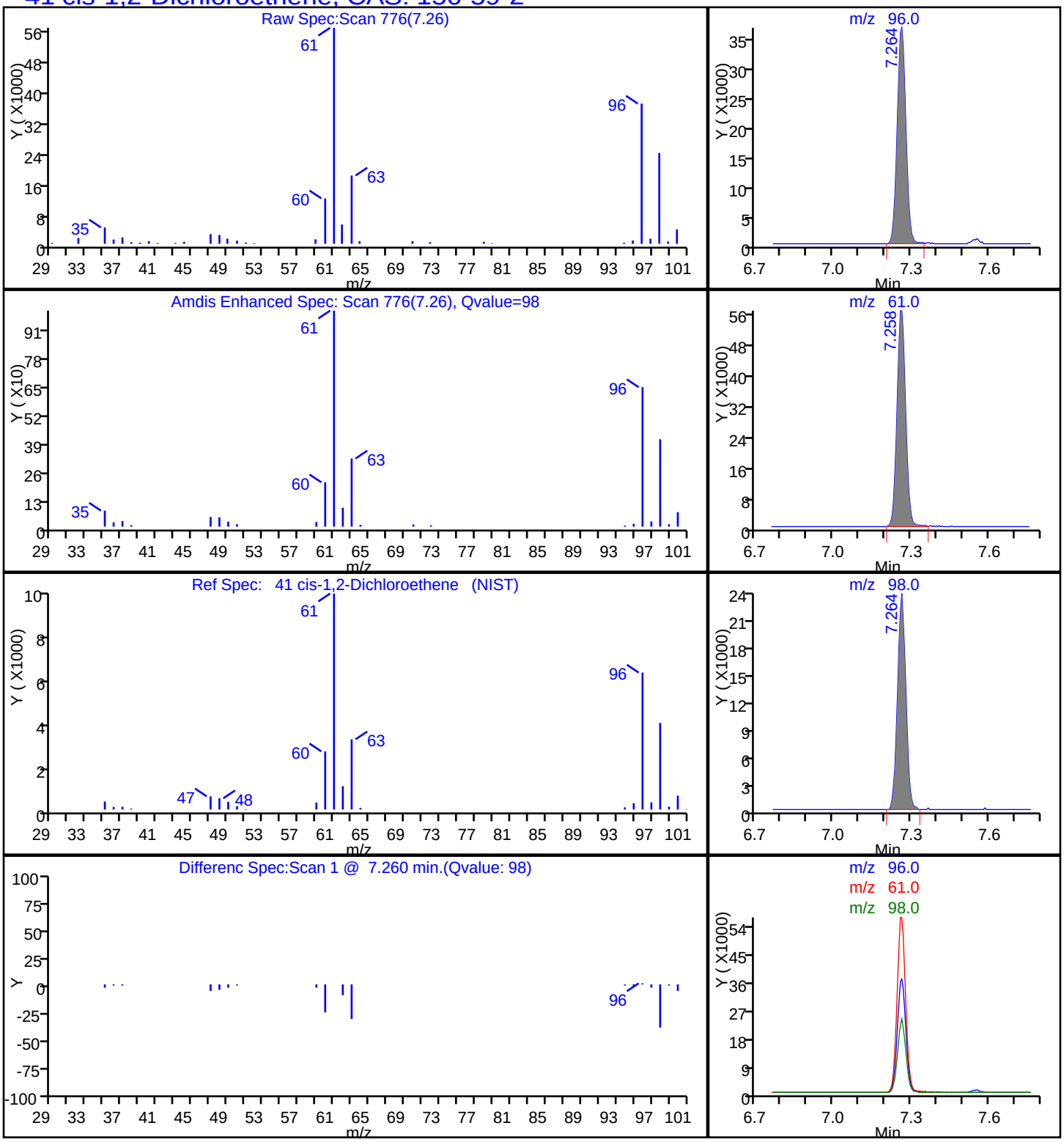


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P201.D

Injection Date:	20-Feb-2018 01:29:30	Instrument ID:	MG		
Lims ID:	140-10674-A-3	Lab Sample ID:	140-10674-3		
Client ID:	BLDG-A INFLUENT				
Operator ID:	7126	ALS Bottle#:	17	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

41 cis-1,2-Dichloroethene, CAS: 156-59-2

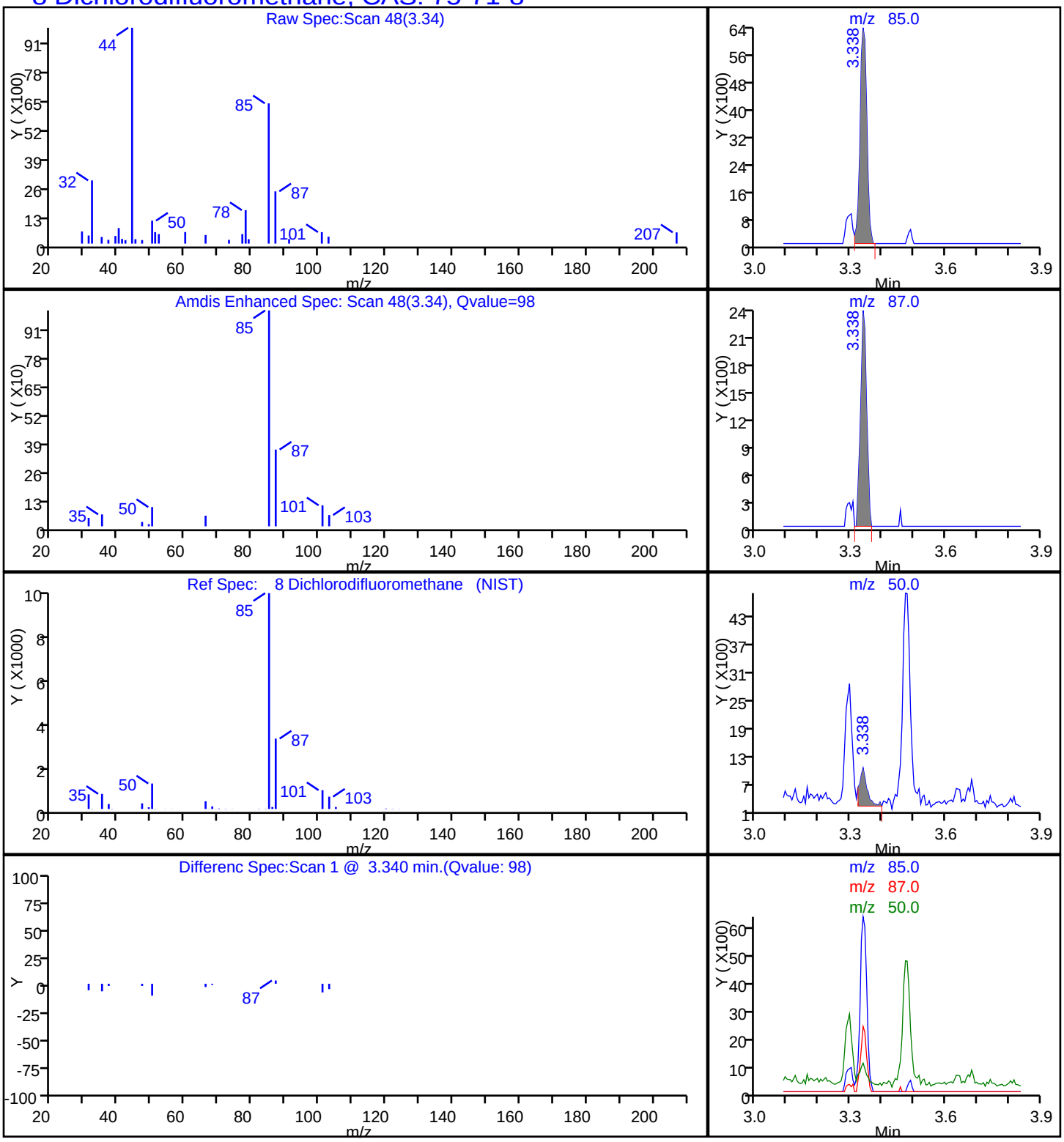


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P201.D

Injection Date:	20-Feb-2018 01:29:30	Instrument ID:	MG		
Lims ID:	140-10674-A-3	Lab Sample ID:	140-10674-3		
Client ID:	BLDG-A INFLUENT				
Operator ID:	7126	ALS Bottle#:	17	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

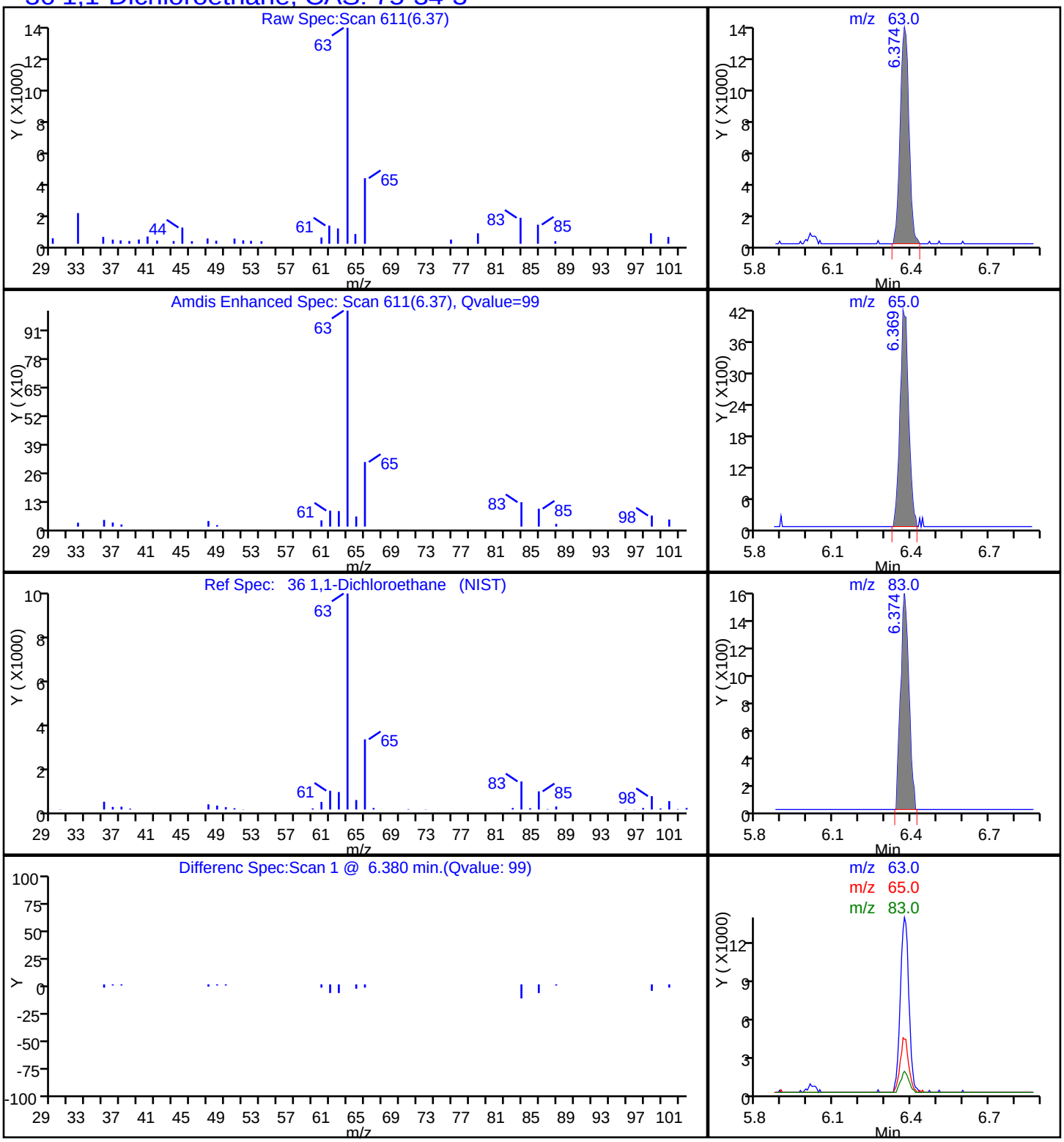
8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P201.D		
Injection Date:	20-Feb-2018 01:29:30	Instrument ID:	MG
Lims ID:	140-10674-A-3	Lab Sample ID:	140-10674-3
Client ID:	BLDG-A INFLUENT		
Operator ID:	7126	ALS Bottle#:	17 Worklist Smp#: 23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

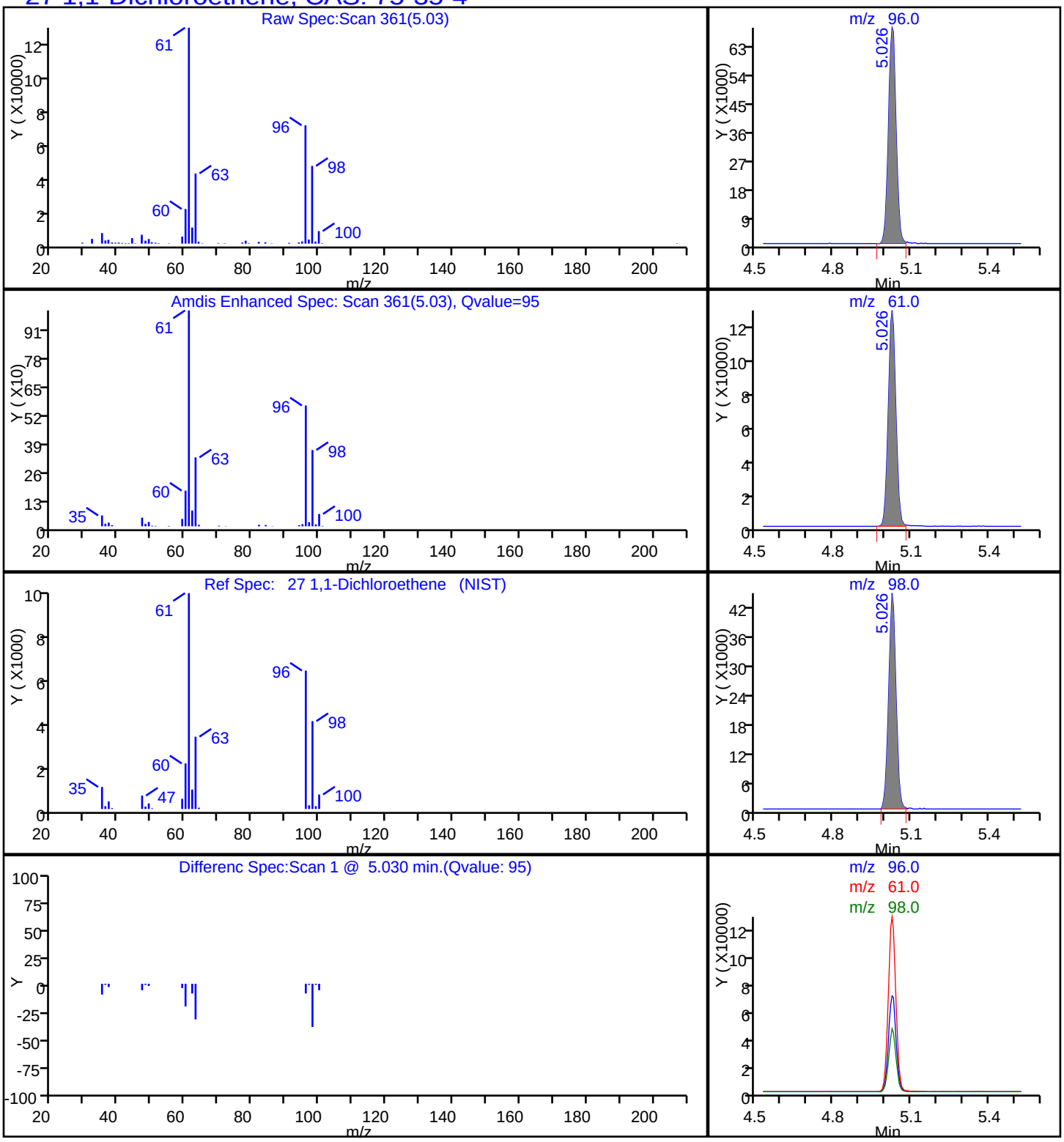
36 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P201.D		
Injection Date:	20-Feb-2018 01:29:30	Instrument ID:	MG
Lims ID:	140-10674-A-3	Lab Sample ID:	140-10674-3
Client ID:	BLDG-A INFLUENT		
Operator ID:	7126	ALS Bottle#:	17 Worklist Smp#: 23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

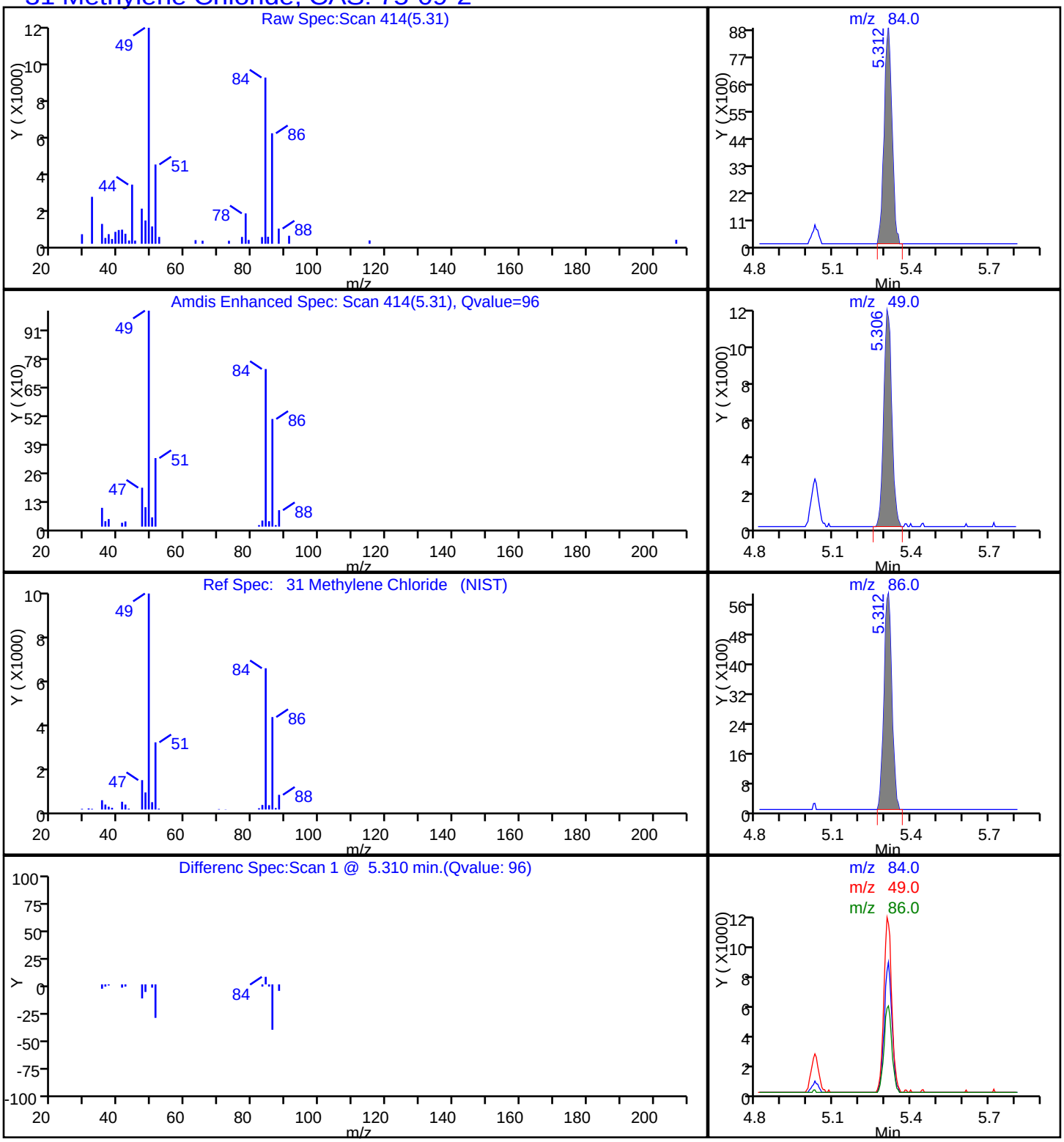
27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P201.D		
Injection Date:	20-Feb-2018 01:29:30	Instrument ID:	MG
Lims ID:	140-10674-A-3	Lab Sample ID:	140-10674-3
Client ID:	BLDG-A INFLUENT		
Operator ID:	7126	ALS Bottle#:	17 Worklist Smp#: 23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

31 Methylene Chloride, CAS: 75-09-2

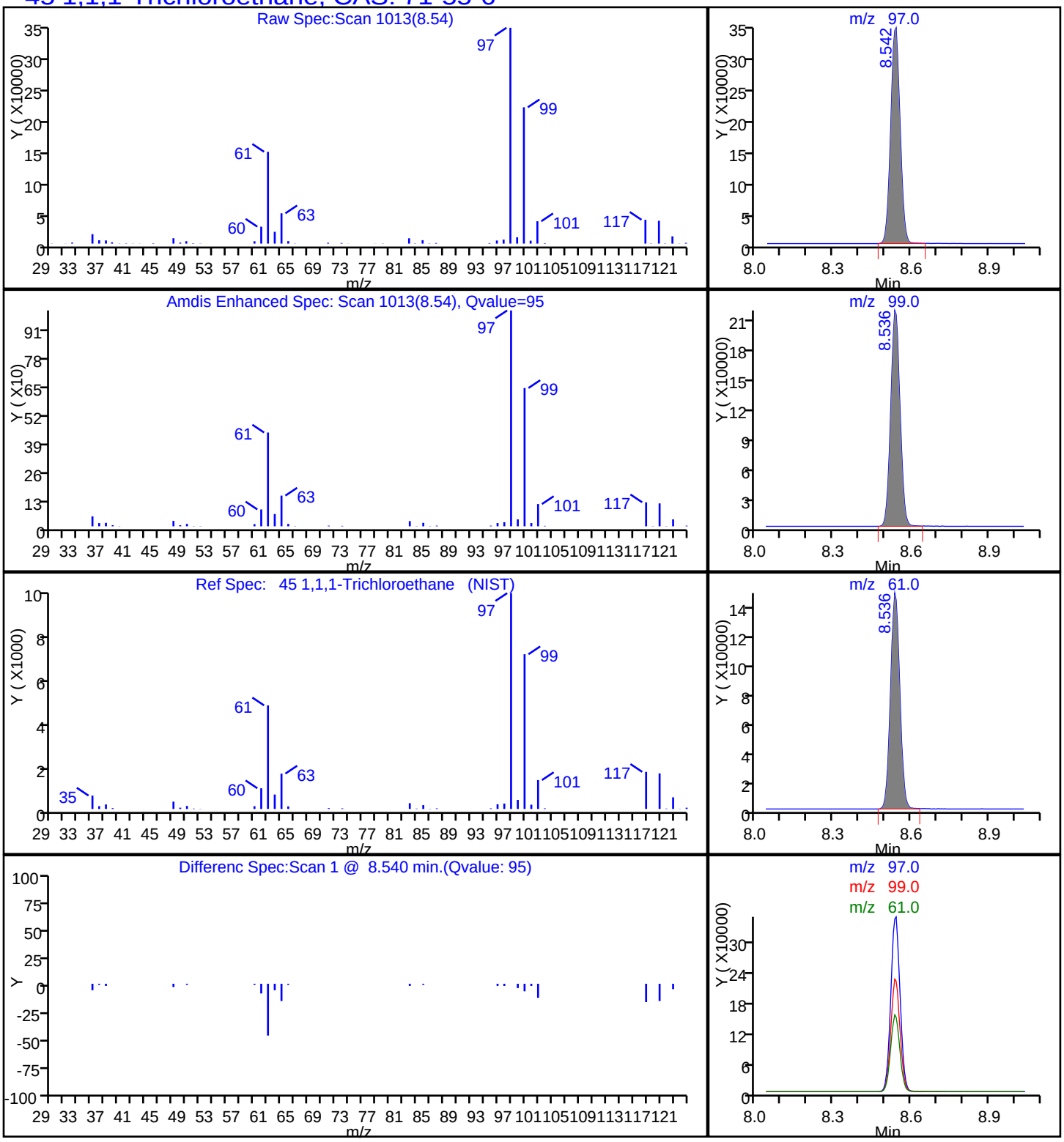


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P201.D

Injection Date:	20-Feb-2018 01:29:30	Instrument ID:	MG		
Lims ID:	140-10674-A-3	Lab Sample ID:	140-10674-3		
Client ID:	BLDG-A INFLUENT				
Operator ID:	7126	ALS Bottle#:	17	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

45 1,1,1-Trichloroethane, CAS: 71-55-6

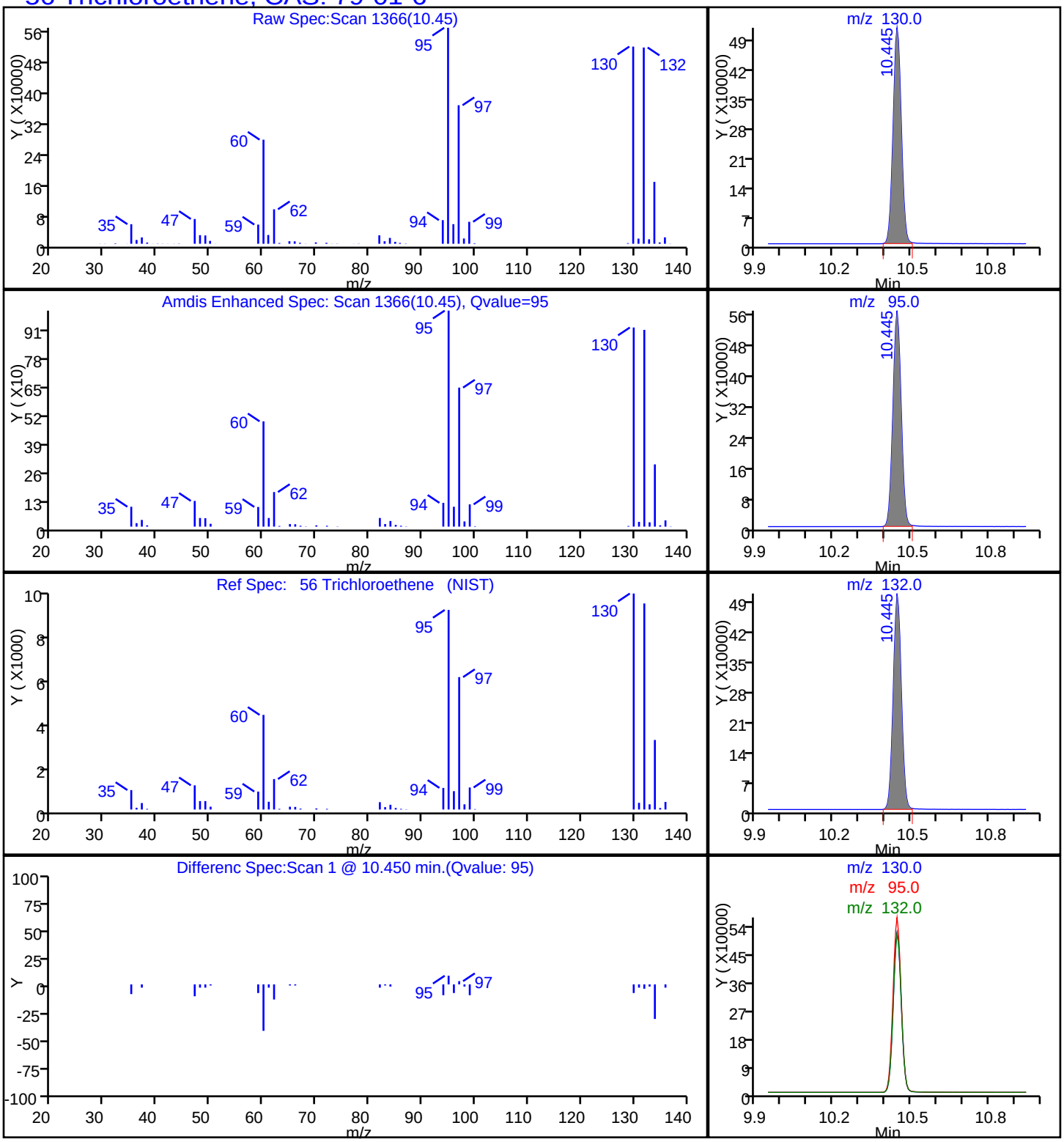


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P201.D

Injection Date:	20-Feb-2018 01:29:30	Instrument ID:	MG		
Lims ID:	140-10674-A-3	Lab Sample ID:	140-10674-3		
Client ID:	BLDG-A INFLUENT				
Operator ID:	7126	ALS Bottle#:	17	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

56 Trichloroethene, CAS: 79-01-6



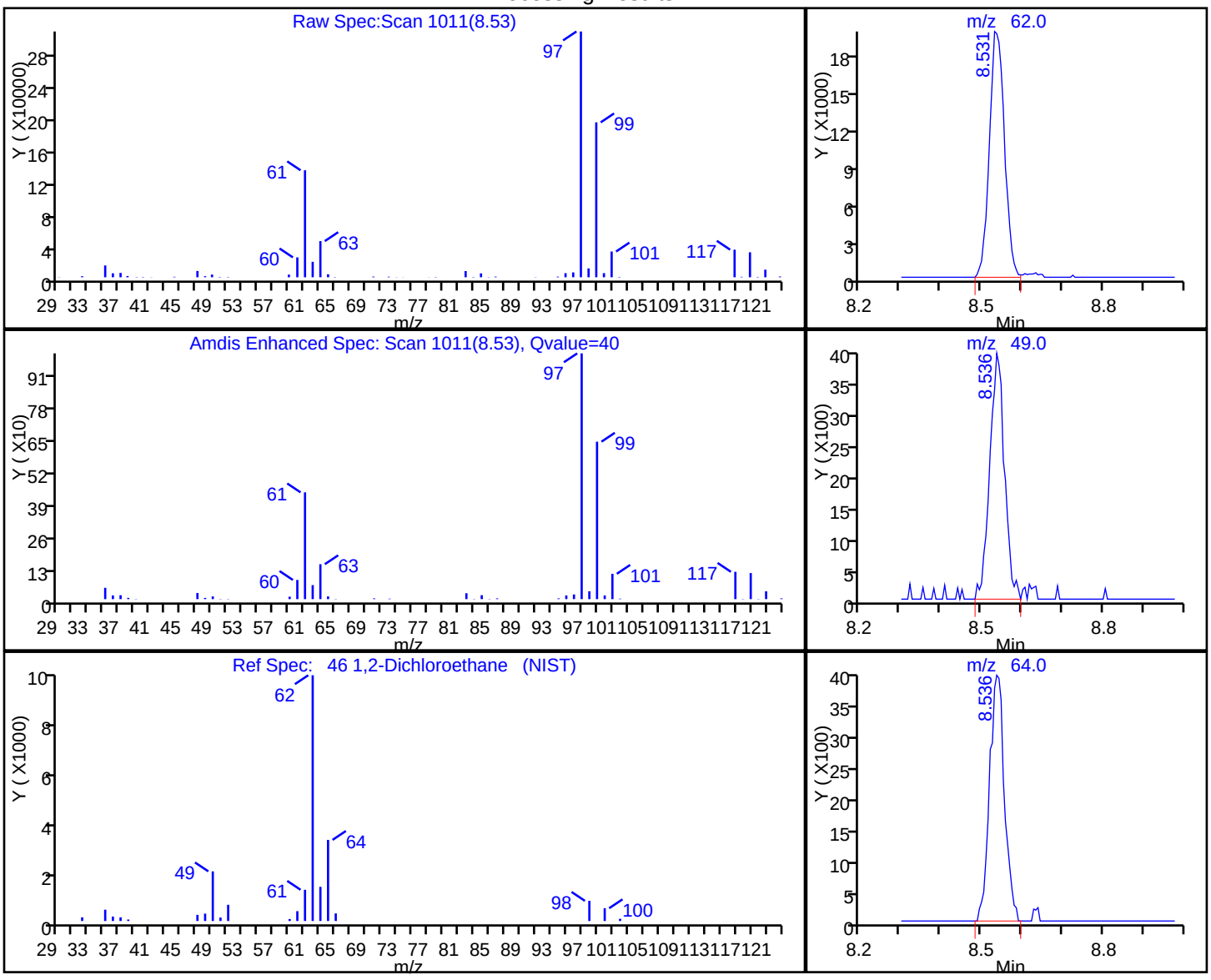
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P201.D				
Injection Date:	20-Feb-2018 01:29:30	Instrument ID:	MG		
Lims ID:	140-10674-A-3	Lab Sample ID:	140-10674-3		
Client ID:	BLDG-A INFLUENT				
Operator ID:	7126	ALS Bottle#:	17	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

46 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
8.53	62.00	50809	0.318678
8.54	49.00	10033	
8.54	64.00	10091	

Reviewer: tajh, 20-Feb-2018 10:45:32

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

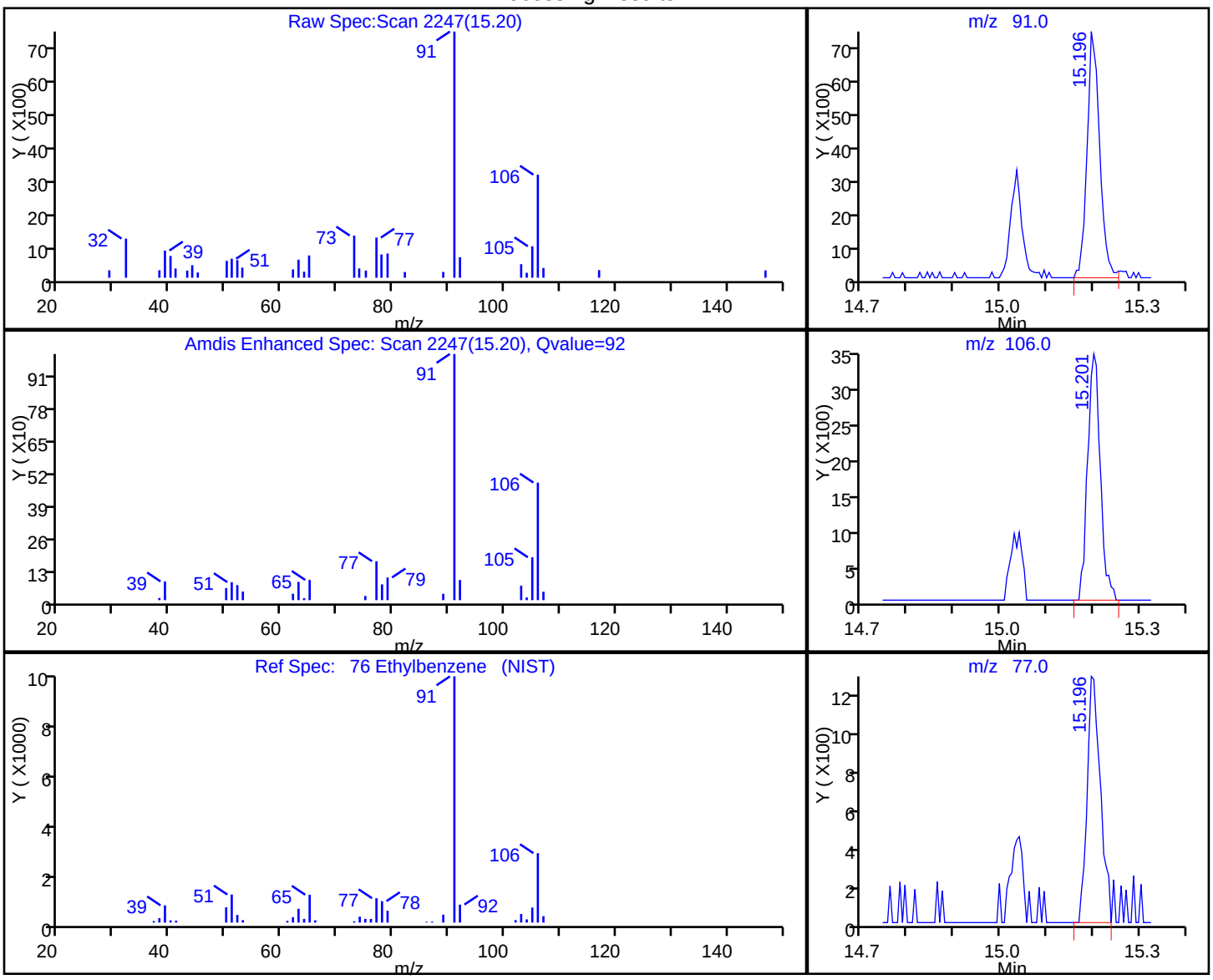
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GB19P201.D				
Injection Date:	20-Feb-2018 01:29:30	Instrument ID:	MG		
Lims ID:	140-10674-A-3	Lab Sample ID:	140-10674-3		
Client ID:	BLDG-A INFLUENT				
Operator ID:	7126	ALS Bottle#:	17	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

76 Ethylbenzene, CAS: 100-41-4

Processing Results



RT	Mass	Response	Amount
15.20	91.00	14173	0.032307
15.20	106.00	6574	
15.20	77.00	2427	

Reviewer: tajh, 20-Feb-2018 10:45:32

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1 Analy Batch No.: 15917

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2017 16:15 Calibration End Date: 11/13/2017 22:37 Calibration ID: 1337

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-15917/3	GK13IC01.D
Level 2	IC 140-15917/4	GK13IC02.D
Level 3	IC 140-15917/5	GK13IC03.D
Level 4	IC 140-15917/6	GK13IC04.D
Level 5	IC 140-15917/7	GK13IC05.D
Level 6	IC 140-15917/8	GK13IC06.D
Level 7	ICIS 140-15917/9	GK13IC07.D
Level 8	IC 140-15917/10	GK13IC08.D
Level 9	IC 140-15917/11	GK13IC09.D
Level 10	IC 140-15917/12	GK13IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Chlorodifluoromethane	+++++ 0.4209	0.4741 0.3778	0.4890 0.3631	0.4015 0.3389	0.3904 0.3461	Ave		0.4002				13.2		30.0			
Propene	+++++ 1.2942	+++++ 1.1742	1.4339 1.0902	1.3826 1.0058	1.2116 0.9801	Ave		1.1966				14.0		30.0			
Dichlorodifluoromethane	+++++ 4.2687	4.7102 3.9109	4.2434 3.7103	4.1211 3.4967	3.8994 3.5726	Ave		3.9926				9.7		30.0			
Chloromethane	+++++ 0.4856	+++++ 0.4266	+++++ 0.4031	0.5283 0.3716	0.4379 0.3688	Ave		0.4317				13.6		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++ 2.6040	2.6490 2.4574	2.7020 2.4381	2.3871 2.3767	2.4295 2.6085	Ave		2.5169				4.9		30.0			
Vinyl chloride	1.9357 1.6167	1.7829 1.5085	1.6650 1.4276	1.5284 1.3540	1.4886 1.3938	Ave		1.5701				11.6		30.0			
1,3-Butadiene	+++++ 1.2734	+++++ 1.1671	1.3254 1.1011	1.2255 1.0267	1.1534 1.0249	Ave		1.1622				9.4		30.0			
Butane	+++++ 2.4587	+++++ 2.2121	2.7533 2.0602	2.4531 1.8895	2.3384 1.8366	Ave		2.2502				13.9		30.0			
Bromomethane	+++++ 1.4801	+++++ 1.4021	1.5021 1.3416	1.4094 1.2847	1.3709 1.3397	Ave		1.3913				5.3		30.0			
Chloroethane	+++++ 0.8384	+++++ 0.7765	0.8487 0.7405	0.8017 0.7131	0.7663 0.7370	Ave		0.7778				6.3		30.0			
Ethanol	+++++ 0.7651	+++++ 0.6439	0.7998 0.6811	0.7406 0.6282	0.7569 0.5700	Ave		0.6982				11.4		30.0			
Vinyl bromide	+++++ 1.4498	1.4149 1.3601	1.4580 1.3047	1.3403 1.2626	1.3032 1.3326	Ave		1.3585				5.0		30.0			
2-Methylbutane	+++++ 1.8716	2.3370 1.7013	2.0465 1.5831	1.7630 1.4868	1.7293 1.5330	Ave		1.7835				15.2		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1 Analy Batch No.: 15917

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2017 16:15 Calibration End Date: 11/13/2017 22:37 Calibration ID: 1337

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Trichlorofluoromethane	+++++ 4.3809	4.6634 4.0134	4.4068 3.8719	4.1208 3.7805	4.0463 3.9344	Ave		4.1354				7.0		30.0			
Acrolein	+++++ 0.3377	+++++ 0.3261	+++++ 0.3414	0.3514 0.3222	0.3132 0.3382	Ave		0.3329				3.9		30.0			
Acetonitrile	+++++ 0.5747	+++++ 0.4890	+++++ 0.5325	0.4160 0.5074	0.5128 0.4502	Ave		0.4975				10.5		30.0			
Acetone	+++++ 0.6862	+++++ 0.5664	+++++ 0.6053	+++++ 0.5595	0.8231 0.4809	Ave		0.6202				19.3		30.0			
Pentane	+++++ 0.2963	+++++ 0.2708	+++++ 0.2656	0.2760 0.2604	0.2756 0.2709	Ave		0.2737				4.2		30.0			
Isopropyl alcohol	+++++ 1.8952	+++++ 1.6084	1.9172 1.6809	1.7458 1.3805	1.8324 +++++	Ave		1.7229				10.9		30.0			
Ethyl ether	+++++ 1.5210	+++++ 1.3351	1.4931 1.3355	1.4082 1.3266	1.5010 1.2689	Ave		1.3987				6.9		30.0			
1,1-Dichloroethene	1.7502 1.4609	1.5168 1.3618	1.4246 1.3230	1.2646 1.3098	1.2861 1.3797	Ave		1.4077				10.2		30.0			
Acrylonitrile	+++++ 0.9596	+++++ 0.8283	0.8995 0.8932	0.8126 0.8745	0.9184 0.8340	Ave		0.8775				5.7		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	3.6567 3.1066	3.1502 2.9260	2.9962 2.8369	2.9172 2.7926	2.8230 2.9631	Ave		3.0169				8.4		30.0			
tert-Butyl alcohol	+++++ 2.5279	2.2922 2.1541	2.4015 2.2705	2.2114 2.0890	2.2379 2.3346	Ave		2.2799				5.8		30.0			
Methylene Chloride	+++++ 1.4251	+++++ 1.2601	+++++ 1.1850	2.2436 1.1339	1.5560 1.1655	Ave		1.4242				27.6		30.0			
3-Chloropropene	+++++ 1.4457	+++++ 1.2674	1.5312 1.2161	1.3992 1.1961	1.3315 1.2092	Ave		1.3246				9.4		30.0			
Carbon disulfide	+++++ 4.1086	+++++ 3.8051	4.0534 3.6756	3.8052 3.6313	3.7219 3.8432	Ave		3.8305				4.5		30.0			
trans-1,2-Dichloroethene	1.7541 1.4461	1.5580 1.3782	1.3541 1.3639	1.3369 1.3461	1.2781 1.4225	Ave		1.4238				9.7		30.0			
Methyl tert-butyl ether	+++++ 3.7627	3.7268 3.2357	3.5424 3.6305	3.1609 3.5993	3.6393 3.2995	Ave		3.5108				6.3		30.0			
1,1-Dichloroethane	3.5525 2.8572	3.1022 2.6631	2.8540 2.6446	2.7940 2.5777	2.6493 2.6406	Ave		2.8335				10.5		30.0			
Vinyl acetate	+++++ 3.7174	+++++ 3.2004	3.4707 3.6232	2.9712 3.5570	3.5837 3.2104	Ave		3.4167				7.6		30.0			
2-Butanone (MEK)	+++++ 0.6334	+++++ 0.5295	0.7110 0.6299	0.6425 0.6169	0.6553 0.5489	Ave		0.6209				9.3		30.0			
Hexane	+++++ 1.2427	+++++ 1.1685	1.3522 1.1361	1.2777 1.0863	1.1291 1.0815	Ave		1.1842				8.2		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1 Analy Batch No.: 15917

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2017 16:15 Calibration End Date: 11/13/2017 22:37 Calibration ID: 1337

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
cis-1,2-Dichloroethene	1.7741 1.4982	1.5249 1.4314	1.4959 1.4374	1.4499 1.4124	1.3413 1.4652	Ave		1.4831				7.7		30.0			
Ethyl acetate	+++++ 2.9400	+++++ 2.4680	2.6650 2.9172	2.4499 2.8494	2.8983 2.4913	Ave		2.7099				8.0		30.0			
Chloroform	3.9103 3.3083	3.5770 3.1112	3.3275 3.0912	3.2198 3.0077	3.0511 3.0501	Ave		3.2654				8.7		30.0			
Tetrahydrofuran	+++++ 1.5162	+++++ 1.2787	1.5723 1.4773	1.3462 1.4386	1.4921 1.2939	Ave		1.4269				7.6		30.0			
1,1,1-Trichloroethane	4.1906 3.4987	3.6924 3.3036	3.4470 3.2998	3.3138 3.2176	3.1294 3.2831	Ave		3.4376				9.0		30.0			
1,2-Dichloroethane	0.5117 0.4100	0.4505 0.3742	0.4316 0.3691	0.3877 0.3586	0.3568 0.3781	Ave		0.4028				12.2		30.0			
Benzene	1.1158 0.7924	0.8587 0.7364	0.7839 0.7148	0.7379 0.6985	0.6966 0.7357	Ave		0.7871				16.0		30.0			
Cyclohexane	+++++ 0.1335	+++++ 0.1226	0.1426 0.1184	0.1305 0.1148	0.1176 0.1205	Ave		0.1251				7.6		30.0			
Carbon tetrachloride	0.7088 0.6291	0.6098 0.5944	0.5973 0.5968	0.5681 0.5952	0.5334 0.6504	Ave		0.6083				7.8		30.0			
1-Butanol	+++++ 0.0946	+++++ 0.0834	+++++ 0.0831	+++++ 0.0819	0.0793 0.0982	Ave		0.0867				8.9		30.0			
2,2,4-Trimethylpentane	+++++ 1.3672	1.5226 1.2532	1.4131 1.2121	1.2981 1.1665	1.1966 1.2023	Ave		1.2924				9.2		30.0			
Heptane	+++++ 0.2926	0.3256 0.2738	0.2998 0.2671	0.2725 0.2600	0.2552 0.2748	Ave		0.2801				7.9		30.0			
1,2-Dichloropropane	+++++ 0.3066	0.3445 0.2774	0.3207 0.2778	0.2853 0.2707	0.2745 0.2714	Ave		0.2921				8.9		30.0			
Trichloroethene	0.4652 0.3688	0.3821 0.3588	0.3635 0.3455	0.3473 0.3501	0.3041 0.4002	Ave		0.3686				11.5		30.0			
Dibromomethane	+++++ 0.3329	0.4326 0.3103	0.3748 0.3064	0.3179 0.3025	0.2950 0.3293	Ave		0.3335				13.2		30.0			
Bromodichloromethane	+++++ 0.6113	0.5991 0.5748	0.5839 0.5709	0.5278 0.5670	0.5155 0.6011	Ave		0.5724				5.7		30.0			
1,4-Dioxane	+++++ 0.1105	+++++ 0.0941	0.1052 0.1081	0.0908 0.1051	0.0972 0.1066	Ave		0.1022				7.0		30.0			
Methyl methacrylate	+++++ 0.3158	+++++ 0.2641	0.2492 0.3141	0.2384 0.3122	0.2828 0.2892	Ave		0.2832				10.7		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.5375	+++++ 0.4341	0.5084 0.4922	0.4079 0.4649	0.4854 0.4900	Ave		0.4776				8.6		30.0			
cis-1,3-Dichloropropene	0.5075 0.4702	0.4397 0.4480	0.4523 0.4416	0.4038 0.4413	0.4096 0.4695	Ave		0.4483				6.7		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1 Analy Batch No.: 15917

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2017 16:15 Calibration End Date: 11/13/2017 22:37 Calibration ID: 1337

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
trans-1,3-Dichloropropene	0.4342 0.4373	0.4304 0.4122	0.4106 0.4009	0.3622 0.4246	0.3856 0.4414	Ave		0.4139				6.1		30.0			
Toluene	1.0429 0.9043	0.9626 0.8486	0.9133 0.8393	0.7821 0.8678	0.8513 0.8790	Ave		0.8891				8.2		30.0			
1,1,2-Trichloroethane	0.3033 0.2741	0.2815 0.2557	0.2792 0.2501	0.2453 0.2586	0.2541 0.2630	Ave		0.2665				6.7		30.0			
2-Hexanone	+++++ 0.2716	+++++ 0.2322	0.2518 0.2501	0.2147 0.2500	0.2290 0.2793	Ave		0.2473				8.7		30.0			
Dibromochloromethane	0.5416 0.5728	0.5126 0.5660	0.5075 0.5689	0.4644 0.6094	0.4724 0.6634	Ave		0.5479				11.2		30.0			
Octane	+++++ 0.3244	0.3327 0.3080	0.3192 0.3031	0.2916 0.3075	0.2942 0.3192	Ave		0.3111				4.4		30.0			
1,2-Dibromoethane (EDB)	+++++ 0.5098	0.4728 0.4820	0.4689 0.4701	0.4348 0.4973	0.4408 0.5244	Ave		0.4779				6.2		30.0			
Tetrachloroethene	0.4213 0.3335	0.3824 0.3188	0.3455 0.3140	0.3122 0.3328	0.3036 0.3657	Ave		0.3430				10.8		30.0			
Chlorobenzene	0.8433 0.7231	0.7521 0.6719	0.7272 0.6662	0.6567 0.7000	0.6517 0.7385	Ave		0.7131				8.2		30.0			
Ethylbenzene	1.3742 1.1894	1.1702 1.0825	1.1557 1.1009	0.9649 1.1355	1.1083 1.1255	Ave		1.1407				9.0		30.0			
m-Xylene & p-Xylene	+++++ 0.9298	0.9015 0.8276	0.9024 0.8564	0.7434 0.8908	0.8693 0.8668	Ave		0.8653				6.3		30.0			
Bromoform	+++++ 0.5176	+++++ 0.5363	0.4204 0.5814	0.3780 0.6486	0.4038 0.7062	Ave		0.5240				22.7		30.0			
Styrene	0.5999 0.6697	0.5201 0.6167	0.5206 0.6491	0.4604 0.7038	0.5617 0.7401	Ave		0.6042				14.7		30.0			
Nonane	+++++ 0.6466	0.6263 0.5909	0.6432 0.5621	0.5601 0.5546	0.5952 0.5326	Ave		0.5902				7.0		30.0			
o-Xylene	1.0869 0.9646	0.9289 0.8472	0.9499 0.8898	0.7858 0.9259	0.9216 0.9030	Ave		0.9204				8.5		30.0			
1,1,2,2-Tetrachloroethane	0.6533 0.6932	0.6079 0.5957	0.6355 0.6316	0.5342 0.6439	0.6321 0.6389	Ave		0.6266				6.6		30.0			
1,2,3-Trichloropropane	+++++ 0.2119	0.1993 0.1814	0.2064 0.1971	0.1669 0.2037	0.1957 0.2016	Ave		0.1960				7.0		30.0			
Isopropylbenzene	+++++ 1.3491	1.3682 1.1827	1.3327 1.2527	1.1039 1.2987	1.2911 1.2653	Ave		1.2716				6.6		30.0			
Propylbenzene	+++++ 0.3621	0.3270 0.3129	0.3289 0.3411	0.2729 0.3669	0.3245 +++++	Ave		0.3295				9.0		30.0			
2-Chlorotoluene	+++++ 0.3343	0.3272 0.3066	0.3121 0.3108	0.2736 0.3334	0.2981 +++++	Ave		0.3120				6.5		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1 Analy Batch No.: 15917

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2017 16:15 Calibration End Date: 11/13/2017 22:37 Calibration ID: 1337

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
4-Ethyltoluene	+++++ 1.3352	1.1081 1.1364	1.1913 1.2355	1.0106 1.2920	1.2010 1.2605	Ave		1.1967				8.4		30.0			
1,3,5-Trimethylbenzene	0.4807 0.5225	0.4770 0.4536	0.4624 0.5031	0.3977 0.5363	0.4907 0.5389	Ave		0.4863				8.8		30.0			
Alpha Methyl Styrene	+++++ 0.5103	0.3322 0.4660	0.3565 0.5246	0.3053 0.5662	0.4034 0.5736	Ave		0.4487				22.8		30.0			
Decane	+++++ 0.7857	0.6888 0.6911	0.7401 0.6921	0.6253 0.6831	0.7217 0.6552	Ave		0.6981				6.7		30.0			
tert-Butylbenzene	+++++ 1.1901	1.0319 1.0285	1.0714 1.1332	0.9066 1.1980	1.1104 1.2180	Ave		1.0987				9.1		30.0			
1,2,4-Trimethylbenzene	1.1091 1.1388	0.9655 0.9726	1.0084 1.0738	0.8528 1.1248	1.0434 1.1041	Ave		1.0393				8.7		30.0			
1,3-Dichlorobenzene	0.8365 0.7918	0.7336 0.7095	0.7293 0.7443	0.6029 0.8352	0.6783 0.9280	Ave		0.7589				12.2		30.0			
sec-Butylbenzene	+++++ 1.6578	1.3730 1.4153	1.4542 1.5502	1.2351 1.6298	1.5346 +++++	Ave		1.4813				9.5		30.0			
Benzyl chloride	+++++ 0.9768	0.7957 0.8885	0.8314 0.9902	0.6921 1.0745	0.8463 1.0292	Ave		0.9028				13.7		30.0			
1,4-Dichlorobenzene	0.8219 0.7874	0.7403 0.7096	0.7341 0.7307	0.6294 0.8124	0.6903 0.8859	Ave		0.7542				9.8		30.0			
4-Isopropyltoluene	+++++ 1.3804	1.1035 1.1652	1.1829 1.3276	1.0350 1.3891	1.2763 +++++	Ave		1.2325				10.6		30.0			
1,2,3-Trimethylbenzene	1.1301 1.2212	0.9985 1.0326	1.0839 1.1440	0.9224 1.1900	1.1508 1.1418	Ave		1.1015				8.4		30.0			
1,2-Dichlorobenzene	0.8093 0.7576	0.7011 0.6556	0.7122 0.7007	0.5760 0.7551	0.6631 0.7809	Ave		0.7112				9.7		30.0			
Butylbenzene	+++++ 1.3331	1.1396 1.1099	1.1769 1.2421	0.9844 1.2553	1.2183 +++++	Ave		1.1825				9.0		30.0			
Undecane	+++++ 0.8305	0.7108 0.6797	0.7565 0.7566	0.6273 0.6922	0.7778 0.5012	Ave		0.7036				13.7		30.0			
1,2-Dibromo-3-Chloropropane	0.4186 0.5564	0.3796 0.4894	0.4384 +++++	0.3554 +++++	0.4490 +++++	Ave		0.4410				15.3		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 1.7199	1.3253 1.3969	1.5070 1.6674	1.2340 1.5685	1.5075 +++++	Ave		1.4908				11.1		30.0			
Dodecane	+++++ 0.8159	0.6104 0.6383	0.7590 0.6272	0.5888 0.4291	0.6184 +++++	Ave		0.6359				18.2		30.0			
1,2,4-Trichlorobenzene	+++++ 0.6739	0.6036 0.5545	0.6234 0.6355	0.4876 0.5074	0.5245 +++++	Ave		0.5763				11.7		30.0			
Naphthalene	+++++ 1.5712	1.3840 1.2411	1.5280 1.3968	1.1679 1.1550	1.2131 +++++	Ave		1.3321				12.1		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1 Analy Batch No.: 15917

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2017 16:15 Calibration End Date: 11/13/2017 22:37 Calibration ID: 1337

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Hexachlorobutadiene	+++++ 0.6454	0.5112 0.5557	0.5505 0.6440	0.4534 0.5647	0.5218 +++++	Ave		0.5558				11.7		30.0			
1,2,3-Trichlorobenzene	+++++ 0.6521	0.5790 0.5122	0.6088 0.5747	0.4773 0.4042	0.4747 +++++	Ave		0.5354				15.3		30.0			
2-Methylnaphthalene	+++++ 0.8005	0.5668 0.6138	0.7733 0.4431	0.6512 +++++	0.3021 +++++	Ave		0.5930				29.8		50.0			
1-Methylnaphthalene	+++++ 0.7496	0.5426 0.5657	0.7787 0.3966	0.6537 +++++	0.2811 +++++	Ave		0.5668				32.0		50.0			
4-Bromofluorobenzene (Surr)	0.7251 0.7536	0.7270 0.7603	0.7319 0.7473	0.7585 0.7425	0.7608 0.7566	Ave		0.7464				1.9		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1 Analy Batch No.: 15917

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2017 16:15 Calibration End Date: 11/13/2017 22:37 Calibration ID: 1337

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-15917/3	GK13IC01.D
Level 2	IC 140-15917/4	GK13IC02.D
Level 3	IC 140-15917/5	GK13IC03.D
Level 4	IC 140-15917/6	GK13IC04.D
Level 5	IC 140-15917/7	GK13IC05.D
Level 6	IC 140-15917/8	GK13IC06.D
Level 7	ICIS 140-15917/9	GK13IC07.D
Level 8	IC 140-15917/10	GK13IC08.D
Level 9	IC 140-15917/11	GK13IC09.D
Level 10	IC 140-15917/12	GK13IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorodifluoromethane	CBM	Ave	+++++ 47584	1944 91604	4016 188886	6739 380435	17815 776367	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Propene	CBM	Ave	+++++ 146316	+++++ 284706	11776 567180	23206 1128877	55285 2198206	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	+++++ 482581	19312 948236	34850 1930222	69172 3924687	177921 8013096	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Chloromethane	CBM	Ave	+++++ 54897	+++++ 103444	+++++ 209700	8868 417131	19982 827117	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	+++++ 294387	10861 595818	22191 1268393	40067 2667613	110853 5850706	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	3977 182777	7310 365751	13674 742706	25654 1519736	67921 3126086	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	+++++ 143956	+++++ 282979	10885 572852	20570 1152350	52626 2298877	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Butane	CBM	Ave	+++++ 277958	+++++ 536349	22612 1071781	41175 2120801	106696 4119438	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Bromomethane	CBM	Ave	+++++ 167329	+++++ 339947	12336 697972	23657 1441978	62553 3004925	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Chloroethane	CBM	Ave	+++++ 94779	+++++ 188279	6970 385220	13456 800409	34965 1652929	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Ethanol	CBM	Ave	+++++ 432503	+++++ 780582	32841 1771762	62153 3525366	172678 6392242	+++++ 5.01	+++++ 9.99	0.397 20.0	0.793 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	+++++ 163902	5801 329759	11974 678777	22496 1417168	59464 2988838	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	+++++ 211585	9582 412500	16807 823604	29591 1668764	78905 3438323	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Trichlorofluoromethane	CBM	Ave	+++++ 495271	19120 973088	36192 2014322	69167 4243257	184625 8824574	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1 Analy Batch No.: 15917

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2017 16:15 Calibration End Date: 11/13/2017 22:37 Calibration ID: 1337

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Acrolein	CBM	Ave	+++++	+++++	+++++	5898	14290	+++++	+++++	+++++	0.159	0.400
			38182	79056	177634	361660	758574	1.00	2.00	4.00	8.00	16.0
Acetonitrile	CBM	Ave	+++++	+++++	+++++	6983	23397	+++++	+++++	+++++	0.159	0.400
			64966	118573	277041	569467	1009777	1.00	2.00	4.00	8.00	16.0
Acetone	CBM	Ave	+++++	+++++	+++++	+++++	112683	+++++	+++++	+++++	+++++	1.20
			232757	412013	944699	1884211	3235879	3.01	5.99	12.0	24.0	48.0
Pentane	CBM	Ave	+++++	+++++	+++++	4633	12574	+++++	+++++	+++++	0.159	0.400
			33503	65649	138163	292318	607693	1.00	2.00	4.00	8.00	16.0
Isopropyl alcohol	CBM	Ave	+++++	+++++	47239	87914	250842	+++++	+++++	0.238	0.476	1.20
			642804	1169994	2623528	4648765	+++++	3.01	5.99	12.0	24.0	+++++
Ethyl ether	CBM	Ave	+++++	+++++	12262	23637	68486	+++++	+++++	0.0793	0.159	0.400
			171952	323714	694797	1488991	2845941	1.00	2.00	4.00	8.00	16.0
1,1-Dichloroethene	CBM	Ave	3596	6219	11700	21226	58681	0.0196	0.0392	0.0793	0.159	0.400
			165163	330185	688255	1470068	3094497	1.00	2.00	4.00	8.00	16.0
Acrylonitrile	CBM	Ave	+++++	+++++	7387	13640	41904	+++++	+++++	0.0793	0.159	0.400
			108483	200830	464689	981544	1870672	1.00	2.00	4.00	8.00	16.0
1,1,2-Trichloro-1,2,2-trifluoroetha ne	CBM	Ave	7513	12916	24607	48964	128810	0.0196	0.0392	0.0793	0.159	0.400
			351206	709434	1475868	3134469	6646009	1.00	2.00	4.00	8.00	16.0
tert-Butyl alcohol	CBM	Ave	+++++	9398	19723	37118	102110	+++++	0.0392	0.0793	0.159	0.400
			285790	522279	1181182	2344702	5236389	1.00	2.00	4.00	8.00	16.0
Methylene Chloride	CBM	Ave	+++++	+++++	+++++	37658	70998	+++++	+++++	+++++	0.159	0.400
			161108	305525	616498	1272652	2614182	1.00	2.00	4.00	8.00	16.0
3-Chloropropene	CBM	Ave	+++++	+++++	12575	23486	60754	+++++	+++++	0.0793	0.159	0.400
			163444	307300	632648	1342560	2712084	1.00	2.00	4.00	8.00	16.0
Carbon disulfide	CBM	Ave	+++++	+++++	33289	63869	169821	+++++	+++++	0.0793	0.159	0.400
			464484	922581	1912166	4075744	8619899	1.00	2.00	4.00	8.00	16.0
trans-1,2-Dichloroethene	CBM	Ave	3604	6388	11121	22440	58319	0.0196	0.0392	0.0793	0.159	0.400
			163483	334149	709568	1510891	3190481	1.00	2.00	4.00	8.00	16.0
Methyl tert-butyl ether	CBM	Ave	+++++	15280	29093	53055	166054	+++++	0.0392	0.0793	0.159	0.400
			425380	784526	1888738	4039827	7400547	1.00	2.00	4.00	8.00	16.0
1,1-Dichloroethane	CBM	Ave	7299	12719	23439	46896	120884	0.0196	0.0392	0.0793	0.159	0.400
			323009	645687	1375802	2893219	5922596	1.00	2.00	4.00	8.00	16.0
Vinyl acetate	CBM	Ave	+++++	+++++	28504	49871	163517	+++++	+++++	0.0793	0.159	0.400
			420259	775973	1884906	3992345	7200595	1.00	2.00	4.00	8.00	16.0
2-Butanone (MEK)	CBM	Ave	+++++	+++++	5839	10784	29898	+++++	+++++	0.0793	0.159	0.400
			71610	128390	327700	692427	1231198	1.00	2.00	4.00	8.00	16.0
Hexane	CBM	Ave	+++++	+++++	11105	21446	51517	+++++	+++++	0.0793	0.159	0.400
			140488	283313	591020	1219314	2425623	1.00	2.00	4.00	8.00	16.0
cis-1,2-Dichloroethene	CBM	Ave	3645	6252	12285	24336	61201	0.0196	0.0392	0.0793	0.159	0.400
			169371	347062	747816	1585322	3286404	1.00	2.00	4.00	8.00	16.0
Ethyl acetate	CBM	Ave	+++++	+++++	21887	41121	132244	+++++	+++++	0.0793	0.159	0.400
			332371	598383	1517621	3198147	5587753	1.00	2.00	4.00	8.00	16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1 Analy Batch No.: 15917

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2017 16:15 Calibration End Date: 11/13/2017 22:37 Calibration ID: 1337

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chloroform	CBM	Ave	8034 374012	14666 754349	27328 1608175	54044 3375902	139215 6841071	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	+++++ 171415	+++++ 310039	12913 768573	22595 1614635	68081 2902098	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	8610 395534	15139 800987	28309 1716664	55622 3611490	142790 7363783	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	5673 259566	10182 520510	19580 1114126	37293 2335228	95876 4709100	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Benzene	DFBZ	Ave	12370 501630	19406 1024154	35561 2157425	70972 4549459	187181 9164238	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	+++++ 84494	+++++ 170517	6467 357392	12548 747761	31612 1500344	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	7858 398226	13782 826704	27093 1801251	54641 3876730	143333 8101116	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	+++++ 59892	+++++ 116059	+++++ 250710	+++++ 533382	21302 1222672	+++++ 1.00	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	+++++ 865496	34411 1743031	64100 3658581	124855 7597575	321511 14975770	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Heptane	DFBZ	Ave	+++++ 185205	7359 380779	13600 806181	26207 1693244	68571 3422405	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	+++++ 194107	7786 385846	14547 838597	27437 1762859	73768 3380117	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	5158 233492	8635 498989	16491 1042788	33403 2280195	81717 4984487	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	+++++ 210713	9776 431534	17001 924791	30571 1970153	79263 4101555	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	+++++ 386993	13539 799522	26488 1723165	50764 3692749	138509 7486541	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	+++++ 69922	+++++ 130937	4772 326321	8736 684344	26106 1328311	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	+++++ 199881	+++++ 367336	11302 948044	22934 2033631	75998 3601729	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	+++++ 340244	+++++ 603705	23063 1485711	39232 3027959	130432 6102839	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
cis-1,3-Dichloropropene	DFBZ	Ave	5626 297640	9937 623039	20516 1332908	38840 2874230	110051 5847515	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	4601 277012	9461 566136	17831 1226943	34215 2732765	98547 5551856	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Toluene	CBZd 5	Ave	11052 572881	21162 1165314	39657 2568835	73875 5584757	217565 11056815	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	3214 173621	6189 351168	12122 765500	23173 1664151	64954 3308788	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1 Analy Batch No.: 15917

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2017 16:15 Calibration End Date: 11/13/2017 22:37 Calibration ID: 1337

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Hexanone	CBZd 5	Ave	+++++ 172057	+++++ 318812	10935 765512	20284 1608707	58525 3512737	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Dibromochloromethane	CBZd 5	Ave	5740 362847	11268 777247	22038 1741361	43866 3921724	120741 8344619	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Octane	CBZd 5	Ave	+++++ 205487	7315 422950	13862 927681	27542 1979286	75198 4015158	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	+++++ 322986	10393 661871	20360 1438737	41070 3200738	112648 6596127	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Tetrachloroethene	CBZd 5	Ave	4465 211272	8406 437875	15001 961139	29490 2142029	77588 4599494	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Chlorobenzene	CBZd 5	Ave	8937 458051	16534 922752	31575 2038993	62025 4504989	166566 9289454	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Ethylbenzene	CBZd 5	Ave	14563 753463	25725 1486579	50183 3369711	91139 7307896	283248 14157820	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd 5	Ave	+++++ 1177991	39638 2272968	78365 5242609	140427 11465455	444334 21806256	+++++ 2.00	0.0784 3.99	0.159 8.00	0.317 16.0	0.800 32.0
Bromoform	CBZd 5	Ave	+++++ 327887	+++++ 736506	18254 1779551	35707 4174050	103211 8882803	+++++ 1.00	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Styrene	CBZd 5	Ave	6357 424228	11434 846974	22604 1986886	43489 4529543	143547 9309265	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Nonane	CBZd 5	Ave	+++++ 409599	13769 811483	27931 1720525	52902 3569182	152116 6699885	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
o-Xylene	CBZd 5	Ave	11518 611045	20421 1163490	41248 2723409	74225 5958754	235544 11358762	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	6923 439123	13365 818045	27596 1933268	50461 4144047	161542 8035941	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd 5	Ave	+++++ 134211	4381 249161	8963 603248	15766 1311284	50028 2536219	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Isopropylbenzene	CBZd 5	Ave	+++++ 854663	30079 1624262	57868 3834410	104274 8357827	329988 15915639	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Propylbenzene	CBZd 5	Ave	+++++ 229365	7189 429742	14281 1043989	25777 2361300	82932 +++++	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 +++++
2-Chlorotoluene	CBZd 5	Ave	+++++ 211810	7193 421025	13554 951412	25846 2145590	76188 +++++	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 +++++
4-Ethyltoluene	CBZd 5	Ave	+++++ 845855	24361 1560565	51730 3781660	95461 8315317	306943 15855587	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	5094 331007	10487 622915	20077 1539893	37561 3451667	125411 6779157	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	+++++ 323279	7304 640010	15479 1605753	28835 3643686	103095 7215494	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Decane	CBZd 5	Ave	+++++ 497726	15143 949035	32136 2118306	59064 4396462	184448 8241480	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1 Analy Batch No.: 15917

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2017 16:15 Calibration End Date: 11/13/2017 22:37 Calibration ID: 1337

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
tert-Butylbenzene	CBZd 5	Ave	+++++ 753895	22686 1412476	46523 3468593	85633 7710356	283790 15320211	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	11754 721428	21226 1335737	43788 3286687	80549 7239156	266676 13888395	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	8865 501608	16127 974372	31667 2278192	56944 5375340	173369 11673191	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	+++++ 1050236	30184 1943696	63144 4744834	116663 10489103	392216 +++++	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 +++++
Benzyl chloride	CBZd 5	Ave	+++++ 618812	17493 1220157	36099 3030954	65377 6915532	216285 12946207	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	8710 498785	16274 974506	31875 2236477	59450 5228501	176427 11143200	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	+++++ 874472	24258 1600192	51363 4063563	97762 8939626	326193 +++++	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 +++++
1,2,3-Trimethylbenzene	CBZd 5	Ave	11976 773629	21951 1418029	47065 3501681	87127 7658766	294110 14362227	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	8577 479951	15412 900341	30924 2144847	54402 4859952	169475 9822366	0.0196 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	+++++ 844489	25053 1524209	51104 3801946	92982 8078894	311379 +++++	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 +++++
Undecane	CBZd 5	Ave	+++++ 526148	15625 933449	32847 2315826	59250 4454741	198779 6304131	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	4436 352487	8345 672068	19037 +++++	33569 +++++	114753 +++++	0.0196 1.00	0.0392 2.00	0.0793 +++++	0.159 +++++	0.400 +++++
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 1089561	29135 1918393	65438 5103471	116556 10094348	385281 +++++	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 +++++
Dodecane	CBZd 5	Ave	+++++ 516869	13418 876620	32956 1919805	55615 2761674	158042 +++++	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 +++++
1,2,4-Trichlorobenzene	CBZd 5	Ave	+++++ 426933	13269 761477	27070 1945001	46058 3265387	134060 +++++	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 +++++
Naphthalene	CBZd 5	Ave	+++++ 995322	30426 1704351	66349 4275324	110319 7433321	310035 +++++	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 +++++
Hexachlorobutadiene	CBZd 5	Ave	+++++ 408883	11237 763125	23905 1971022	42828 3633973	133367 +++++	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 +++++
1,2,3-Trichlorobenzene	CBZd 5	Ave	+++++ 413121	12729 703409	26434 1758932	45087 2601150	121323 +++++	+++++ 1.00	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 +++++
2-Methylnaphthalene	CBZd 5	Ave	+++++ 1166334	28659 1938623	77228 3119599	141471 +++++	177610 +++++	+++++ 2.30	0.0902 4.59	0.182 9.20	0.365 +++++	0.920 +++++
1-Methylnaphthalene	CBZd 5	Ave	+++++ 1092194	27436 1786735	77764 2791839	142019 +++++	165222 +++++	+++++ 2.30	0.0902 4.59	0.182 9.20	0.365 +++++	0.920 +++++
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1568234 1906447	1630824 2091104	1602397 2287406	1806171 2389282	1944444 2379169	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1 Analy Batch No.: 15917

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2017 16:15 Calibration End Date: 11/13/2017 22:37 Calibration ID: 1337

Curve Type Legend:
Ave = Average ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1 Analy Batch No.: 15917

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2017 16:15 Calibration End Date: 11/13/2017 22:37 Calibration ID: 1337

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-15917/3	GK13IC01.D
Level 2	IC 140-15917/4	GK13IC02.D
Level 3	IC 140-15917/5	GK13IC03.D
Level 4	IC 140-15917/6	GK13IC04.D
Level 5	IC 140-15917/7	GK13IC05.D
Level 6	IC 140-15917/8	GK13IC06.D
Level 7	ICIS 140-15917/9	GK13IC07.D
Level 8	IC 140-15917/10	GK13IC08.D
Level 9	IC 140-15917/11	GK13IC09.D
Level 10	IC 140-15917/12	GK13IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	18.5						50				
Propene	+++++	+++++	19.8						50			
Dichlorodifluoromethane	+++++	18.0						50				
Chloromethane	+++++	+++++	+++++	22.4						50		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	5.2						50				
Vinyl chloride	23.3						50					
1,3-Butadiene	+++++	+++++	14.0						50			
Butane	+++++	+++++	22.4						50			
Bromomethane	+++++	+++++	8.0						50			
Chloroethane	+++++	+++++	9.1						50			
Ethanol	+++++	+++++	14.5						50			
Vinyl bromide	+++++	4.2						50				
2-Methylbutane	+++++	31.0						50				
Trichlorofluoromethane	+++++	12.8						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1 Analy Batch No.: 15917

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2017 16:15 Calibration End Date: 11/13/2017 22:37 Calibration ID: 1337

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Acrolein	+++++	+++++	+++++	5.6						50		
Acetonitrile	+++++	+++++	+++++	-16.4						50		
Acetone	+++++	+++++	+++++	+++++	32.7						80	
Pentane	+++++	+++++	+++++	0.9						50		
Isopropyl alcohol	+++++	+++++	11.3	+++++					50			
Ethyl ether	+++++	+++++	6.7						50			
1,1-Dichloroethene	24.3						50					
Acrylonitrile	+++++	+++++	2.5						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	21.2						50					
tert-Butyl alcohol	+++++	0.5						50				
Methylene Chloride	+++++	+++++	+++++	57.5						80		
3-Chloropropene	+++++	+++++	15.6						50			
Carbon disulfide	+++++	+++++	5.8						50			
trans-1,2-Dichloroethene	23.2						50					
Methyl tert-butyl ether	+++++	6.2						50				
1,1-Dichloroethane	25.4						50					
Vinyl acetate	+++++	+++++	1.6						50			
2-Butanone (MEK)	+++++	+++++	14.5						50			
Hexane	+++++	+++++	14.2						50			
cis-1,2-Dichloroethene	19.6						50					
Ethyl acetate	+++++	+++++	-1.7						50			

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1 Analy Batch No.: 15917

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2017 16:15 Calibration End Date: 11/13/2017 22:37 Calibration ID: 1337

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chloroform	19.7						50					
Tetrahydrofuran	+++++	+++++	10.2						50			
1,1,1-Trichloroethane	21.9						50					
1,2-Dichloroethane	27.0						50					
Benzene	41.8						50					
Cyclohexane	+++++	+++++	14.0						50			
Carbon tetrachloride	16.5						50					
1-Butanol	+++++	+++++	+++++	+++++	-8.6						50	
2,2,4-Trimethylpentane	+++++	17.8						50				
Heptane	+++++	16.2						50				
1,2-Dichloropropane	+++++	17.9						50				
Trichloroethene	26.2						50					
Dibromomethane	+++++	29.7						50				
Bromodichloromethane	+++++	4.7						50				
1,4-Dioxane	+++++	+++++	2.9						50			
Methyl methacrylate	+++++	+++++	-12.0						50			
4-Methyl-2-pentanone (MIBK)	+++++	+++++	6.5						50			
cis-1,3-Dichloropropene	13.2						50					
trans-1,3-Dichloropropene	4.9						50					
Toluene	17.3						50					
1,1,2-Trichloroethane	13.8						50					

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1 Analy Batch No.: 15917

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2017 16:15 Calibration End Date: 11/13/2017 22:37 Calibration ID: 1337

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
2-Hexanone	+++++	+++++	1.8						50			
Dibromochloromethane	-1.1						50					
Octane	+++++	7.0						50				
1,2-Dibromoethane (EDB)	+++++	-1.1						50				
Tetrachloroethene	22.8						50					
Chlorobenzene	18.3						50					
Ethylbenzene	20.5						50					
m-Xylene & p-Xylene	+++++	4.2						50				
Bromoform	+++++	+++++	-19.8						50			
Styrene	-0.7						50					
Nonane	+++++	6.1						50				
o-Xylene	18.1						50					
1,1,2,2-Tetrachloroethane	4.3						50					
1,2,3-Trichloropropane	+++++	1.7						50				
Isopropylbenzene	+++++	7.6						50				
Propylbenzene	+++++	-0.8		+++++				50				
2-Chlorotoluene	+++++	4.9		+++++				50				
4-Ethyltoluene	+++++	-7.4						50				
1,3,5-Trimethylbenzene	-1.2						50					
Alpha Methyl Styrene	+++++	-26.0						50				
Decane	+++++	-1.3						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1 Analy Batch No.: 15917

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/13/2017 16:15 Calibration End Date: 11/13/2017 22:37 Calibration ID: 1337

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
tert-Butylbenzene	+++++	-6.1						50				
1,2,4-Trimethylbenzene	6.7						50					
1,3-Dichlorobenzene	10.2						50					
sec-Butylbenzene	+++++	-7.3		+++++				50				
Benzyl chloride	+++++	-11.9						50				
1,4-Dichlorobenzene	9.0						50					
4-Isopropyltoluene	+++++	-10.5		+++++				50				
1,2,3-Trimethylbenzene	2.6						50					
1,2-Dichlorobenzene	13.8						50					
Butylbenzene	+++++	-3.6		+++++				50				
Undecane	+++++	1.0						50				
1,2-Dibromo-3-Chloropropane	-5.1	+++++	+++++	+++++			50					
1,2,4,5-Tetramethylbenzene	+++++	-11.1		+++++				50				
Dodecane	+++++	-4.0		+++++				50				
1,2,4-Trichlorobenzene	+++++	4.7		+++++				50				
Naphthalene	+++++	3.9		+++++				80				
Hexachlorobutadiene	+++++	-8.0		+++++				50				
1,2,3-Trichlorobenzene	+++++	8.2		+++++				50				
2-Methylnaphthalene	+++++	-4.4	+++++	+++++				80				
1-Methylnaphthalene	+++++	-4.3	+++++	+++++				80				

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC01.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 13-Nov-2017 16:15:30 ALS Bottle#: 1 Worklist Smp#: 3
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006586-003
Misc. Info.: 123609
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 15-Nov-2017 15:40:41 Calib Date: 13-Nov-2017 22:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: tajh Date: 14-Nov-2017 13:40:03

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.603	7.613	-0.010	97	419303	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.744	9.753	-0.009	96	2262577	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.700	14.703	-0.003	89	2162758	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.382	16.389	-0.007	88	1568234	4.00	3.89	
6 Chlorodifluoromethane	67	3.311	3.306	0.005	97	1323	0.0196	0.0315	
7 Propene	41	3.316	3.312	0.004	83	4123	0.0196	0.0329	
8 Dichlorodifluoromethane	85	3.354	3.354	0.000	99	10959	0.0196	0.0262	
9 Chloromethane	52	3.500	3.492	0.008	99	2664	0.0196	0.0589	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.511	3.507	0.004	94	6449	0.0196	0.0244	
11 Vinyl chloride	62	3.629	3.625	0.004	61	3977	0.0196	0.0242	
12 Butadiene	54	3.699	3.696	0.003	58	3570	0.0196	0.0293	
13 Butane	43	3.699	3.696	0.003	86	7602	0.0196	0.0322	
15 Bromomethane	94	3.942	3.937	0.005	97	3644	0.0196	0.0250	
16 Chloroethane	64	4.055	4.048	0.007	95	1948	0.0196	0.0239	
17 Ethanol	31	4.201	4.184	0.017	98	9287	0.0980	0.1269	
18 Vinyl bromide	106	4.282	4.281	0.001	96	3261	0.0196	0.0229	
19 2-Methylbutane	43	4.336	4.332	0.004	87	5146	0.0196	0.0275	
20 Trichlorofluoromethane	101	4.503	4.500	0.003	98	10774	0.0196	0.0249	
21 Acrolein	56	4.519	4.509	0.010	38	2396	0.0196	0.0687	
23 Acetone	58	4.627	4.606	0.021	97	7134	0.0588	0.1097	
24 Pentane	72	4.681	4.682	-0.001	95	786	0.0196	0.0274	
25 Isopropyl alcohol	45	4.783	4.739	0.044	98	13416	0.0588	0.0743	
26 Ethyl ether	31	4.864	4.827	0.037	94	3171	0.0196	0.0216	
27 1,1-Dichloroethene	96	5.064	5.066	-0.002	96	3596	0.0196	0.0244	
28 Acrylonitrile	53	5.161	5.158	0.003	89	2242	0.0196	0.0244	
30 1,1,2-Trichloro-1,2,2-trif	101	5.231	5.233	-0.002	92	7513	0.0196	0.0238	
29 2-Methyl-2-propanol	59	5.349	5.261	0.088	40	5488	0.0196	0.0230	
31 Methylene Chloride	84	5.349	5.353	-0.004	96	20475	0.0196	0.1371	
32 3-Chloro-1-propene	39	5.360	5.371	-0.011	97	8215	0.0196	0.0592	
33 Carbon disulfide	76	5.484	5.485	-0.001	98	10147	0.0196	0.0253	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
34 trans-1,2-Dichloroethene	96	6.061	6.061	0.000	96	3604	0.0196	0.0241	
35 Methyl tert-butyl ether	73	6.277	6.218	0.059	95	8060	0.0196	0.0219	
36 1,1-Dichloroethane	63	6.422	6.427	-0.005	99	7299	0.0196	0.0246	
37 Vinyl acetate	43	6.563	6.553	0.010	99	7152	0.0196	0.0200	
39 2-Butanone (MEK)	72	6.994	6.954	0.040	82	1407	0.0196	0.0216	
40 Hexane	56	6.978	6.984	-0.006	78	3625	0.0196	0.0292	
41 cis-1,2-Dichloroethene	96	7.312	7.319	-0.007	98	3645	0.0196	0.0234	
42 Ethyl acetate	43	7.560	7.536	0.024	97	7457	0.0196	0.0263	
43 Chloroform	83	7.630	7.639	-0.009	90	8034	0.0196	0.0235	
44 Tetrahydrofuran	42	8.089	8.034	0.055	80	4374	0.0196	0.0292	
45 1,1,1-Trichloroethane	97	8.590	8.598	-0.008	96	8610	0.0196	0.0239	
46 1,2-Dichloroethane	62	8.682	8.686	-0.004	97	5673	0.0196	0.0249	
47 Benzene	78	9.173	9.173	0.000	97	12370	0.0196	0.0278	
48 Cyclohexane	69	9.173	9.180	-0.007	91	1846	0.0196	0.0261	
49 Carbon tetrachloride	117	9.205	9.203	0.002	85	7858	0.0196	0.0228	
50 n-Butanol	31	9.442	9.315	0.127	17	793	0.0196	0.0162	
53 Isooctane	57	10.019	10.019	0.000	97	19712	0.0196	0.0270	
54 n-Heptane	71	10.434	10.437	-0.003	87	4035	0.0196	0.0255	
55 1,2-Dichloropropane	63	10.445	10.447	-0.002	62	4433	0.0196	0.0268	
56 Trichloroethene	130	10.504	10.503	0.001	94	5158	0.0196	0.0247	
57 Dibromomethane	93	10.548	10.560	-0.012	88	6421	0.0196	0.0340	
58 Dichlorobromomethane	83	10.731	10.735	-0.004	96	7182	0.0196	0.0222	
59 1,4-Dioxane	88	10.844	10.795	0.049	65	1142	0.0196	0.0198	
60 Methyl methacrylate	41	10.914	10.901	0.013	91	3613	0.0196	0.0226	
62 4-Methyl-2-pentanone (MIBK	43	11.836	11.805	0.031	75	3124	0.0196	0.0116	
63 cis-1,3-Dichloropropene	75	11.804	11.811	-0.007	96	5626	0.0196	0.0222	
64 trans-1,3-Dichloropropene	75	12.543	12.548	-0.005	96	4601	0.0196	0.0206	
65 Toluene	91	12.672	12.671	0.001	91	11052	0.0196	0.0230	
66 1,1,2-Trichloroethane	83	12.737	12.741	-0.004	96	3214	0.0196	0.0223	
68 2-Hexanone	58	13.249	13.214	0.035	90	2774	0.0196	0.0207	
70 Chlorodibromomethane	129	13.449	13.455	-0.006	91	5740	0.0196	0.0194	
71 n-Octane	85	13.465	13.461	0.004	94	3641	0.0196	0.0216	
72 Ethylene Dibromide	107	13.740	13.745	-0.005	96	5505	0.0196	0.0213	
73 Tetrachloroethene	129	13.859	13.857	0.002	89	4465	0.0196	0.0241	
74 Chlorobenzene	112	14.748	14.752	-0.004	88	8937	0.0196	0.0232	
75 Ethylbenzene	91	15.066	15.070	-0.004	99	14563	0.0196	0.0236	
77 m-Xylene & p-Xylene	91	15.239	15.242	-0.003	0	19038	0.0392	0.0407	
79 Bromoform	173	15.643	15.650	-0.007	91	4450	0.0196	0.0157	
80 Styrene	104	15.703	15.710	-0.007	98	6357	0.0196	0.0195	
81 n-Nonane	57	15.730	15.732	-0.002	90	7351	0.0196	0.0230	
82 o-Xylene	91	15.762	15.771	-0.009	99	11518	0.0196	0.0231	
83 1,1,2,2-Tetrachloroethane	83	16.091	16.096	-0.005	96	6923	0.0196	0.0204	
84 1,2,3-Trichloropropane	110	16.237	16.250	-0.013	96	2464	0.0196	0.0232	
85 Isopropylbenzene	105	16.377	16.381	-0.004	46	17572	0.0196	0.0256	
86 N-Propylbenzene	120	16.932	16.938	-0.006	98	3957	0.0196	0.0222	
87 2-Chlorotoluene	126	16.954	16.958	-0.004	95	3792	0.0196	0.0225	
88 4-Ethyltoluene	105	17.099	17.102	-0.003	97	14333	0.0196	0.0222	
89 1,3,5-Trimethylbenzene	120	17.180	17.187	-0.007	91	5094	0.0196	0.0194	
90 Alpha Methyl Styrene	118	17.423	17.431	-0.008	88	4200	0.0196	0.0173	
91 n-Decane	57	17.552	17.556	-0.004	92	8349	0.0196	0.0221	
92 tert-Butylbenzene	119	17.644	17.645	-0.001	91	12197	0.0196	0.0205	
93 1,2,4-Trimethylbenzene	105	17.649	17.659	-0.010	96	11754	0.0196	0.0209	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
94 1,3-Dichlorobenzene	146	17.924	17.930	-0.006	96	8865	0.0196	0.0216	
95 sec-Butylbenzene	105	17.935	17.939	-0.004	98	17194	0.0196	0.0215	
96 Benzyl chloride	91	18.011	18.014	-0.003	96	9921	0.0196	0.0203	
97 1,4-Dichlorobenzene	146	18.021	18.026	-0.005	91	8710	0.0196	0.0214	
98 4-Isopropyltoluene	119	18.124	18.124	0.000	95	13574	0.0196	0.0204	
99 1,2,3-Trimethylbenzene	105	18.162	18.164	-0.002	98	11976	0.0196	0.0201	
100 1,2-Dichlorobenzene	146	18.404	18.407	-0.003	92	8577	0.0196	0.0223	
103 n-Butylbenzene	91	18.582	18.588	-0.006	98	13804	0.0196	0.0216	
105 Undecane	57	18.965	18.967	-0.002	95	8903	0.0196	0.0234	
106 1,2-Dibromo-3-Chloropropan	157	19.035	19.040	-0.005	85	4436	0.0196	0.0186	
108 1,2,4,5-Tetramethylbenzene	119	19.380	19.384	-0.004	96	17174	0.0196	0.0213	
111 Dodecane	57	20.049	20.050	-0.001	94	8486	0.0196	0.0247	
112 1,2,4-Trichlorobenzene	180	20.162	20.164	-0.002	91	8271	0.0196	0.0265	
113 Naphthalene	128	20.286	20.287	-0.001	98	17535	0.0196	0.0243	
114 Hexachlorobutadiene	225	20.518	20.521	-0.003	92	6518	0.0196	0.0217	
115 1,2,3-Trichlorobenzene	180	20.561	20.562	-0.001	93	7911	0.0196	0.0273	
117 2-Methylnaphthalene	142	21.354	21.354	0.000	99	20652	0.0451	0.0644	
118 1-Methylnaphthalene	142	21.543	21.542	0.001	97	20412	0.0451	0.0666	
S 119 Xylenes, Total	100				0		0.0588	0.0638	
S 120 1,2-Dichloroethene, Total	1				0		0.0392	0.0476	

Reagents:

40L12DNP_00015	Amount Added: 50.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

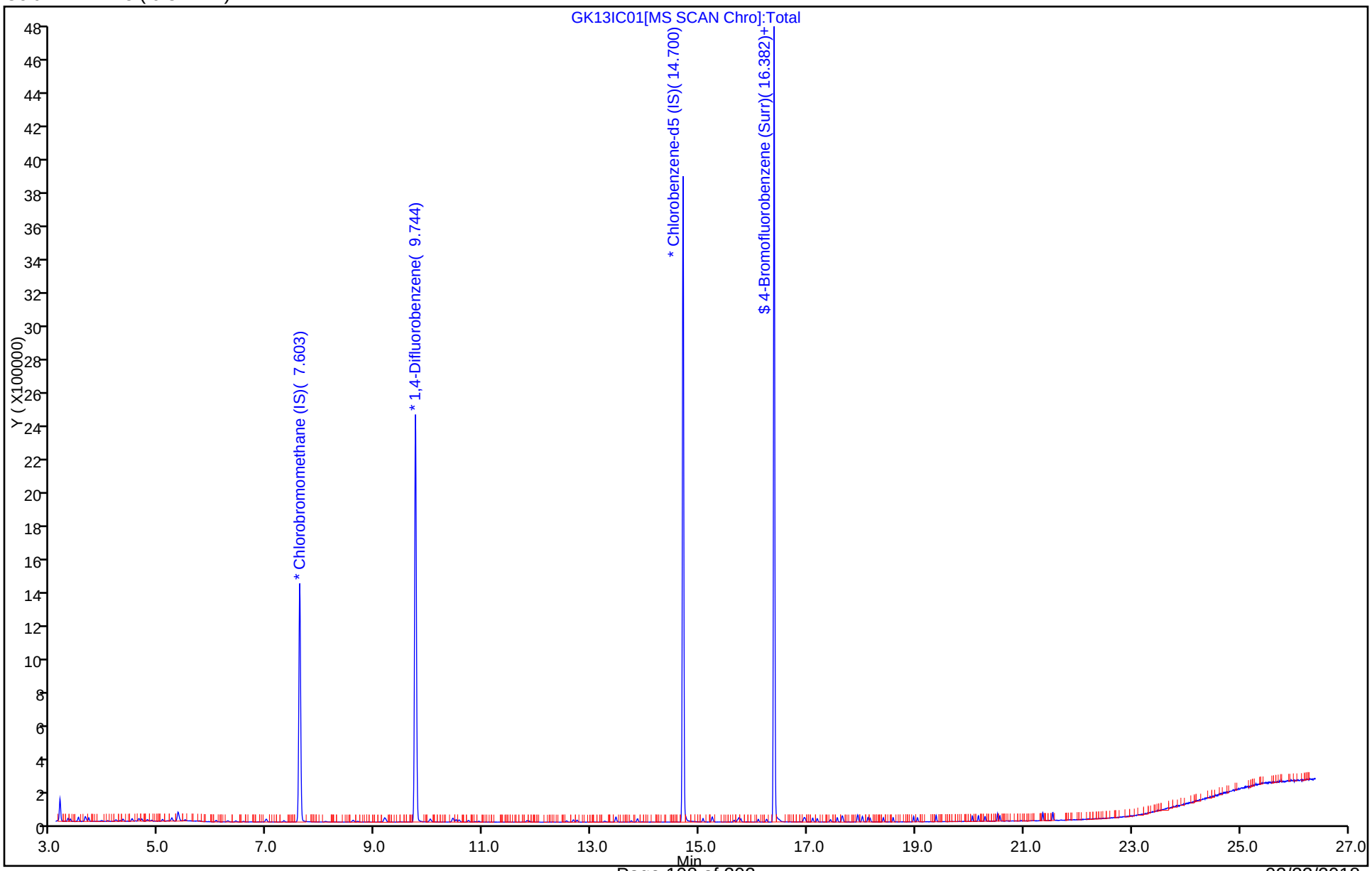
Report Date: 15-Nov-2017 15:40:42 Chrom Revision: 2.2 13-Nov-2017 17:19:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC01.D

Injection Date:	13-Nov-2017 16:15:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	IC L1			Worklist Smp#:	3
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC02.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 13-Nov-2017 16:57:30 ALS Bottle#: 1 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006586-004
Misc. Info.: 123609
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 15-Nov-2017 15:40:45 Calib Date: 13-Nov-2017 22:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: tajh Date: 14-Nov-2017 13:40:45

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.603	7.613	-0.010	97	418373	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.744	9.753	-0.009	96	2306175	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.694	14.703	-0.009	89	2243238	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.382	16.389	-0.007	88	1630824	4.00	3.90	
6 Chlorodifluoromethane	67	3.311	3.306	0.005	96	1944	0.0392	0.0464	
7 Propene	41	3.316	3.312	0.004	75	7081	0.0392	0.0566	
8 Dichlorodifluoromethane	85	3.359	3.354	0.005	99	19312	0.0392	0.0462	
9 Chloromethane	52	3.494	3.492	0.002	95	3789	0.0392	0.0839	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.510	3.507	0.003	96	10861	0.0392	0.0413	
11 Vinyl chloride	62	3.629	3.625	0.004	59	7310	0.0392	0.0445	
13 Butane	43	3.699	3.696	0.003	85	13010	0.0392	0.0553	
12 Butadiene	54	3.699	3.696	0.003	65	5739	0.0392	0.0472	
15 Bromomethane	94	3.936	3.937	-0.001	97	6662	0.0392	0.0458	
16 Chloroethane	64	4.050	4.048	0.002	91	3501	0.0392	0.0430	
17 Ethanol	31	4.190	4.184	0.006	97	17031	0.1960	0.2332	
18 Vinyl bromide	106	4.282	4.281	0.001	96	5801	0.0392	0.0408	
19 2-Methylbutane	43	4.330	4.332	-0.002	91	9582	0.0392	0.0514	
20 Trichlorofluoromethane	101	4.503	4.500	0.003	97	19120	0.0392	0.0442	
21 Acrolein	56	4.519	4.509	0.010	94	4193	0.0392	0.1204	
23 Acetone	58	4.621	4.606	0.015	97	12468	0.1176	0.1922	
24 Pentane	72	4.681	4.682	-0.001	98	1410	0.0392	0.0493	
25 Isopropyl alcohol	45	4.761	4.739	0.022	99	23569	0.1176	0.1308	
26 Ethyl ether	31	4.853	4.827	0.026	93	6455	0.0392	0.0441	
27 1,1-Dichloroethene	96	5.069	5.066	0.003	97	6219	0.0392	0.0422	
28 Acrylonitrile	53	5.155	5.158	-0.003	96	4014	0.0392	0.0437	
30 1,1,2-Trichloro-1,2,2-trif	101	5.231	5.233	-0.002	94	12916	0.0392	0.0409	
29 2-Methyl-2-propanol	59	5.311	5.261	0.050	90	9398	0.0392	0.0394	
31 Methylene Chloride	84	5.349	5.353	-0.004	97	22573	0.0392	0.1515	
32 3-Chloro-1-propene	39	5.365	5.371	-0.006	98	13440	0.0392	0.0970	
33 Carbon disulfide	76	5.484	5.485	-0.001	100	18136	0.0392	0.0453	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
34 trans-1,2-Dichloroethene	96	6.056	6.061	-0.005	96	6388	0.0392	0.0429	
35 Methyl tert-butyl ether	73	6.255	6.218	0.037	96	15280	0.0392	0.0416	
36 1,1-Dichloroethane	63	6.428	6.427	0.001	100	12719	0.0392	0.0429	
37 Vinyl acetate	43	6.557	6.553	0.004	99	15062	0.0392	0.0421	
39 2-Butanone (MEK)	72	6.972	6.954	0.018	81	2693	0.0392	0.0415	
40 Hexane	56	6.989	6.984	0.005	82	6351	0.0392	0.0513	
41 cis-1,2-Dichloroethene	96	7.312	7.319	-0.007	96	6252	0.0392	0.0403	
42 Ethyl acetate	43	7.549	7.536	0.013	98	12419	0.0392	0.0438	
43 Chloroform	83	7.625	7.639	-0.014	94	14666	0.0392	0.0429	
44 Tetrahydrofuran	42	8.072	8.034	0.038	94	7556	0.0392	0.0506	
45 1,1,1-Trichloroethane	97	8.595	8.598	-0.003	96	15139	0.0392	0.0421	
46 1,2-Dichloroethane	62	8.676	8.686	-0.010	97	10182	0.0392	0.0438	
47 Benzene	78	9.167	9.173	-0.006	97	19406	0.0392	0.0428	
48 Cyclohexane	69	9.172	9.180	-0.008	86	3312	0.0392	0.0459	
49 Carbon tetrachloride	117	9.194	9.203	-0.009	95	13782	0.0392	0.0393	
50 n-Butanol	31	9.399	9.315	0.084	80	2009	0.0392	0.0402	
53 Isooctane	57	10.019	10.019	0.000	98	34411	0.0392	0.0462	
54 n-Heptane	71	10.434	10.437	-0.003	84	7359	0.0392	0.0456	
55 1,2-Dichloropropane	63	10.434	10.447	-0.013	64	7786	0.0392	0.0462	
56 Trichloroethene	130	10.494	10.503	-0.009	94	8635	0.0392	0.0406	
57 Dibromomethane	93	10.553	10.560	-0.007	93	9776	0.0392	0.0508	
58 Dichlorobromomethane	83	10.725	10.735	-0.010	98	13539	0.0392	0.0410	
59 1,4-Dioxane	88	10.823	10.795	0.027	55	2387	0.0392	0.0405	
60 Methyl methacrylate	41	10.914	10.901	0.013	93	6404	0.0392	0.0392	
62 4-Methyl-2-pentanone (MIBK	43	11.831	11.805	0.026	96	10977	0.0392	0.0399	
63 cis-1,3-Dichloropropene	75	11.804	11.811	-0.007	97	9937	0.0392	0.0384	
64 trans-1,3-Dichloropropene	75	12.543	12.548	-0.005	96	9461	0.0392	0.0408	
65 Toluene	91	12.667	12.671	-0.004	92	21162	0.0392	0.0424	
66 1,1,2-Trichloroethane	83	12.731	12.741	-0.010	97	6189	0.0392	0.0414	
68 2-Hexanone	58	13.238	13.214	0.024	92	5018	0.0392	0.0362	
70 Chlorodibromomethane	129	13.449	13.455	-0.006	97	11268	0.0392	0.0367	
71 n-Octane	85	13.459	13.461	-0.002	93	7315	0.0392	0.0419	
72 Ethylene Dibromide	107	13.740	13.745	-0.005	97	10393	0.0392	0.0388	
73 Tetrachloroethene	129	13.853	13.857	-0.004	89	8406	0.0392	0.0437	
74 Chlorobenzene	112	14.743	14.752	-0.009	91	16534	0.0392	0.0413	
75 Ethylbenzene	91	15.066	15.070	-0.004	98	25725	0.0392	0.0402	
77 m-Xylene & p-Xylene	91	15.233	15.242	-0.009	0	39638	0.0784	0.0817	
79 Bromoform	173	15.643	15.650	-0.007	92	8812	0.0392	0.0300	
80 Styrene	104	15.703	15.710	-0.007	99	11434	0.0392	0.0337	
81 n-Nonane	57	15.730	15.732	-0.002	91	13769	0.0392	0.0416	
82 o-Xylene	91	15.762	15.771	-0.009	99	20421	0.0392	0.0396	
83 1,1,2,2-Tetrachloroethane	83	16.085	16.096	-0.011	97	13365	0.0392	0.0380	
84 1,2,3-Trichloropropane	110	16.242	16.250	-0.008	96	4381	0.0392	0.0399	
85 Isopropylbenzene	105	16.377	16.381	-0.004	66	30079	0.0392	0.0422	
86 N-Propylbenzene	120	16.932	16.938	-0.006	98	7189	0.0392	0.0389	
87 2-Chlorotoluene	126	16.954	16.958	-0.004	91	7193	0.0392	0.0411	
88 4-Ethyltoluene	105	17.094	17.102	-0.008	97	24361	0.0392	0.0363	
89 1,3,5-Trimethylbenzene	120	17.180	17.187	-0.007	93	10487	0.0392	0.0385	
90 Alpha Methyl Styrene	118	17.423	17.431	-0.008	86	7304	0.0392	0.0290	
91 n-Decane	57	17.552	17.556	-0.004	92	15143	0.0392	0.0387	
92 tert-Butylbenzene	119	17.638	17.645	-0.007	90	22686	0.0392	0.0368	
93 1,2,4-Trimethylbenzene	105	17.655	17.659	-0.004	96	21226	0.0392	0.0364	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
94 1,3-Dichlorobenzene	146	17.924	17.930	-0.006	96	16127	0.0392	0.0379	
95 sec-Butylbenzene	105	17.935	17.939	-0.004	97	30184	0.0392	0.0363	
96 Benzyl chloride	91	18.011	18.014	-0.003	95	17493	0.0392	0.0346	
97 1,4-Dichlorobenzene	146	18.021	18.026	-0.005	91	16274	0.0392	0.0385	
98 4-Isopropyltoluene	119	18.118	18.124	-0.006	97	24258	0.0392	0.0351	
99 1,2,3-Trimethylbenzene	105	18.156	18.164	-0.008	98	21951	0.0392	0.0355	
100 1,2-Dichlorobenzene	146	18.399	18.407	-0.008	92	15412	0.0392	0.0386	
103 n-Butylbenzene	91	18.588	18.588	0.000	98	25053	0.0392	0.0378	
105 Undecane	57	18.965	18.967	-0.002	95	15625	0.0392	0.0396	
106 1,2-Dibromo-3-Chloropropan	157	19.035	19.040	-0.005	86	8345	0.0392	0.0337	
108 1,2,4,5-Tetramethylbenzene	119	19.380	19.384	-0.004	96	29135	0.0392	0.0348	
111 Dodecane	57	20.049	20.050	-0.001	94	13418	0.0392	0.0376	
112 1,2,4-Trichlorobenzene	180	20.162	20.164	-0.002	94	13269	0.0392	0.0411	
113 Naphthalene	128	20.286	20.287	-0.001	99	30426	0.0392	0.0407	
114 Hexachlorobutadiene	225	20.518	20.521	-0.003	92	11237	0.0392	0.0360	
115 1,2,3-Trichlorobenzene	180	20.561	20.562	-0.001	94	12729	0.0392	0.0424	
117 2-Methylnaphthalene	142	21.354	21.354	0.000	99	28659	0.0902	0.0862	
118 1-Methylnaphthalene	142	21.537	21.542	-0.005	99	27436	0.0902	0.0863	
S 119 Xylenes, Total	100				0		0.1176	0.1212	
S 120 1,2-Dichloroethene, Total	1				0		0.0784	0.0832	

Reagents:

40L12DNP_00015	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

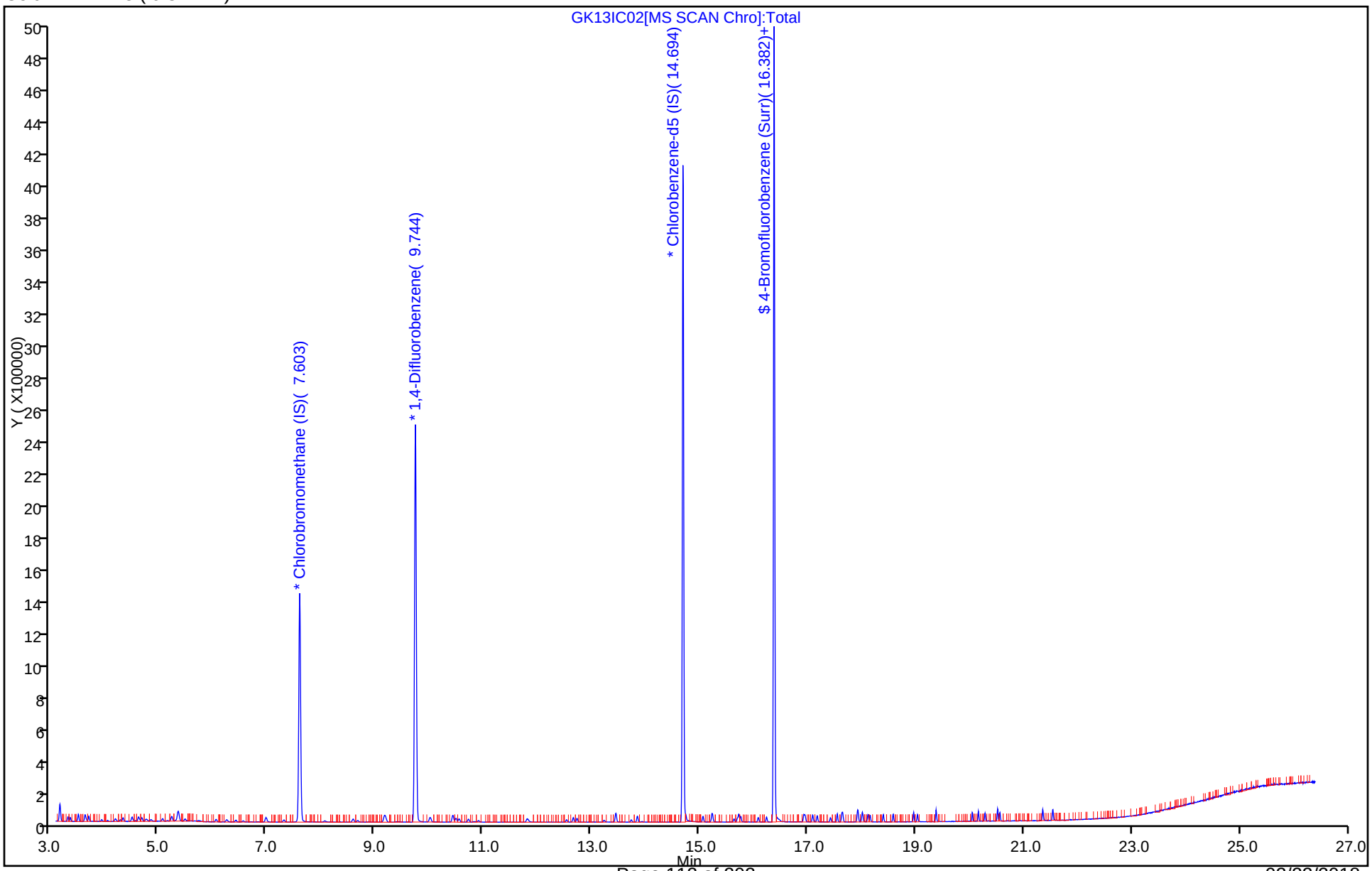
Report Date: 15-Nov-2017 15:40:46 Chrom Revision: 2.2 13-Nov-2017 17:19:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC02.D

Injection Date:	13-Nov-2017 16:57:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	IC L2			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC03.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 13-Nov-2017 17:39:30 ALS Bottle#: 2 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006586-005
Misc. Info.: 123608
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 15-Nov-2017 15:40:48 Calib Date: 13-Nov-2017 22:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: tajh Date: 14-Nov-2017 13:42:43

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.593	7.613	-0.020	97	414085	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.739	9.753	-0.014	96	2287139	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.694	14.703	-0.009	89	2189329	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.382	16.389	-0.007	89	1602397	4.00	3.92	
6 Chlorodifluoromethane	67	3.306	3.306	0.000	97	4016	0.0793	0.0969	
7 Propene	41	3.306	3.312	-0.006	97	11776	0.0793	0.0951	
8 Dichlorodifluoromethane	85	3.349	3.354	-0.005	100	34850	0.0793	0.0843	
9 Chloromethane	52	3.484	3.492	-0.008	98	5596	0.0793	0.1252	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.500	3.507	-0.007	94	22191	0.0793	0.0852	
11 Vinyl chloride	62	3.618	3.625	-0.007	60	13674	0.0793	0.0841	
12 Butadiene	54	3.689	3.696	-0.007	63	10885	0.0793	0.0905	
13 Butane	43	3.689	3.696	-0.007	86	22612	0.0793	0.0971	
15 Bromomethane	94	3.926	3.937	-0.011	98	12336	0.0793	0.0856	
16 Chloroethane	64	4.034	4.048	-0.014	93	6970	0.0793	0.0866	
17 Ethanol	31	4.152	4.184	-0.032	97	32841	0.3967	0.4544	
18 Vinyl bromide	106	4.271	4.281	-0.010	97	11974	0.0793	0.0851	
19 2-Methylbutane	43	4.319	4.332	-0.013	90	16807	0.0793	0.0910	
20 Trichlorofluoromethane	101	4.487	4.500	-0.013	99	36192	0.0793	0.0845	
21 Acrolein	56	4.503	4.509	-0.006	26	3257	0.0793	0.0945	
23 Acetone	58	4.600	4.606	-0.006	98	28830	0.2380	0.4490	
24 Pentane	72	4.665	4.682	-0.017	96	2825	0.0793	0.0997	
25 Isopropyl alcohol	45	4.713	4.739	-0.026	93	47239	0.2380	0.2649	
26 Ethyl ether	31	4.821	4.827	-0.006	95	12262	0.0793	0.0847	
27 1,1-Dichloroethene	96	5.053	5.066	-0.013	95	11700	0.0793	0.0803	
28 Acrylonitrile	53	5.139	5.158	-0.019	94	7387	0.0793	0.0813	
30 1,1,2-Trichloro-1,2,2-trif	101	5.220	5.233	-0.013	94	24607	0.0793	0.0788	
29 2-Methyl-2-propanol	59	5.247	5.261	-0.014	97	19723	0.0793	0.0836	
31 Methylene Chloride	84	5.339	5.353	-0.014	97	26924	0.0793	0.1826	
32 3-Chloro-1-propene	39	5.360	5.371	-0.011	97	12575	0.0793	0.0917	
33 Carbon disulfide	76	5.468	5.485	-0.017	99	33289	0.0793	0.0839	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
34 trans-1,2-Dichloroethene	96	6.045	6.061	-0.016	95	11121	0.0793	0.0755	
35 Methyl tert-butyl ether	73	6.218	6.218	0.000	96	29093	0.0793	0.0800	
36 1,1-Dichloroethane	63	6.406	6.427	-0.021	99	23439	0.0793	0.0799	
37 Vinyl acetate	43	6.541	6.553	-0.012	100	28504	0.0793	0.0806	
39 2-Butanone (MEK)	72	6.946	6.954	-0.008	98	5839	0.0793	0.0908	
40 Hexane	56	6.973	6.984	-0.011	92	11105	0.0793	0.0906	
41 cis-1,2-Dichloroethene	96	7.301	7.319	-0.018	97	12285	0.0793	0.0800	
42 Ethyl acetate	43	7.533	7.536	-0.003	98	21887	0.0793	0.0780	
43 Chloroform	83	7.620	7.639	-0.019	93	27328	0.0793	0.0808	
44 Tetrahydrofuran	42	8.035	8.034	0.001	93	12913	0.0793	0.0874	
45 1,1,1-Trichloroethane	97	8.585	8.598	-0.013	97	28309	0.0793	0.0795	
46 1,2-Dichloroethane	62	8.666	8.686	-0.020	98	19580	0.0793	0.0850	
47 Benzene	78	9.156	9.173	-0.017	97	35561	0.0793	0.0790	
48 Cyclohexane	69	9.173	9.180	-0.007	95	6467	0.0793	0.0904	
49 Carbon tetrachloride	117	9.189	9.203	-0.014	97	27093	0.0793	0.0779	
50 n-Butanol	31	9.361	9.315	0.046	85	4758	0.0793	0.0959	
53 Isooctane	57	10.003	10.019	-0.016	97	64100	0.0793	0.0867	
54 n-Heptane	71	10.429	10.437	-0.008	88	13600	0.0793	0.0849	
55 1,2-Dichloropropane	63	10.434	10.447	-0.013	89	14547	0.0793	0.0871	
56 Trichloroethene	130	10.494	10.503	-0.009	94	16491	0.0793	0.0783	
57 Dibromomethane	93	10.548	10.560	-0.012	89	17001	0.0793	0.0892	
58 Dichlorobromomethane	83	10.720	10.735	-0.015	98	26488	0.0793	0.0809	
59 1,4-Dioxane	88	10.807	10.795	0.012	96	4772	0.0793	0.0817	
60 Methyl methacrylate	41	10.893	10.901	-0.008	90	11302	0.0793	0.0698	
62 4-Methyl-2-pentanone (MIBK	43	11.804	11.805	-0.001	86	23063	0.0793	0.0845	
63 cis-1,3-Dichloropropene	75	11.799	11.811	-0.012	96	20516	0.0793	0.0800	
64 trans-1,3-Dichloropropene	75	12.543	12.548	-0.005	97	17831	0.0793	0.0787	
65 Toluene	91	12.661	12.671	-0.010	93	39657	0.0793	0.0815	
66 1,1,2-Trichloroethane	83	12.726	12.741	-0.015	96	12122	0.0793	0.0831	
68 2-Hexanone	58	13.217	13.214	0.003	92	10935	0.0793	0.0808	
70 Chlorodibromomethane	129	13.449	13.455	-0.006	72	22038	0.0793	0.0735	
71 n-Octane	85	13.454	13.461	-0.007	95	13862	0.0793	0.0814	
72 Ethylene Dibromide	107	13.735	13.745	-0.010	97	20360	0.0793	0.0778	
73 Tetrachloroethene	129	13.853	13.857	-0.004	93	15001	0.0793	0.0799	
74 Chlorobenzene	112	14.743	14.752	-0.009	90	31575	0.0793	0.0809	
75 Ethylbenzene	91	15.061	15.070	-0.009	99	50183	0.0793	0.0804	
77 m-Xylene & p-Xylene	91	15.234	15.242	-0.008	0	78365	0.1587	0.1655	
79 Bromoform	173	15.643	15.650	-0.007	93	18254	0.0793	0.0636	
80 Styrene	104	15.703	15.710	-0.007	98	22604	0.0793	0.0684	
81 n-Nonane	57	15.730	15.732	-0.002	92	27931	0.0793	0.0865	
82 o-Xylene	91	15.762	15.771	-0.009	100	41248	0.0793	0.0819	
83 1,1,2,2-Tetrachloroethane	83	16.086	16.096	-0.010	98	27596	0.0793	0.0805	
84 1,2,3-Trichloropropane	110	16.242	16.250	-0.008	97	8963	0.0793	0.0835	
85 Isopropylbenzene	105	16.371	16.381	-0.010	92	57868	0.0793	0.0831	
86 N-Propylbenzene	120	16.932	16.938	-0.006	98	14281	0.0793	0.0792	
87 2-Chlorotoluene	126	16.954	16.958	-0.004	94	13554	0.0793	0.0794	
88 4-Ethyltoluene	105	17.094	17.102	-0.008	98	51730	0.0793	0.0790	
89 1,3,5-Trimethylbenzene	120	17.175	17.187	-0.012	91	20077	0.0793	0.0754	
90 Alpha Methyl Styrene	118	17.423	17.431	-0.008	87	15479	0.0793	0.0630	
91 n-Decane	57	17.547	17.556	-0.009	91	32136	0.0793	0.0841	
92 tert-Butylbenzene	119	17.639	17.645	-0.006	91	46523	0.0793	0.0774	
93 1,2,4-Trimethylbenzene	105	17.649	17.659	-0.010	96	43788	0.0793	0.0770	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
94 1,3-Dichlorobenzene	146	17.924	17.930	-0.006	97	31667	0.0793	0.0762	
95 sec-Butylbenzene	105	17.935	17.939	-0.004	98	63144	0.0793	0.0779	
96 Benzyl chloride	91	18.005	18.014	-0.009	96	36099	0.0793	0.0731	
97 1,4-Dichlorobenzene	146	18.016	18.026	-0.010	91	31875	0.0793	0.0772	
98 4-Isopropyltoluene	119	18.119	18.124	-0.005	96	51363	0.0793	0.0761	
99 1,2,3-Trimethylbenzene	105	18.156	18.164	-0.008	98	47065	0.0793	0.0781	
100 1,2-Dichlorobenzene	146	18.404	18.407	-0.003	93	30924	0.0793	0.0794	
103 n-Butylbenzene	91	18.582	18.588	-0.006	99	51104	0.0793	0.0790	
105 Undecane	57	18.965	18.967	-0.002	96	32847	0.0793	0.0853	
106 1,2-Dibromo-3-Chloropropan	157	19.035	19.040	-0.005	88	19037	0.0793	0.0789	
108 1,2,4,5-Tetramethylbenzene	119	19.380	19.384	-0.004	96	65438	0.0793	0.0802	
111 Dodecane	57	20.049	20.050	-0.001	94	32956	0.0793	0.0947	
112 1,2,4-Trichlorobenzene	180	20.162	20.164	-0.002	93	27070	0.0793	0.0858	
113 Naphthalene	128	20.286	20.287	-0.001	99	66349	0.0793	0.0910	
114 Hexachlorobutadiene	225	20.518	20.521	-0.003	92	23905	0.0793	0.0786	
115 1,2,3-Trichlorobenzene	180	20.561	20.562	-0.001	93	26434	0.0793	0.0902	
117 2-Methylnaphthalene	142	21.354	21.354	0.000	100	77228	0.1825	0.2380	
118 1-Methylnaphthalene	142	21.543	21.542	0.001	100	77764	0.1825	0.2506	
S 119 Xylenes, Total	100				0		0.2380	0.2473	
S 120 1,2-Dichloroethene, Total	1				0		0.1587	0.1555	

Reagents:

40L3DNP_00016	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

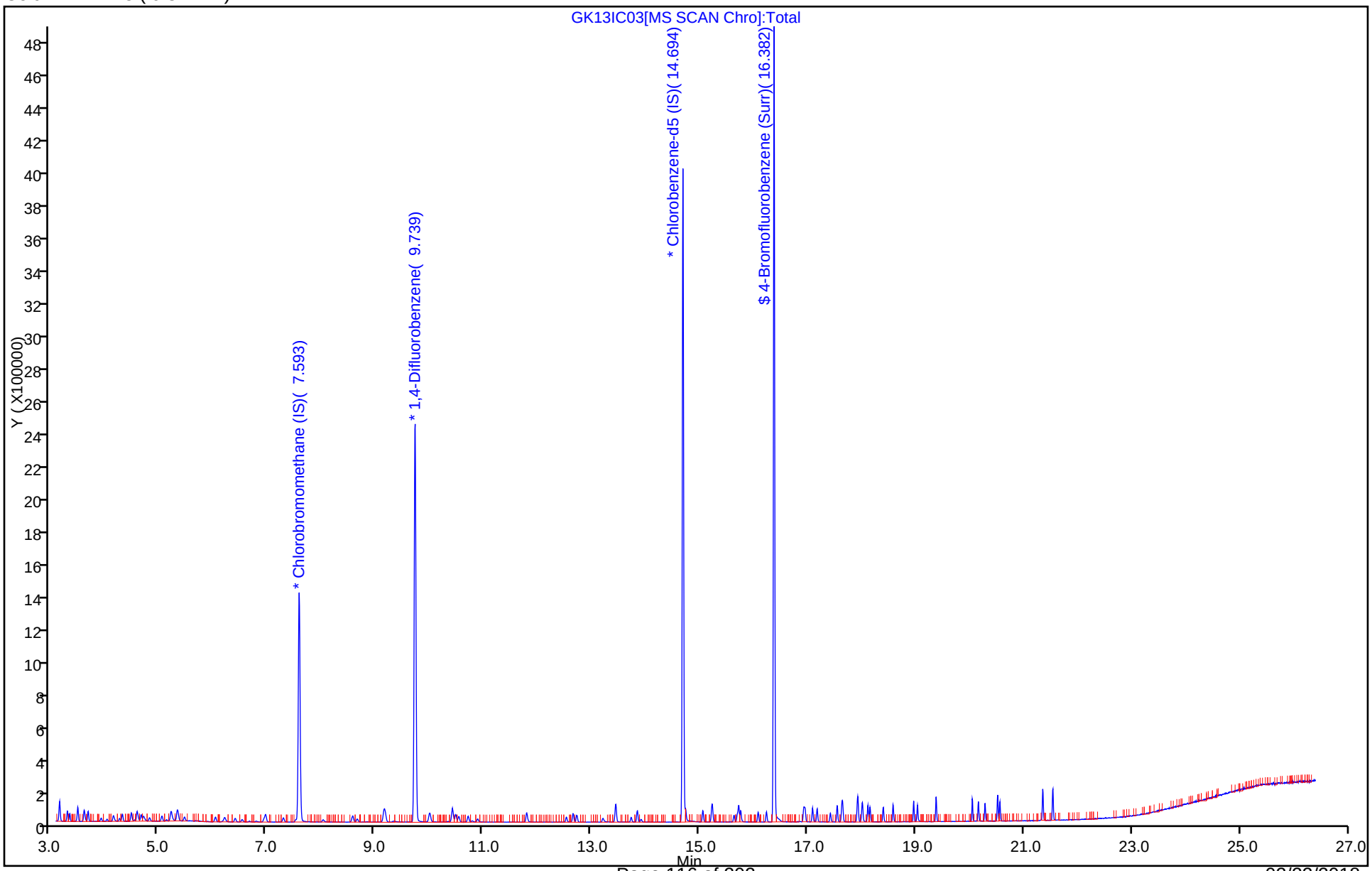
Report Date: 15-Nov-2017 15:40:49 Chrom Revision: 2.2 13-Nov-2017 17:19:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC03.D

Injection Date:	13-Nov-2017 17:39:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	IC L3			Worklist Smp#:	5
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC04.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 13-Nov-2017 18:22:30 ALS Bottle#: 2 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006586-006
Misc. Info.: 123608
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 15-Nov-2017 15:40:52 Calib Date: 13-Nov-2017 22:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: tajh Date: 14-Nov-2017 13:42:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.614	7.613	0.001	96	423144	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.755	9.753	0.002	96	2424696	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.700	14.703	-0.003	88	2381228	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.382	16.389	-0.007	89	1806171	4.00	4.07	
6 Chlorodifluoromethane	67	3.311	3.306	0.005	98	6739	0.1587	0.1592	
7 Propene	41	3.316	3.312	0.004	96	23206	0.1587	0.1833	
8 Dichlorodifluoromethane	85	3.360	3.354	0.006	100	69172	0.1587	0.1638	
9 Chloromethane	52	3.494	3.492	0.002	100	8868	0.1587	0.1942	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.511	3.507	0.004	95	40067	0.1587	0.1505	
11 Vinyl chloride	62	3.629	3.625	0.004	77	25654	0.1587	0.1545	
13 Butane	43	3.699	3.696	0.003	92	41175	0.1587	0.1730	
12 Butadiene	54	3.699	3.696	0.003	88	20570	0.1587	0.1673	
15 Bromomethane	94	3.937	3.937	0.000	97	23657	0.1587	0.1607	
16 Chloroethane	64	4.050	4.048	0.002	97	13456	0.1587	0.1635	
17 Ethanol	31	4.179	4.184	-0.005	98	62153	0.7933	0.8415	
18 Vinyl bromide	106	4.282	4.281	0.001	98	22496	0.1587	0.1565	
19 2-Methylbutane	43	4.336	4.332	0.004	92	29591	0.1587	0.1568	
20 Trichlorofluoromethane	101	4.503	4.500	0.003	98	69167	0.1587	0.1581	
21 Acrolein	56	4.519	4.509	0.010	91	5898	0.1587	0.1675	
22 Acetonitrile	40	4.573	4.551	0.022	100	6983	0.1587	0.1327	
23 Acetone	58	4.621	4.606	0.015	99	50830	0.4760	0.7747	
24 Pentane	72	4.686	4.682	0.004	98	4633	0.1587	0.1600	
25 Isopropyl alcohol	45	4.735	4.739	-0.004	95	87914	0.4760	0.4824	
26 Ethyl ether	31	4.842	4.827	0.015	95	23637	0.1587	0.1598	
27 1,1-Dichloroethene	96	5.069	5.066	0.003	95	21226	0.1587	0.1425	
28 Acrylonitrile	53	5.166	5.158	0.008	97	13640	0.1587	0.1469	
30 1,1,2-Trichloro-1,2,2-trif	101	5.241	5.233	0.008	94	48964	0.1587	0.1534	
29 2-Methyl-2-propanol	59	5.285	5.261	0.024	91	37118	0.1587	0.1539	
31 Methylene Chloride	84	5.355	5.353	0.002	97	37658	0.1587	0.2500	
32 3-Chloro-1-propene	39	5.371	5.371	0.000	97	23486	0.1587	0.1676	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.484	5.485	-0.001	100	63869	0.1587	0.1576	
34 trans-1,2-Dichloroethene	96	6.061	6.061	0.000	96	22440	0.1587	0.1490	
35 Methyl tert-butyl ether	73	6.234	6.218	0.016	97	53055	0.1587	0.1429	
36 1,1-Dichloroethane	63	6.422	6.427	-0.005	99	46896	0.1587	0.1565	
37 Vinyl acetate	43	6.557	6.553	0.004	100	49871	0.1587	0.1380	
39 2-Butanone (MEK)	72	6.956	6.954	0.002	98	10784	0.1587	0.1642	
40 Hexane	56	6.989	6.984	0.005	90	21446	0.1587	0.1712	
41 cis-1,2-Dichloroethene	96	7.318	7.319	-0.001	96	24336	0.1587	0.1551	
42 Ethyl acetate	43	7.539	7.536	0.003	98	41121	0.1587	0.1434	
43 Chloroform	83	7.636	7.639	-0.003	96	54044	0.1587	0.1565	
44 Tetrahydrofuran	42	8.046	8.034	0.012	94	22595	0.1587	0.1497	
45 1,1,1-Trichloroethane	97	8.601	8.598	0.003	96	55622	0.1587	0.1530	
46 1,2-Dichloroethane	62	8.687	8.686	0.001	98	37293	0.1587	0.1527	
47 Benzene	78	9.173	9.173	-0.001	97	70972	0.1587	0.1488	
48 Cyclohexane	69	9.183	9.180	0.003	81	12548	0.1587	0.1655	
49 Carbon tetrachloride	117	9.199	9.203	-0.004	97	54641	0.1587	0.1482	
50 n-Butanol	31	9.356	9.315	0.041	88	7880	0.1587	0.1499	
53 Isooctane	57	10.025	10.019	0.005	98	124855	0.1587	0.1594	
54 n-Heptane	71	10.434	10.437	-0.003	88	26207	0.1587	0.1543	
55 1,2-Dichloropropane	63	10.445	10.447	-0.002	90	27437	0.1587	0.1550	
56 Trichloroethene	130	10.499	10.503	-0.004	94	33403	0.1587	0.1495	
57 Dibromomethane	93	10.558	10.560	-0.002	91	30571	0.1587	0.1512	
58 Dichlorobromomethane	83	10.731	10.735	-0.004	99	50764	0.1587	0.1463	
59 1,4-Dioxane	88	10.806	10.795	0.011	94	8736	0.1587	0.1410	
60 Methyl methacrylate	41	10.903	10.901	0.002	92	22934	0.1587	0.1336	
62 4-Methyl-2-pentanone (MIBK	43	11.815	11.805	0.010	96	39232	0.1587	0.1355	
63 cis-1,3-Dichloropropene	75	11.809	11.811	-0.002	97	38840	0.1587	0.1429	
64 trans-1,3-Dichloropropene	75	12.543	12.548	-0.005	98	34215	0.1587	0.1388	
65 Toluene	91	12.667	12.671	-0.004	94	73875	0.1587	0.1396	
66 1,1,2-Trichloroethane	83	12.737	12.741	-0.004	98	23173	0.1587	0.1461	
68 2-Hexanone	58	13.217	13.214	0.003	93	20284	0.1587	0.1378	
70 Chlorodibromomethane	129	13.449	13.455	-0.006	97	43866	0.1587	0.1345	
71 n-Octane	85	13.459	13.461	-0.002	94	27542	0.1587	0.1487	
72 Ethylene Dibromide	107	13.740	13.745	-0.005	97	41070	0.1587	0.1444	
73 Tetrachloroethene	129	13.853	13.857	-0.004	93	29490	0.1587	0.1444	
74 Chlorobenzene	112	14.748	14.752	-0.004	91	62025	0.1587	0.1461	
75 Ethylbenzene	91	15.066	15.070	-0.004	99	91139	0.1587	0.1342	
77 m-Xylene & p-Xylene	91	15.239	15.242	-0.003	0	140427	0.3173	0.2726	
79 Bromoform	173	15.643	15.650	-0.007	94	35707	0.1587	0.1145	
80 Styrene	104	15.708	15.710	-0.002	99	43489	0.1587	0.1209	
81 n-Nonane	57	15.730	15.732	-0.002	94	52902	0.1587	0.1506	
82 o-Xylene	91	15.767	15.771	-0.004	97	74225	0.1587	0.1355	
83 1,1,2,2-Tetrachloroethane	83	16.091	16.096	-0.005	99	50461	0.1587	0.1353	
84 1,2,3-Trichloropropane	110	16.242	16.250	-0.008	97	15766	0.1587	0.1351	
85 Isopropylbenzene	105	16.377	16.381	-0.004	93	104274	0.1587	0.1377	
86 N-Propylbenzene	120	16.932	16.938	-0.006	98	25777	0.1587	0.1314	
87 2-Chlorotoluene	126	16.954	16.958	-0.004	97	25846	0.1587	0.1391	
88 4-Ethyltoluene	105	17.094	17.102	-0.008	98	95461	0.1587	0.1340	
89 1,3,5-Trimethylbenzene	120	17.180	17.187	-0.007	92	37561	0.1587	0.1297	
90 Alpha Methyl Styrene	118	17.428	17.431	-0.003	86	28835	0.1587	0.1080	
91 n-Decane	57	17.552	17.556	-0.004	91	59064	0.1587	0.1421	
92 tert-Butylbenzene	119	17.639	17.645	-0.006	91	85633	0.1587	0.1309	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.655	17.659	-0.004	96	80549	0.1587	0.1302	
94 1,3-Dichlorobenzene	146	17.924	17.930	-0.006	97	56944	0.1587	0.1260	
95 sec-Butylbenzene	105	17.935	17.939	-0.004	98	116663	0.1587	0.1323	
96 Benzyl chloride	91	18.011	18.014	-0.003	97	65377	0.1587	0.1217	
97 1,4-Dichlorobenzene	146	18.021	18.026	-0.005	93	59450	0.1587	0.1324	
98 4-Isopropyltoluene	119	18.118	18.124	-0.006	97	97762	0.1587	0.1332	
99 1,2,3-Trimethylbenzene	105	18.156	18.164	-0.008	98	87127	0.1587	0.1329	
100 1,2-Dichlorobenzene	146	18.404	18.407	-0.003	94	54402	0.1587	0.1285	
103 n-Butylbenzene	91	18.582	18.588	-0.006	98	92982	0.1587	0.1321	
105 Undecane	57	18.965	18.967	-0.002	95	59250	0.1587	0.1415	
106 1,2-Dibromo-3-Chloropropan	157	19.041	19.040	0.001	93	33569	0.1587	0.1279	
108 1,2,4,5-Tetramethylbenzene	119	19.380	19.384	-0.004	97	116556	0.1587	0.1313	
111 Dodecane	57	20.049	20.050	-0.001	95	55615	0.1587	0.1469	
112 1,2,4-Trichlorobenzene	180	20.162	20.164	-0.002	94	46058	0.1587	0.1343	
113 Naphthalene	128	20.286	20.287	-0.001	99	110319	0.1587	0.1391	
114 Hexachlorobutadiene	225	20.518	20.521	-0.003	93	42828	0.1587	0.1294	
115 1,2,3-Trichlorobenzene	180	20.561	20.562	-0.001	95	45087	0.1587	0.1415	
117 2-Methylnaphthalene	142	21.354	21.354	0.000	100	141471	0.3649	0.4008	
118 1-Methylnaphthalene	142	21.537	21.542	-0.005	100	142019	0.3649	0.4209	
S 119 Xylenes, Total	100				0		0.4760	0.4081	
S 120 1,2-Dichloroethene, Total	1				0		0.3173	0.3041	

Reagents:

40L3DNP_00016	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

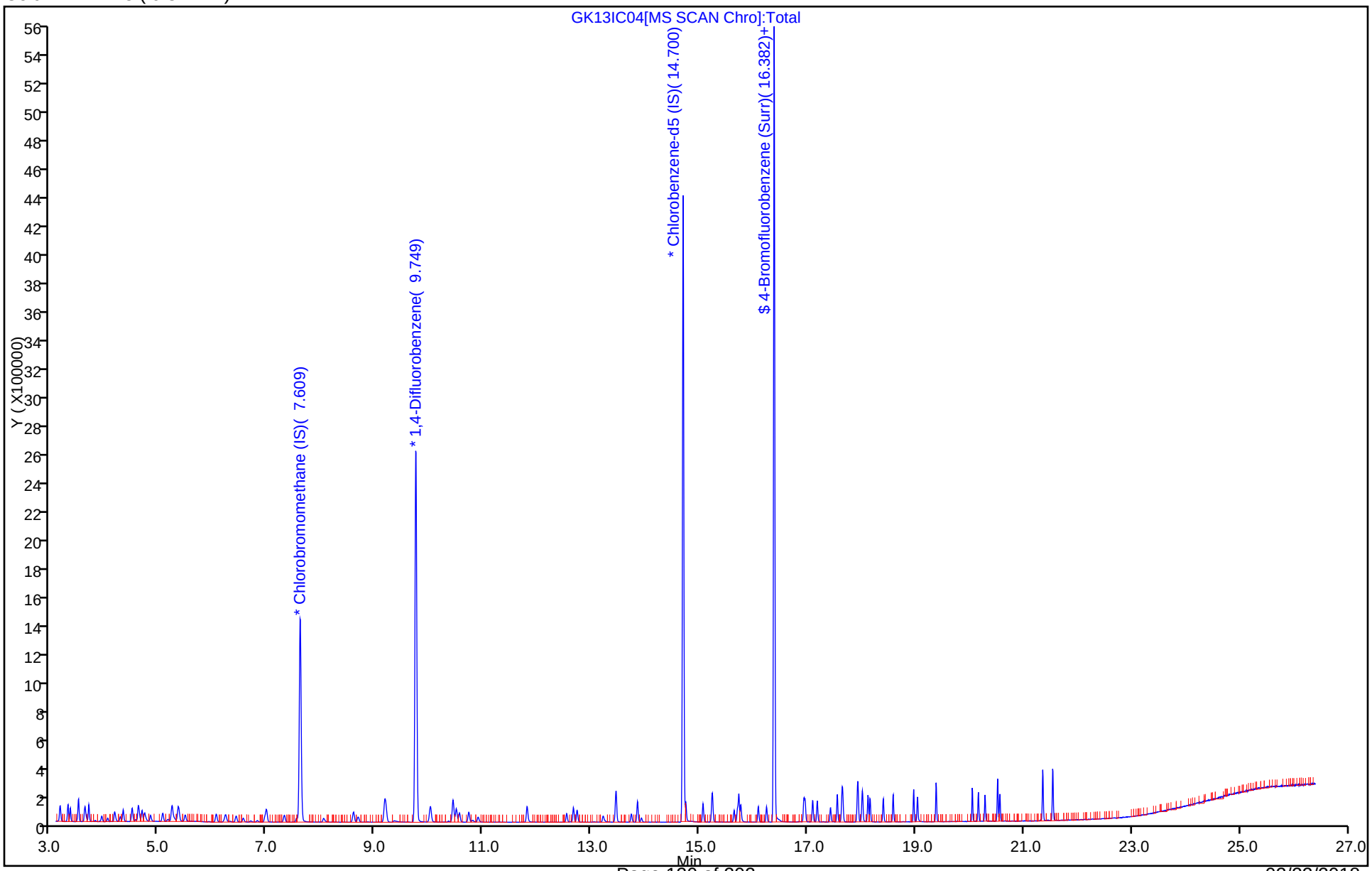
Report Date: 15-Nov-2017 15:40:52 Chrom Revision: 2.2 13-Nov-2017 17:19:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC04.D

Injection Date:	13-Nov-2017 18:22:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	IC L4			Worklist Smp#:	6
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC05.D
Lims ID: IC L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 13-Nov-2017 19:05:30 ALS Bottle#: 3 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006586-007
Misc. Info.: 123607
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 15-Nov-2017 15:40:55 Calib Date: 13-Nov-2017 22:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: tajh Date: 14-Nov-2017 13:49:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.603	7.613	-0.010	96	456281	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.744	9.753	-0.009	96	2686976	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.700	14.703	-0.003	88	2555778	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.382	16.389	-0.007	91	1944444	4.00	4.08	
6 Chlorodifluoromethane	67	3.300	3.306	-0.006	97	17815	0.4000	0.3902	
7 Propene	41	3.311	3.312	-0.001	99	55285	0.4000	0.4050	
8 Dichlorodifluoromethane	85	3.354	3.354	0.000	100	177921	0.4000	0.3907	
9 Chloromethane	52	3.489	3.492	-0.003	99	19982	0.4000	0.4058	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.505	3.507	-0.002	95	110853	0.4000	0.3861	
11 Vinyl chloride	62	3.624	3.625	-0.001	98	67921	0.4000	0.3792	
12 Butadiene	54	3.694	3.696	-0.002	96	52626	0.4000	0.3970	
13 Butane	43	3.694	3.696	-0.002	95	106696	0.4000	0.4157	
15 Bromomethane	94	3.936	3.937	-0.001	98	62553	0.4000	0.3941	
16 Chloroethane	64	4.044	4.048	-0.004	98	34965	0.4000	0.3941	
17 Ethanol	31	4.158	4.184	-0.026	98	172678	2.00	2.17	
18 Vinyl bromide	106	4.276	4.281	-0.005	97	59464	0.4000	0.3837	
19 2-Methylbutane	43	4.330	4.332	-0.002	91	78905	0.4000	0.3878	
20 Trichlorofluoromethane	101	4.492	4.500	-0.008	99	184625	0.4000	0.3914	
21 Acrolein	56	4.497	4.509	-0.012	30	14290	0.4000	0.3763	
22 Acetonitrile	40	4.546	4.551	-0.005	99	23397	0.4000	0.4123	
23 Acetone	58	4.594	4.606	-0.012	98	112683	1.20	1.59	
24 Pentane	72	4.681	4.682	-0.001	98	12574	0.4000	0.4028	
25 Isopropyl alcohol	45	4.702	4.739	-0.037	97	250842	1.20	1.28	
26 Ethyl ether	31	4.815	4.827	-0.012	96	68486	0.4000	0.4293	
27 1,1-Dichloroethene	96	5.058	5.066	-0.008	95	58681	0.4000	0.3654	
28 Acrylonitrile	53	5.150	5.158	-0.008	93	41904	0.4000	0.4186	
30 1,1,2-Trichloro-1,2,2-trif	101	5.231	5.233	-0.002	93	128810	0.4000	0.3743	
29 2-Methyl-2-propanol	59	5.225	5.261	-0.036	67	102110	0.4000	0.3926	
31 Methylene Chloride	84	5.344	5.353	-0.009	97	70998	0.4000	0.4370	
32 3-Chloro-1-propene	39	5.365	5.371	-0.006	97	60754	0.4000	0.4021	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.479	5.485	-0.006	99	169821	0.4000	0.3887	
34 trans-1,2-Dichloroethene	96	6.050	6.061	-0.011	96	58319	0.4000	0.3591	
35 Methyl tert-butyl ether	73	6.201	6.218	-0.017	97	166054	0.4000	0.4146	
36 1,1-Dichloroethane	63	6.417	6.427	-0.010	100	120884	0.4000	0.3740	
37 Vinyl acetate	43	6.541	6.553	-0.012	100	163517	0.4000	0.4195	
39 2-Butanone (MEK)	72	6.935	6.954	-0.019	99	29898	0.4000	0.4221	
40 Hexane	56	6.978	6.984	-0.006	90	51517	0.4000	0.3814	
41 cis-1,2-Dichloroethene	96	7.307	7.319	-0.012	97	61201	0.4000	0.3618	
42 Ethyl acetate	43	7.522	7.536	-0.014	98	132244	0.4000	0.4278	
43 Chloroform	83	7.630	7.639	-0.009	96	139215	0.4000	0.3737	
44 Tetrahydrofuran	42	8.018	8.034	-0.016	95	68081	0.4000	0.4183	
45 1,1,1-Trichloroethane	97	8.590	8.598	-0.008	95	142790	0.4000	0.3641	
46 1,2-Dichloroethane	62	8.676	8.686	-0.010	98	95876	0.4000	0.3543	
47 Benzene	78	9.167	9.173	-0.006	97	187181	0.4000	0.3540	
48 Cyclohexane	69	9.178	9.180	-0.002	96	31612	0.4000	0.3763	
49 Carbon tetrachloride	117	9.199	9.203	-0.004	97	143333	0.4000	0.3508	
50 n-Butanol	31	9.275	9.315	-0.040	86	21302	0.4000	0.3656	
53 Isooctane	57	10.014	10.019	-0.005	98	321511	0.4000	0.3703	
54 n-Heptane	71	10.434	10.437	-0.003	92	68571	0.4000	0.3644	
55 1,2-Dichloropropane	63	10.440	10.447	-0.007	90	73768	0.4000	0.3759	
56 Trichloroethene	130	10.499	10.503	-0.004	94	81717	0.4000	0.3301	
57 Dibromomethane	93	10.553	10.560	-0.007	91	79263	0.4000	0.3538	
58 Dichlorobromomethane	83	10.725	10.735	-0.010	99	138509	0.4000	0.3602	
59 1,4-Dioxane	88	10.779	10.795	-0.016	93	26106	0.4000	0.3803	
60 Methyl methacrylate	41	10.887	10.901	-0.014	92	75998	0.4000	0.3995	
62 4-Methyl-2-pentanone (MIBK	43	11.793	11.805	-0.012	98	130432	0.4000	0.4066	
63 cis-1,3-Dichloropropene	75	11.804	11.811	-0.007	97	110051	0.4000	0.3654	
64 trans-1,3-Dichloropropene	75	12.543	12.548	-0.005	98	98547	0.4000	0.3726	
65 Toluene	91	12.667	12.671	-0.004	94	217565	0.4000	0.3830	
66 1,1,2-Trichloroethane	83	12.737	12.741	-0.004	99	64954	0.4000	0.3815	
68 2-Hexanone	58	13.206	13.214	-0.008	93	58525	0.4000	0.3703	
70 Chlorodibromomethane	129	13.449	13.455	-0.006	97	120741	0.4000	0.3449	
71 n-Octane	85	13.459	13.461	-0.002	93	75198	0.4000	0.3783	
72 Ethylene Dibromide	107	13.740	13.745	-0.005	98	112648	0.4000	0.3689	
73 Tetrachloroethene	129	13.853	13.857	-0.004	94	77588	0.4000	0.3540	
74 Chlorobenzene	112	14.748	14.752	-0.004	91	166566	0.4000	0.3656	
75 Ethylbenzene	91	15.066	15.070	-0.004	99	283248	0.4000	0.3886	
77 m-Xylene & p-Xylene	91	15.239	15.242	-0.003	0	444334	0.8000	0.8037	
79 Bromoform	173	15.643	15.650	-0.007	94	103211	0.4000	0.3082	
80 Styrene	104	15.703	15.710	-0.007	99	143547	0.4000	0.3718	
81 n-Nonane	57	15.730	15.732	-0.002	92	152116	0.4000	0.4034	
82 o-Xylene	91	15.767	15.771	-0.004	98	235544	0.4000	0.4005	
83 1,1,2,2-Tetrachloroethane	83	16.091	16.096	-0.005	99	161542	0.4000	0.4035	
84 1,2,3-Trichloropropane	110	16.247	16.250	-0.003	97	50028	0.4000	0.3995	
85 Isopropylbenzene	105	16.377	16.381	-0.004	96	329988	0.4000	0.4061	
86 N-Propylbenzene	120	16.932	16.938	-0.006	99	82932	0.4000	0.3939	
87 2-Chlorotoluene	126	16.959	16.958	0.001	97	76188	0.4000	0.3821	
88 4-Ethyltoluene	105	17.099	17.102	-0.003	99	306943	0.4000	0.4014	
89 1,3,5-Trimethylbenzene	120	17.180	17.187	-0.007	92	125411	0.4000	0.4036	
90 Alpha Methyl Styrene	118	17.428	17.431	-0.003	88	103095	0.4000	0.3596	
91 n-Decane	57	17.552	17.556	-0.004	91	184448	0.4000	0.4135	
92 tert-Butylbenzene	119	17.638	17.645	-0.007	92	283790	0.4000	0.4043	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.655	17.659	-0.004	96	266676	0.4000	0.4016	
94 1,3-Dichlorobenzene	146	17.924	17.930	-0.006	98	173369	0.4000	0.3575	
95 sec-Butylbenzene	105	17.935	17.939	-0.004	98	392216	0.4000	0.4144	
96 Benzyl chloride	91	18.011	18.014	-0.003	97	216285	0.4000	0.3750	
97 1,4-Dichlorobenzene	146	18.021	18.026	-0.005	97	176427	0.4000	0.3661	
98 4-Isopropyltoluene	119	18.118	18.124	-0.006	97	326193	0.4000	0.4142	
99 1,2,3-Trimethylbenzene	105	18.162	18.164	-0.002	98	294110	0.4000	0.4179	
100 1,2-Dichlorobenzene	146	18.404	18.407	-0.003	94	169475	0.4000	0.3730	
103 n-Butylbenzene	91	18.588	18.588	0.000	98	311379	0.4000	0.4121	
105 Undecane	57	18.965	18.967	-0.002	96	198779	0.4000	0.4422	
106 1,2-Dibromo-3-Chloropropan	157	19.035	19.040	-0.005	93	114753	0.4000	0.4073	
108 1,2,4,5-Tetramethylbenzene	119	19.380	19.384	-0.004	97	385281	0.4000	0.4045	
111 Dodecane	57	20.049	20.050	-0.001	96	158042	0.4000	0.3890	
112 1,2,4-Trichlorobenzene	180	20.162	20.164	-0.002	94	134060	0.4000	0.3641	
113 Naphthalene	128	20.286	20.287	-0.001	99	310035	0.4000	0.3643	
114 Hexachlorobutadiene	225	20.518	20.521	-0.003	94	133367	0.4000	0.3755	
115 1,2,3-Trichlorobenzene	180	20.561	20.562	-0.001	95	121323	0.4000	0.3547	
117 2-Methylnaphthalene	142	21.354	21.354	0.000	100	177610	0.9200	0.4688	
118 1-Methylnaphthalene	142	21.543	21.542	0.001	100	165222	0.9200	0.4562	
S 119 Xylenes, Total	100				0		1.20	1.20	
S 120 1,2-Dichloroethene, Total	1				0		0.8000	0.7208	

Reagents:

40L4DNP_00015	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

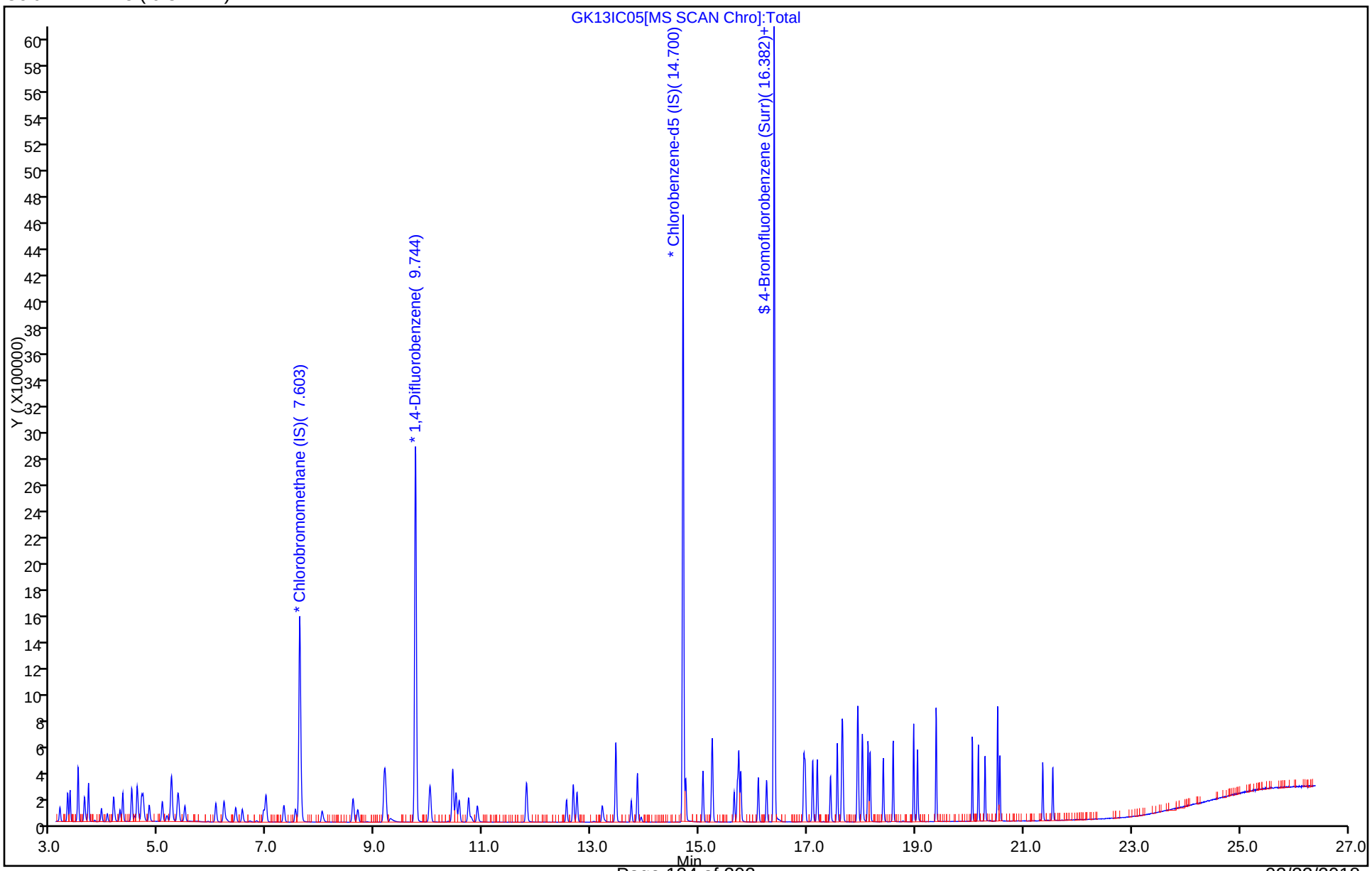
Report Date: 15-Nov-2017 15:40:56 Chrom Revision: 2.2 13-Nov-2017 17:19:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC05.D

Injection Date:	13-Nov-2017 19:05:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	IC L5			Worklist Smp#:	7
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC06.D
Lims ID: IC L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 13-Nov-2017 19:47:30 ALS Bottle#: 4 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006586-008
Misc. Info.: 123606
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 15-Nov-2017 15:40:58 Calib Date: 13-Nov-2017 22:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: tajh Date: 14-Nov-2017 09:39:31

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.609	7.613	-0.004	96	451487	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.750	9.753	-0.003	95	2528068	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.700	14.703	-0.003	88	2529945	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.388	16.389	-0.001	94	1906447	4.00	4.04	
6 Chlorodifluoromethane	67	3.306	3.306	0.000	97	47584	1.00	1.05	
7 Propene	41	3.311	3.312	-0.001	98	146316	1.00	1.08	
8 Dichlorodifluoromethane	85	3.354	3.354	0.000	100	482581	1.00	1.07	
9 Chloromethane	52	3.494	3.492	0.002	100	54897	1.00	1.13	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.505	3.507	-0.002	99	294387	1.00	1.04	
11 Vinyl chloride	62	3.624	3.625	-0.001	99	182777	1.00	1.03	
13 Butane	43	3.694	3.696	-0.002	93	277958	1.00	1.09	
12 Butadiene	54	3.694	3.696	-0.002	95	143956	1.00	1.10	
15 Bromomethane	94	3.937	3.937	0.000	99	167329	1.00	1.07	
16 Chloroethane	64	4.044	4.048	-0.004	98	94779	1.00	1.08	
17 Ethanol	31	4.168	4.184	-0.016	96	432503	5.01	5.49	
18 Vinyl bromide	106	4.282	4.281	0.001	99	163902	1.00	1.07	
19 2-Methylbutane	43	4.330	4.332	-0.002	90	211585	1.00	1.05	
20 Trichlorofluoromethane	101	4.497	4.500	-0.003	99	495271	1.00	1.06	
21 Acrolein	56	4.503	4.509	-0.006	91	38182	1.00	1.02	
22 Acetonitrile	40	4.551	4.551	0.000	99	64966	1.00	1.16	
23 Acetone	58	4.594	4.606	-0.012	98	232757	3.01	3.32	
24 Pentane	72	4.681	4.682	-0.001	98	33503	1.00	1.08	
25 Isopropyl alcohol	45	4.713	4.739	-0.026	93	642804	3.01	3.31	
26 Ethyl ether	31	4.816	4.827	-0.011	96	171952	1.00	1.09	
27 1,1-Dichloroethene	96	5.064	5.066	-0.002	96	165163	1.00	1.04	
28 Acrylonitrile	53	5.150	5.158	-0.008	95	108483	1.00	1.10	
30 1,1,2-Trichloro-1,2,2-trif	101	5.231	5.233	-0.002	96	351206	1.00	1.03	
29 2-Methyl-2-propanol	59	5.215	5.261	-0.046	95	285790	1.00	1.11	
31 Methylene Chloride	84	5.349	5.353	-0.004	96	161108	1.00	1.00	
32 3-Chloro-1-propene	39	5.371	5.371	0.000	97	163444	1.00	1.09	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.484	5.485	-0.001	99	464484	1.00	1.07	
34 trans-1,2-Dichloroethene	96	6.056	6.061	-0.005	97	163483	1.00	1.02	
35 Methyl tert-butyl ether	73	6.201	6.218	-0.017	97	425380	1.00	1.07	
36 1,1-Dichloroethane	63	6.422	6.427	-0.005	100	323009	1.00	1.01	
37 Vinyl acetate	43	6.547	6.553	-0.007	100	420259	1.00	1.09	
39 2-Butanone (MEK)	72	6.940	6.954	-0.014	100	71610	1.00	1.02	
40 Hexane	56	6.983	6.984	-0.001	91	140488	1.00	1.05	
41 cis-1,2-Dichloroethene	96	7.318	7.319	-0.001	96	169371	1.00	1.01	
42 Ethyl acetate	43	7.523	7.536	-0.013	99	332371	1.00	1.09	
43 Chloroform	83	7.636	7.639	-0.003	97	374012	1.00	1.01	
44 Tetrahydrofuran	42	8.013	8.034	-0.021	94	171415	1.00	1.06	
45 1,1,1-Trichloroethane	97	8.596	8.598	-0.002	95	395534	1.00	1.02	
46 1,2-Dichloroethane	62	8.682	8.686	-0.004	98	259566	1.00	1.02	
47 Benzene	78	9.167	9.173	-0.006	97	501630	1.00	1.01	
48 Cyclohexane	69	9.173	9.180	-0.007	96	84494	1.00	1.07	
49 Carbon tetrachloride	117	9.200	9.203	-0.003	97	398226	1.00	1.04	
50 n-Butanol	31	9.253	9.315	-0.062	86	59892	1.00	1.09	
53 Isooctane	57	10.014	10.019	-0.005	98	865496	1.00	1.06	
54 n-Heptane	71	10.434	10.437	-0.003	92	185205	1.00	1.05	
55 1,2-Dichloropropane	63	10.445	10.447	-0.002	92	194107	1.00	1.05	
56 Trichloroethene	130	10.499	10.503	-0.004	96	233492	1.00	1.00	
57 Dibromomethane	93	10.558	10.560	-0.002	91	210713	1.00	1.00	
58 Dichlorobromomethane	83	10.731	10.735	-0.004	99	386993	1.00	1.07	
59 1,4-Dioxane	88	10.774	10.795	-0.021	92	69922	1.00	1.08	
60 Methyl methacrylate	41	10.887	10.901	-0.014	93	199881	1.00	1.12	
62 4-Methyl-2-pentanone (MIBK	43	11.788	11.805	-0.017	96	340244	1.00	1.13	
63 cis-1,3-Dichloropropene	75	11.809	11.811	-0.002	98	297640	1.00	1.05	
64 trans-1,3-Dichloropropene	75	12.543	12.548	-0.005	98	277012	1.00	1.06	
65 Toluene	91	12.667	12.671	-0.004	93	572881	1.00	1.02	
66 1,1,2-Trichloroethane	83	12.737	12.741	-0.004	99	173621	1.00	1.03	
68 2-Hexanone	58	13.195	13.214	-0.019	93	172057	1.00	1.10	
70 Chlorodibromomethane	129	13.454	13.455	-0.001	97	362847	1.00	1.05	
71 n-Octane	85	13.460	13.461	-0.001	93	205487	1.00	1.04	
72 Ethylene Dibromide	107	13.745	13.745	0.000	98	322986	1.00	1.07	
73 Tetrachloroethene	129	13.853	13.857	-0.004	95	211272	1.00	0.9739	
74 Chlorobenzene	112	14.748	14.752	-0.004	92	458051	1.00	1.02	
75 Ethylbenzene	91	15.066	15.070	-0.004	99	753463	1.00	1.04	
77 m-Xylene & p-Xylene	91	15.239	15.242	-0.003	0	1177991	2.00	2.15	
79 Bromoform	173	15.649	15.650	-0.001	96	327887	1.00	0.9893	
80 Styrene	104	15.708	15.710	-0.002	99	424228	1.00	1.11	
81 n-Nonane	57	15.730	15.732	-0.002	92	409599	1.00	1.10	
82 o-Xylene	91	15.767	15.771	-0.004	98	611045	1.00	1.05	
83 1,1,2,2-Tetrachloroethane	83	16.091	16.096	-0.005	99	439123	1.00	1.11	
84 1,2,3-Trichloropropane	110	16.247	16.250	-0.003	98	134211	1.00	1.08	
85 Isopropylbenzene	105	16.377	16.381	-0.004	98	854663	1.00	1.06	
86 N-Propylbenzene	120	16.938	16.938	0.000	99	229365	1.00	1.10	
87 2-Chlorotoluene	126	16.959	16.958	0.001	97	211810	1.00	1.07	
88 4-Ethyltoluene	105	17.099	17.102	-0.003	99	845855	1.00	1.12	
89 1,3,5-Trimethylbenzene	120	17.186	17.187	-0.001	92	331007	1.00	1.08	
90 Alpha Methyl Styrene	118	17.428	17.431	-0.003	88	323279	1.00	1.14	
91 n-Decane	57	17.552	17.556	-0.004	91	497726	1.00	1.13	
92 tert-Butylbenzene	119	17.639	17.645	-0.006	92	753895	1.00	1.08	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.655	17.659	-0.004	96	721428	1.00	1.10	
94 1,3-Dichlorobenzene	146	17.924	17.930	-0.006	98	501608	1.00	1.04	
95 sec-Butylbenzene	105	17.935	17.939	-0.004	98	1050236	1.00	1.12	
96 Benzyl chloride	91	18.011	18.014	-0.003	98	618812	1.00	1.08	
97 1,4-Dichlorobenzene	146	18.021	18.026	-0.005	93	498785	1.00	1.05	
98 4-Isopropyltoluene	119	18.124	18.124	0.000	96	874472	1.00	1.12	
99 1,2,3-Trimethylbenzene	105	18.162	18.164	-0.002	98	773629	1.00	1.11	
100 1,2-Dichlorobenzene	146	18.404	18.407	-0.003	94	479951	1.00	1.07	
103 n-Butylbenzene	91	18.588	18.588	0.000	99	844489	1.00	1.13	
105 Undecane	57	18.965	18.967	-0.002	96	526148	1.00	1.18	
106 1,2-Dibromo-3-Chloropropan	157	19.041	19.040	0.001	98	352487	1.00	1.26	
108 1,2,4,5-Tetramethylbenzene	119	19.380	19.384	-0.004	97	1089561	1.00	1.16	
111 Dodecane	57	20.049	20.050	-0.001	96	516869	1.00	1.29	
112 1,2,4-Trichlorobenzene	180	20.162	20.164	-0.002	94	426933	1.00	1.17	
113 Naphthalene	128	20.286	20.287	-0.001	99	995322	1.00	1.18	
114 Hexachlorobutadiene	225	20.524	20.521	0.003	95	408883	1.00	1.16	
115 1,2,3-Trichlorobenzene	180	20.561	20.562	-0.001	95	413121	1.00	1.22	
117 2-Methylnaphthalene	142	21.354	21.354	0.000	100	1166334	2.30	3.11	
118 1-Methylnaphthalene	142	21.543	21.542	0.001	100	1092194	2.30	3.05	
S 119 Xylenes, Total	100				0		3.00	3.20	
S 120 1,2-Dichloroethene, Total	1				0		2.00	2.03	

Reagents:

40L5DNP_00015	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

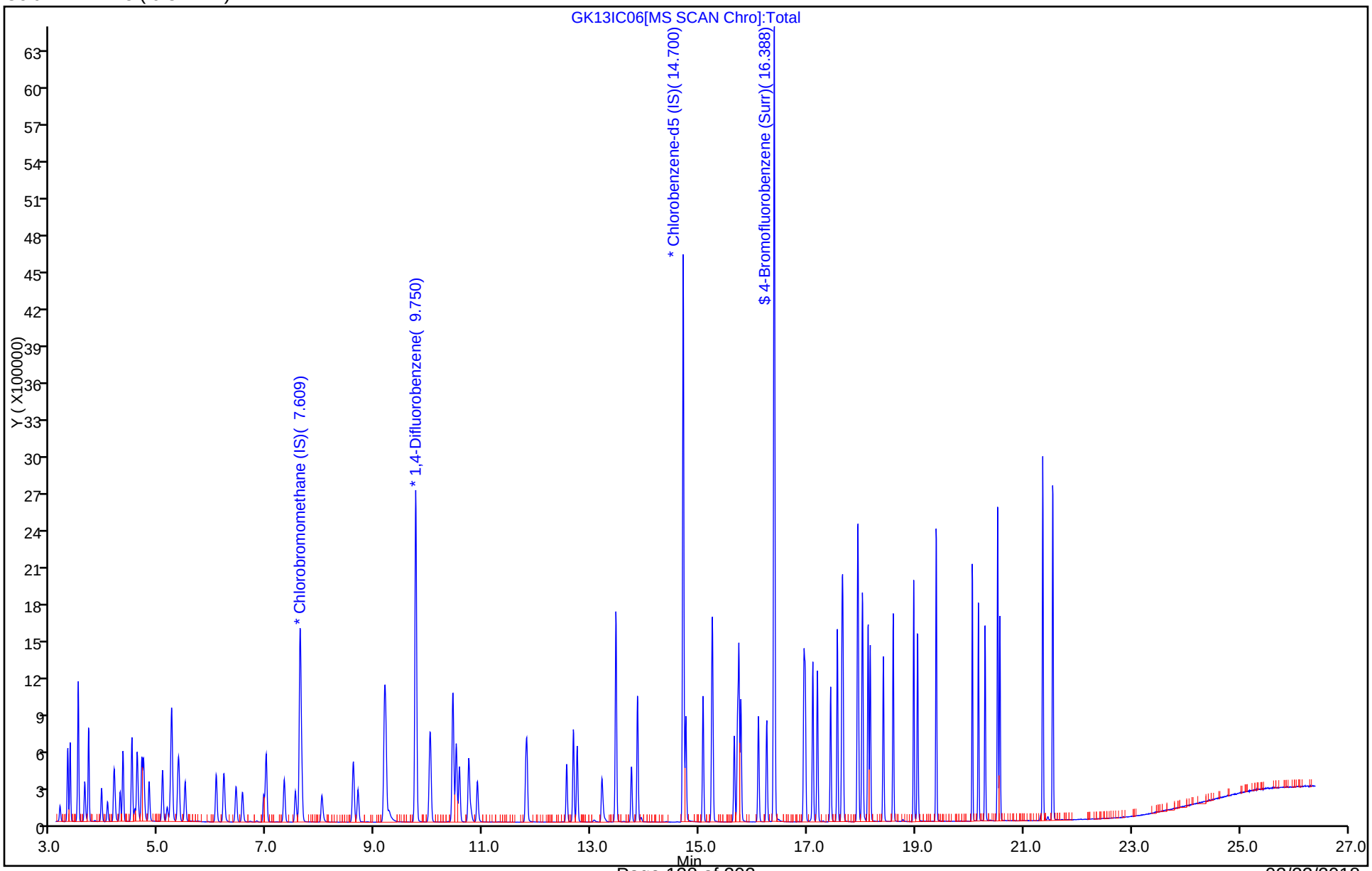
Report Date: 15-Nov-2017 15:40:59 Chrom Revision: 2.2 13-Nov-2017 17:19:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC06.D

Injection Date:	13-Nov-2017 19:47:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	IC L6			Worklist Smp#:	8
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC07.D
Lims ID: ICIS L7
Client ID:
Sample Type: ICIS Calib Level: 7
Inject. Date: 13-Nov-2017 20:29:30 ALS Bottle#: 5 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006586-009
Misc. Info.: 123605
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 15-Nov-2017 15:41:02 Calib Date: 13-Nov-2017 22:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: tajh Date: 14-Nov-2017 09:42:20

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.620	7.613	0.007	95	485567	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.760	9.753	0.007	95	2785396	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.705	14.703	0.002	87	2750264	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.388	16.389	-0.001	95	2091104	4.00	4.07	
6 Chlorodifluoromethane	67	3.306	3.306	0.000	97	91604	2.00	1.89	
7 Propene	41	3.316	3.312	0.004	99	284706	2.00	1.96	
8 Dichlorodifluoromethane	85	3.354	3.354	0.000	100	948236	2.00	1.96	
9 Chloromethane	52	3.494	3.492	0.002	100	103444	2.00	1.97	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.511	3.507	0.004	94	595818	2.00	1.95	
11 Vinyl chloride	62	3.629	3.625	0.004	99	365751	2.00	1.92	
12 Butadiene	54	3.699	3.696	0.003	93	282979	2.00	2.01	
13 Butane	43	3.699	3.696	0.003	92	536349	2.00	1.96	
15 Bromomethane	94	3.942	3.937	0.005	98	339947	2.00	2.01	
16 Chloroethane	64	4.055	4.048	0.007	100	188279	2.00	1.99	
17 Ethanol	31	4.185	4.184	0.001	96	780582	9.99	9.21	
18 Vinyl bromide	106	4.287	4.281	0.006	99	329759	2.00	2.00	
19 2-Methylbutane	43	4.341	4.332	0.009	91	412500	2.00	1.91	
20 Trichlorofluoromethane	101	4.508	4.500	0.008	99	973088	2.00	1.94	
21 Acrolein	56	4.514	4.509	0.005	92	79056	2.00	1.96	
22 Acetonitrile	40	4.562	4.551	0.011	99	118573	2.00	1.96	
23 Acetone	58	4.605	4.606	-0.001	98	412013	5.99	5.47	
24 Pentane	72	4.692	4.682	0.010	98	65649	2.00	1.98	
25 Isopropyl alcohol	45	4.729	4.739	-0.010	95	1169994	5.99	5.59	
26 Ethyl ether	31	4.821	4.827	-0.006	96	323714	2.00	1.91	
27 1,1-Dichloroethene	96	5.074	5.066	0.008	96	330185	2.00	1.93	
28 Acrylonitrile	53	5.166	5.158	0.008	94	200830	2.00	1.89	
30 1,1,2-Trichloro-1,2,2-trif	101	5.242	5.233	0.009	96	709434	2.00	1.94	
29 2-Methyl-2-propanol	59	5.231	5.261	-0.030	95	522279	2.00	1.89	
31 Methylene Chloride	84	5.360	5.353	0.007	96	305525	2.00	1.77	
32 3-Chloro-1-propene	39	5.382	5.371	0.011	97	307300	2.00	1.91	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.495	5.485	0.010	99	922581	2.00	1.98	
34 trans-1,2-Dichloroethene	96	6.072	6.061	0.011	97	334149	2.00	1.93	
35 Methyl tert-butyl ether	73	6.207	6.218	-0.011	97	784526	2.00	1.84	
36 1,1-Dichloroethane	63	6.439	6.427	0.012	100	645687	2.00	1.88	
37 Vinyl acetate	43	6.557	6.553	0.004	100	775973	2.00	1.87	
39 2-Butanone (MEK)	72	6.946	6.954	-0.008	100	128390	2.00	1.70	
40 Hexane	56	6.989	6.984	0.005	91	283313	2.00	1.97	
41 cis-1,2-Dichloroethene	96	7.328	7.319	0.009	96	347062	2.00	1.93	
42 Ethyl acetate	43	7.533	7.536	-0.003	99	598383	2.00	1.82	
43 Chloroform	83	7.647	7.639	0.008	96	754349	2.00	1.90	
44 Tetrahydrofuran	42	8.019	8.034	-0.015	94	310039	2.00	1.79	
45 1,1,1-Trichloroethane	97	8.606	8.598	0.008	95	800987	2.00	1.92	
46 1,2-Dichloroethane	62	8.693	8.686	0.007	98	520510	2.00	1.86	
47 Benzene	78	9.178	9.173	0.005	97	1024154	2.00	1.87	
48 Cyclohexane	69	9.189	9.180	0.009	96	170517	2.00	1.96	
49 Carbon tetrachloride	117	9.210	9.203	0.007	98	826704	2.00	1.95	
50 n-Butanol	31	9.248	9.315	-0.067	91	116059	2.00	1.92	
53 Isooctane	57	10.025	10.019	0.006	99	1743031	2.00	1.94	
54 n-Heptane	71	10.440	10.437	0.003	91	380779	2.00	1.95	
55 1,2-Dichloropropane	63	10.451	10.447	0.004	89	385846	2.00	1.90	
56 Trichloroethene	130	10.510	10.503	0.007	96	498989	2.00	1.94	
57 Dibromomethane	93	10.564	10.560	0.004	94	431534	2.00	1.86	
58 Dichlorobromomethane	83	10.742	10.735	0.007	99	799522	2.00	2.01	
59 1,4-Dioxane	88	10.774	10.795	-0.021	94	130937	2.00	1.84	
60 Methyl methacrylate	41	10.898	10.901	-0.003	94	367336	2.00	1.86	
62 4-Methyl-2-pentanone (MIBK	43	11.788	11.805	-0.017	96	603705	2.00	1.82	
63 cis-1,3-Dichloropropene	75	11.815	11.811	0.004	97	623039	2.00	2.00	
64 trans-1,3-Dichloropropene	75	12.548	12.548	0.000	98	566136	2.00	1.99	
65 Toluene	91	12.672	12.671	0.001	94	1165314	2.00	1.91	
66 1,1,2-Trichloroethane	83	12.742	12.741	0.001	99	351168	2.00	1.92	
68 2-Hexanone	58	13.195	13.214	-0.019	93	318812	2.00	1.87	
70 Chlorodibromomethane	129	13.454	13.455	-0.001	97	777247	2.00	2.06	
71 n-Octane	85	13.460	13.461	-0.001	92	422950	2.00	1.98	
72 Ethylene Dibromide	107	13.745	13.745	0.000	98	661871	2.00	2.01	
73 Tetrachloroethene	129	13.859	13.857	0.002	96	437875	2.00	1.86	
74 Chlorobenzene	112	14.754	14.752	0.002	92	922752	2.00	1.88	
75 Ethylbenzene	91	15.072	15.070	0.002	98	1486579	2.00	1.90	
77 m-Xylene & p-Xylene	91	15.239	15.242	-0.003	0	2272968	3.99	3.82	
79 Bromoform	173	15.649	15.650	-0.001	96	736506	2.00	2.04	
80 Styrene	104	15.708	15.710	-0.002	99	846974	2.00	2.04	
81 n-Nonane	57	15.730	15.732	-0.002	91	811483	2.00	2.00	
82 o-Xylene	91	15.767	15.771	-0.004	98	1163490	2.00	1.84	
83 1,1,2,2-Tetrachloroethane	83	16.096	16.096	0.000	99	818045	2.00	1.90	
84 1,2,3-Trichloropropane	110	16.247	16.250	-0.003	98	249161	2.00	1.85	
85 Isopropylbenzene	105	16.377	16.381	-0.004	98	1624262	2.00	1.86	
86 N-Propylbenzene	120	16.938	16.938	0.000	99	429742	2.00	1.90	
87 2-Chlorotoluene	126	16.959	16.958	0.001	97	421025	2.00	1.96	
88 4-Ethyltoluene	105	17.099	17.102	-0.003	99	1560565	2.00	1.90	
89 1,3,5-Trimethylbenzene	120	17.186	17.187	-0.001	92	622915	2.00	1.86	
90 Alpha Methyl Styrene	118	17.428	17.431	-0.003	88	640010	2.00	2.07	
91 n-Decane	57	17.552	17.556	-0.004	91	949035	2.00	1.98	
92 tert-Butylbenzene	119	17.644	17.645	-0.001	93	1412476	2.00	1.87	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.660	17.659	0.001	96	1335737	2.00	1.87	
94 1,3-Dichlorobenzene	146	17.930	17.930	0.000	98	974372	2.00	1.87	
95 sec-Butylbenzene	105	17.941	17.939	0.002	98	1943696	2.00	1.91	
96 Benzyl chloride	91	18.011	18.014	-0.003	98	1220157	2.00	1.97	
97 1,4-Dichlorobenzene	146	18.027	18.026	0.001	95	974506	2.00	1.88	
98 4-Isopropyltoluene	119	18.124	18.124	0.000	97	1600192	2.00	1.89	
99 1,2,3-Trimethylbenzene	105	18.162	18.164	-0.002	97	1418029	2.00	1.87	
100 1,2-Dichlorobenzene	146	18.404	18.407	-0.003	95	900341	2.00	1.84	
103 n-Butylbenzene	91	18.588	18.588	0.000	99	1524209	2.00	1.87	
105 Undecane	57	18.965	18.967	-0.002	96	933449	2.00	1.93	
106 1,2-Dibromo-3-Chloropropan	157	19.041	19.040	0.001	99	672068	2.00	2.22	
108 1,2,4,5-Tetramethylbenzene	119	19.386	19.384	0.002	97	1918393	2.00	1.87	
111 Dodecane	57	20.049	20.050	-0.001	97	876620	2.00	2.01	
112 1,2,4-Trichlorobenzene	180	20.168	20.164	0.004	94	761477	2.00	1.92	
113 Naphthalene	128	20.286	20.287	-0.001	99	1704351	2.00	1.86	
114 Hexachlorobutadiene	225	20.524	20.521	0.003	96	763125	2.00	2.00	
115 1,2,3-Trichlorobenzene	180	20.561	20.562	-0.001	95	703409	2.00	1.91	
117 2-Methylnaphthalene	142	21.354	21.354	0.000	100	1938623	4.59	4.75	
118 1-Methylnaphthalene	142	21.543	21.542	0.001	100	1786735	4.59	4.58	
S 119 Xylenes, Total	100				0		5.99	5.66	
S 120 1,2-Dichloroethene, Total	1				0		3.99	3.86	

Reagents:

40L6DNP_00016	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

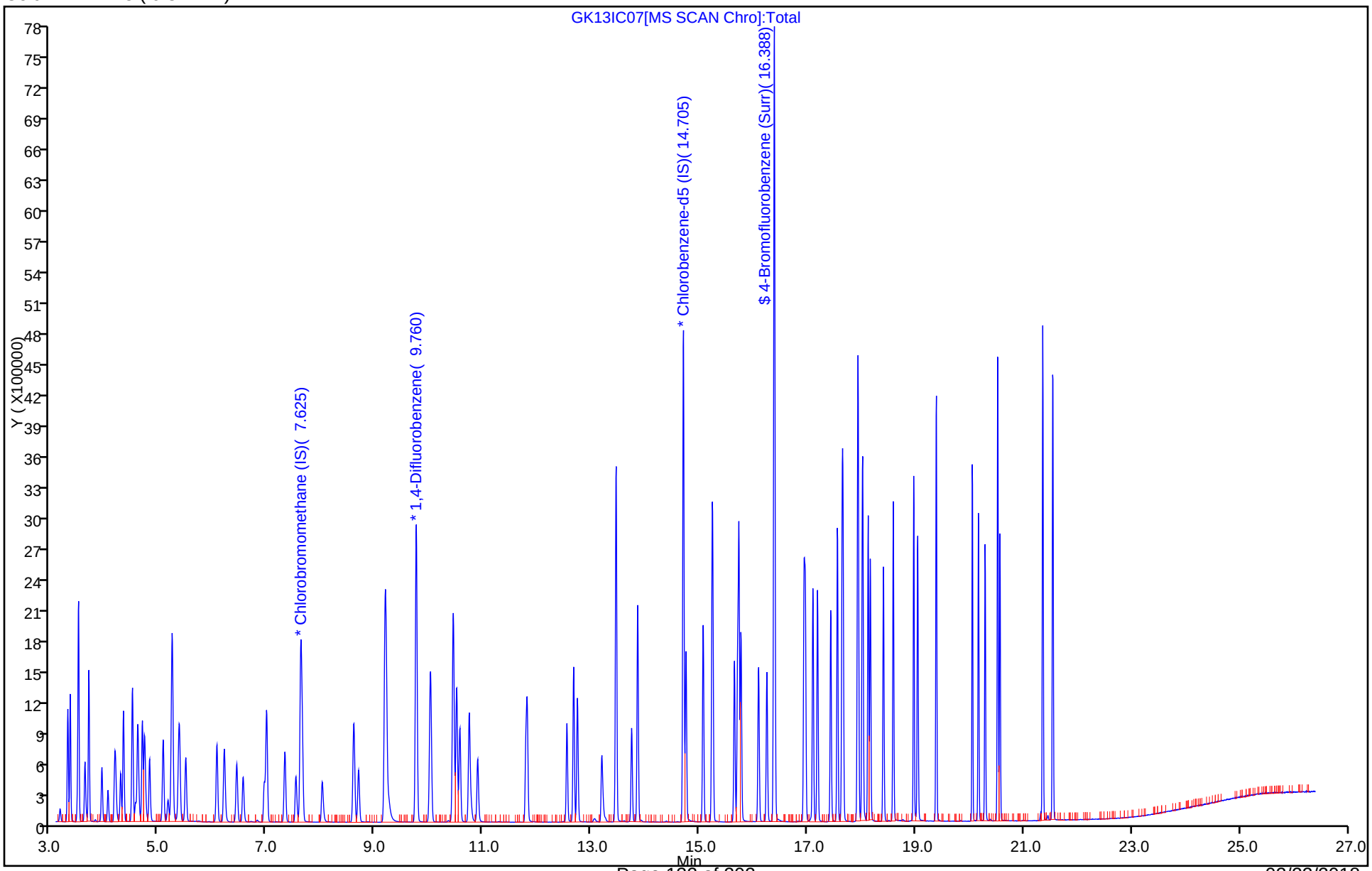
Report Date: 15-Nov-2017 15:41:02 Chrom Revision: 2.2 13-Nov-2017 17:19:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC07.D

Injection Date:	13-Nov-2017 20:29:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	ICIS L7			Worklist Smp#:	9
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC08.D
Lims ID: IC L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 13-Nov-2017 21:11:30 ALS Bottle#: 6 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006586-010
Misc. Info.: 123604
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 15-Nov-2017 15:41:05 Calib Date: 13-Nov-2017 22:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: tajh Date: 14-Nov-2017 14:36:58

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.614	7.613	0.001	94	520239	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.755	9.753	0.002	95	3018309	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.705	14.703	0.002	87	3060811	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.393	16.389	0.004	97	2287406	4.00	4.01	
6 Chlorodifluoromethane	67	3.300	3.306	-0.006	97	188886	4.00	3.63	
7 Propene	41	3.306	3.312	-0.006	99	567180	4.00	3.64	
8 Dichlorodifluoromethane	85	3.349	3.354	-0.005	100	1930222	4.00	3.72	
9 Chloromethane	52	3.484	3.492	-0.008	100	209700	4.00	3.73	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.500	3.507	-0.007	93	1268393	4.00	3.87	
11 Vinyl chloride	62	3.618	3.625	-0.007	99	742706	4.00	3.64	
13 Butane	43	3.689	3.696	-0.007	91	1071781	4.00	3.66	
12 Butadiene	54	3.689	3.696	-0.007	92	572852	4.00	3.79	
15 Bromomethane	94	3.931	3.937	-0.006	99	697972	4.00	3.86	
16 Chloroethane	64	4.044	4.048	-0.004	100	385220	4.00	3.81	
17 Ethanol	31	4.174	4.184	-0.010	96	1771762	20.0	19.5	
18 Vinyl bromide	106	4.276	4.281	-0.005	99	678777	4.00	3.84	
19 2-Methylbutane	43	4.325	4.332	-0.007	91	823604	4.00	3.55	
20 Trichlorofluoromethane	101	4.492	4.500	-0.008	99	2014322	4.00	3.75	
21 Acrolein	56	4.492	4.509	-0.017	90	177634	4.00	4.10	
22 Acetonitrile	40	4.551	4.551	0.000	99	277041	4.00	4.28	
23 Acetone	58	4.589	4.606	-0.017	98	944699	12.0	11.7	
24 Pentane	72	4.675	4.682	-0.007	98	138163	4.00	3.88	
25 Isopropyl alcohol	45	4.719	4.739	-0.020	92	2623528	12.0	11.7	
26 Ethyl ether	31	4.805	4.827	-0.022	96	694797	4.00	3.82	
27 1,1-Dichloroethene	96	5.064	5.066	-0.002	97	688255	4.00	3.76	
28 Acrylonitrile	53	5.150	5.158	-0.008	94	464689	4.00	4.07	
30 1,1,2-Trichloro-1,2,2-trif	101	5.225	5.233	-0.008	97	1475868	4.00	3.76	
29 2-Methyl-2-propanol	59	5.209	5.261	-0.052	94	1181182	4.00	3.98	
31 Methylene Chloride	84	5.349	5.353	-0.004	96	616498	4.00	3.33	
32 3-Chloro-1-propene	39	5.366	5.371	-0.005	98	632648	4.00	3.67	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.479	5.485	-0.006	99	1912166	4.00	3.84	
34 trans-1,2-Dichloroethene	96	6.056	6.061	-0.005	97	709568	4.00	3.83	
35 Methyl tert-butyl ether	73	6.185	6.218	-0.033	96	1888738	4.00	4.14	
36 1,1-Dichloroethane	63	6.428	6.427	0.001	100	1375802	4.00	3.73	
37 Vinyl acetate	43	6.541	6.553	-0.012	100	1884906	4.00	4.24	
39 2-Butanone (MEK)	72	6.929	6.954	-0.025	100	327700	4.00	4.06	
40 Hexane	56	6.978	6.984	-0.006	91	591020	4.00	3.84	
41 cis-1,2-Dichloroethene	96	7.318	7.319	-0.001	95	747816	4.00	3.88	
42 Ethyl acetate	43	7.517	7.536	-0.019	99	1517621	4.00	4.31	
43 Chloroform	83	7.641	7.639	0.002	97	1608175	4.00	3.79	
44 Tetrahydrofuran	42	8.002	8.034	-0.032	93	768573	4.00	4.14	
45 1,1,1-Trichloroethane	97	8.596	8.598	-0.002	95	1716664	4.00	3.84	
46 1,2-Dichloroethane	62	8.687	8.686	0.001	98	1114126	4.00	3.67	
47 Benzene	78	9.173	9.173	0.000	97	2157425	4.00	3.63	
48 Cyclohexane	69	9.178	9.180	-0.002	96	357392	4.00	3.79	
49 Carbon tetrachloride	117	9.200	9.203	-0.003	98	1801251	4.00	3.92	
50 n-Butanol	31	9.227	9.315	-0.088	67	250710	4.00	3.83	
53 Isooctane	57	10.014	10.019	-0.005	99	3658581	4.00	3.75	
54 n-Heptane	71	10.434	10.437	-0.003	90	806181	4.00	3.81	
55 1,2-Dichloropropane	63	10.445	10.447	-0.002	90	838597	4.00	3.80	
56 Trichloroethene	130	10.505	10.503	0.002	97	1042788	4.00	3.75	
57 Dibromomethane	93	10.558	10.560	-0.002	94	924791	4.00	3.67	
58 Dichlorobromomethane	83	10.736	10.735	0.001	99	1723165	4.00	3.99	
59 1,4-Dioxane	88	10.763	10.795	-0.032	89	326321	4.00	4.23	
60 Methyl methacrylate	41	10.887	10.901	-0.014	95	948044	4.00	4.44	
62 4-Methyl-2-pentanone (MIBK	43	11.783	11.805	-0.022	97	1485711	4.00	4.12	
63 cis-1,3-Dichloropropene	75	11.810	11.811	-0.001	97	1332908	4.00	3.94	
64 trans-1,3-Dichloropropene	75	12.548	12.548	0.000	98	1226943	4.00	3.87	
65 Toluene	91	12.672	12.671	0.001	94	2568835	4.00	3.78	
66 1,1,2-Trichloroethane	83	12.742	12.741	0.001	99	765500	4.00	3.75	
68 2-Hexanone	58	13.190	13.214	-0.024	94	765512	4.00	4.04	
70 Chlorodibromomethane	129	13.454	13.455	-0.001	98	1741361	4.00	4.15	
71 n-Octane	85	13.460	13.461	-0.001	91	927681	4.00	3.90	
72 Ethylene Dibromide	107	13.745	13.745	0.000	98	1438737	4.00	3.93	
73 Tetrachloroethene	129	13.859	13.857	0.002	97	961139	4.00	3.66	
74 Chlorobenzene	112	14.754	14.752	0.002	93	2038993	4.00	3.74	
75 Ethylbenzene	91	15.072	15.070	0.002	98	3369711	4.00	3.86	
77 m-Xylene & p-Xylene	91	15.244	15.242	0.002	0	5242609	8.00	7.92	
79 Bromoform	173	15.649	15.650	-0.001	96	1779551	4.00	4.44	
80 Styrene	104	15.708	15.710	-0.002	99	1986886	4.00	4.30	
81 n-Nonane	57	15.730	15.732	-0.002	90	1720525	4.00	3.81	
82 o-Xylene	91	15.773	15.771	0.002	98	2723409	4.00	3.87	
83 1,1,2,2-Tetrachloroethane	83	16.096	16.096	0.000	99	1933268	4.00	4.03	
84 1,2,3-Trichloropropane	110	16.253	16.250	0.003	98	603248	4.00	4.02	
85 Isopropylbenzene	105	16.382	16.381	0.001	96	3834410	4.00	3.94	
86 N-Propylbenzene	120	16.938	16.938	0.000	99	1043989	4.00	4.14	
87 2-Chlorotoluene	126	16.965	16.958	0.007	95	951412	4.00	3.98	
88 4-Ethyltoluene	105	17.105	17.102	0.003	99	3781660	4.00	4.13	
89 1,3,5-Trimethylbenzene	120	17.191	17.187	0.004	92	1539893	4.00	4.14	
90 Alpha Methyl Styrene	118	17.434	17.431	0.003	89	1605753	4.00	4.68	
91 n-Decane	57	17.558	17.556	0.002	92	2118306	4.00	3.97	
92 tert-Butylbenzene	119	17.644	17.645	-0.001	93	3468593	4.00	4.13	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.660	17.659	0.001	96	3286687	4.00	4.13	
94 1,3-Dichlorobenzene	146	17.930	17.930	0.000	99	2278192	4.00	3.92	
95 sec-Butylbenzene	105	17.941	17.939	0.002	98	4744834	4.00	4.19	
96 Benzyl chloride	91	18.016	18.014	0.002	98	3030954	4.00	4.39	
97 1,4-Dichlorobenzene	146	18.027	18.026	0.001	95	2236477	4.00	3.88	
98 4-Isopropyltoluene	119	18.124	18.124	0.000	97	4063563	4.00	4.31	
99 1,2,3-Trimethylbenzene	105	18.167	18.164	0.003	98	3501681	4.00	4.15	
100 1,2-Dichlorobenzene	146	18.410	18.407	0.003	99	2144847	4.00	3.94	
103 n-Butylbenzene	91	18.588	18.588	0.000	99	3801946	4.00	4.20	
105 Undecane	57	18.965	18.967	-0.002	95	2315826	4.00	4.30	
106 1,2-Dibromo-3-Chloropropan	157	19.041	19.040	0.001	99	1848671	4.00	5.48	
108 1,2,4,5-Tetramethylbenzene	119	19.386	19.384	0.002	97	5103471	4.00	4.47	
111 Dodecane	57	20.049	20.050	-0.001	97	1919805	4.00	3.95	
112 1,2,4-Trichlorobenzene	180	20.168	20.164	0.004	94	1945001	4.00	4.41	
113 Naphthalene	128	20.286	20.287	-0.001	99	4275324	4.00	4.19	
114 Hexachlorobutadiene	225	20.524	20.521	0.003	95	1971022	4.00	4.63	
115 1,2,3-Trichlorobenzene	180	20.561	20.562	-0.001	96	1758932	4.00	4.29	
117 2-Methylnaphthalene	142	21.354	21.354	0.000	99	3119599	9.20	6.88	
118 1-Methylnaphthalene	142	21.543	21.542	0.001	100	2791839	9.20	6.44	
S 119 Xylenes, Total	100				0		12.0	11.8	
S 120 1,2-Dichloroethene, Total	1				0		8.00	7.71	

Reagents:

40L7DNP_00015	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

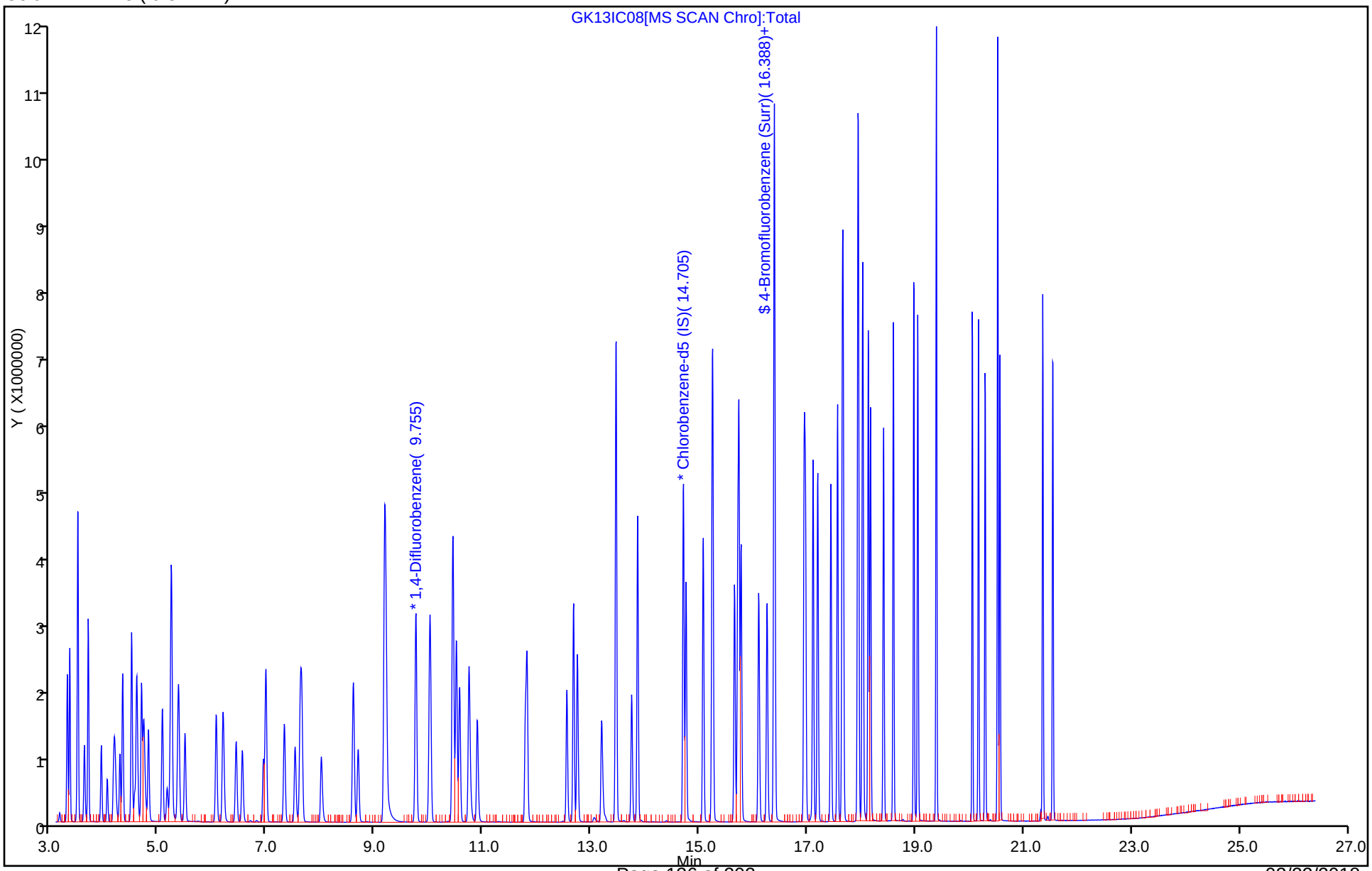
Report Date: 15-Nov-2017 15:41:05 Chrom Revision: 2.2 13-Nov-2017 17:19:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC08.D

Injection Date:	13-Nov-2017 21:11:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	IC L8			Worklist Smp#:	10
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC09.D
Lims ID: IC L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 13-Nov-2017 21:54:30 ALS Bottle#: 7 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006586-011
Misc. Info.: 123603
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 15-Nov-2017 15:41:08 Calib Date: 13-Nov-2017 22:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: tajh Date: 14-Nov-2017 14:04:43

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.630	7.613	0.017	92	561201	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.766	9.753	0.013	95	3256474	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.711	14.703	0.008	86	3217884	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.398	16.389	0.009	94	2389282	4.00	3.98	
6 Chlorodifluoromethane	67	3.300	3.306	-0.006	96	380435	8.00	6.78	
7 Propene	41	3.311	3.312	-0.001	99	1128877	8.00	6.72	
8 Dichlorodifluoromethane	85	3.354	3.354	0.000	100	3924687	8.00	7.01	
9 Chloromethane	52	3.489	3.492	-0.003	99	417131	8.00	6.89	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.505	3.507	-0.002	93	2667613	8.00	7.55	
11 Vinyl chloride	62	3.624	3.625	-0.001	99	1519736	8.00	6.90	
12 Butadiene	54	3.694	3.696	-0.002	70	1152350	8.00	7.07	
13 Butane	43	3.694	3.696	-0.002	85	2120801	8.00	6.72	
15 Bromomethane	94	3.937	3.937	0.000	98	1441978	8.00	7.39	
16 Chloroethane	64	4.050	4.048	0.002	100	800409	8.00	7.34	
17 Ethanol	31	4.206	4.184	0.022	95	3525366	40.0	36.0	
18 Vinyl bromide	106	4.282	4.281	0.001	98	1417168	8.00	7.44	
19 2-Methylbutane	43	4.336	4.332	0.004	90	1668764	8.00	6.67	
20 Trichlorofluoromethane	101	4.503	4.500	0.003	99	4243257	8.00	7.31	
21 Acrolein	56	4.508	4.509	-0.001	91	361660	8.00	7.74	
22 Acetonitrile	40	4.568	4.551	0.017	99	569467	8.00	8.16	
23 Acetone	58	4.600	4.606	-0.006	98	1884211	24.0	21.7	
24 Pentane	72	4.686	4.682	0.004	99	292318	8.00	7.61	
25 Isopropyl alcohol	45	4.756	4.739	0.017	98	4648765	24.0	19.2	
26 Ethyl ether	31	4.816	4.827	-0.011	94	1488991	8.00	7.59	
27 1,1-Dichloroethene	96	5.069	5.066	0.003	97	1470068	8.00	7.44	
28 Acrylonitrile	53	5.166	5.158	0.008	95	981544	8.00	7.97	
30 1,1,2-Trichloro-1,2,2-trif	101	5.236	5.233	0.003	98	3134469	8.00	7.41	
29 2-Methyl-2-propanol	59	5.252	5.261	-0.009	94	2344702	8.00	7.33	
31 Methylene Chloride	84	5.366	5.353	0.013	95	1272652	8.00	6.37	
32 3-Chloro-1-propene	39	5.382	5.371	0.011	98	1342560	8.00	7.22	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.490	5.485	0.005	99	4075744	8.00	7.58	
34 trans-1,2-Dichloroethene	96	6.072	6.061	0.011	98	1510891	8.00	7.56	
35 Methyl tert-butyl ether	73	6.196	6.218	-0.022	96	4039827	8.00	8.20	
36 1,1-Dichloroethane	63	6.439	6.427	0.012	100	2893219	8.00	7.28	
37 Vinyl acetate	43	6.557	6.553	0.004	100	3992345	8.00	8.33	
39 2-Butanone (MEK)	72	6.951	6.954	-0.003	99	692427	8.00	7.95	
40 Hexane	56	6.989	6.984	0.005	93	1219314	8.00	7.34	
41 cis-1,2-Dichloroethene	96	7.334	7.319	0.015	95	1585322	8.00	7.62	
42 Ethyl acetate	43	7.533	7.536	-0.003	99	3198147	8.00	8.41	
43 Chloroform	83	7.657	7.639	0.018	98	3375902	8.00	7.37	
44 Tetrahydrofuran	42	8.013	8.034	-0.021	93	1614635	8.00	8.07	
45 1,1,1-Trichloroethane	97	8.606	8.598	0.008	95	3611490	8.00	7.49	
46 1,2-Dichloroethane	62	8.698	8.686	0.012	98	2335228	8.00	7.12	
47 Benzene	78	9.183	9.173	0.010	96	4549459	8.00	7.10	
48 Cyclohexane	69	9.183	9.180	0.003	93	747761	8.00	7.34	
49 Carbon tetrachloride	117	9.210	9.203	0.007	97	3876730	8.00	7.83	
50 n-Butanol	31	9.270	9.315	-0.045	87	533382	8.00	7.55	
53 Isooctane	57	10.025	10.019	0.006	99	7597575	8.00	7.22	
54 n-Heptane	71	10.445	10.437	0.008	89	1693244	8.00	7.42	
55 1,2-Dichloropropane	63	10.456	10.447	0.009	90	1762859	8.00	7.41	
56 Trichloroethene	130	10.510	10.503	0.007	98	2280195	8.00	7.60	
57 Dibromomethane	93	10.575	10.560	0.015	94	1970153	8.00	7.26	
58 Dichlorobromomethane	83	10.747	10.735	0.012	99	3692749	8.00	7.92	
59 1,4-Dioxane	88	10.780	10.795	-0.015	89	684344	8.00	8.22	
60 Methyl methacrylate	41	10.904	10.901	0.003	97	2033631	8.00	8.82	
62 4-Methyl-2-pentanone (MIBK	43	11.799	11.805	-0.006	95	3027959	8.00	7.79	
63 cis-1,3-Dichloropropene	75	11.820	11.811	0.009	97	2874230	8.00	7.87	
64 trans-1,3-Dichloropropene	75	12.559	12.548	0.011	98	2732765	8.00	8.21	
65 Toluene	91	12.678	12.671	0.007	94	5584757	8.00	7.81	
66 1,1,2-Trichloroethane	83	12.753	12.741	0.012	99	1664151	8.00	7.76	
68 2-Hexanone	58	13.206	13.214	-0.008	94	1608707	8.00	8.09	
70 Chlorodibromomethane	129	13.465	13.455	0.010	97	3921724	8.00	8.90	
71 n-Octane	85	13.465	13.461	0.004	88	1979286	8.00	7.91	
72 Ethylene Dibromide	107	13.756	13.745	0.011	98	3200738	8.00	8.33	
73 Tetrachloroethene	129	13.864	13.857	0.007	97	2142029	8.00	7.76	
74 Chlorobenzene	112	14.759	14.752	0.007	94	4504989	8.00	7.85	
75 Ethylbenzene	91	15.077	15.070	0.007	98	7307896	8.00	7.96	
77 m-Xylene & p-Xylene	91	15.250	15.242	0.008	0	11465455	16.0	16.5	
79 Bromoform	173	15.665	15.650	0.015	98	4174050	8.00	9.90	
80 Styrene	104	15.719	15.710	0.009	98	4529543	8.00	9.32	
81 n-Nonane	57	15.741	15.732	0.009	88	3569182	8.00	7.52	
82 o-Xylene	91	15.784	15.771	0.013	98	5958754	8.00	8.05	
83 1,1,2,2-Tetrachloroethane	83	16.107	16.096	0.011	99	4144047	8.00	8.22	
84 1,2,3-Trichloropropane	110	16.264	16.250	0.014	98	1311284	8.00	8.32	
85 Isopropylbenzene	105	16.393	16.381	0.012	96	8357827	8.00	8.17	
86 N-Propylbenzene	120	16.948	16.938	0.010	99	2361300	8.00	8.91	
87 2-Chlorotoluene	126	16.970	16.958	0.012	94	2145590	8.00	8.55	
88 4-Ethyltoluene	105	17.116	17.102	0.014	98	8315317	8.00	8.64	
89 1,3,5-Trimethylbenzene	120	17.202	17.187	0.015	93	3451667	8.00	8.82	
90 Alpha Methyl Styrene	118	17.445	17.431	0.013	89	3643686	8.00	10.1	
91 n-Decane	57	17.563	17.556	0.007	92	4396462	8.00	7.83	
92 tert-Butylbenzene	119	17.655	17.645	0.010	94	7710356	8.00	8.72	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.671	17.659	0.012	95	7239156	8.00	8.66	
94 1,3-Dichlorobenzene	146	17.941	17.930	0.011	97	5375340	8.00	8.80	
95 sec-Butylbenzene	105	17.951	17.939	0.012	98	10489103	8.00	8.80	
96 Benzyl chloride	91	18.027	18.014	0.013	99	6915532	8.00	9.52	
97 1,4-Dichlorobenzene	146	18.038	18.026	0.012	95	5228501	8.00	8.62	
98 4-Isopropyltoluene	119	18.135	18.124	0.011	96	8939626	8.00	9.02	
99 1,2,3-Trimethylbenzene	105	18.172	18.164	0.008	97	7658766	8.00	8.64	
100 1,2-Dichlorobenzene	146	18.415	18.407	0.008	96	4859952	8.00	8.49	
103 n-Butylbenzene	91	18.598	18.588	0.010	98	8078894	8.00	8.49	
105 Undecane	57	18.971	18.967	0.004	93	4454741	8.00	7.87	
106 1,2-Dibromo-3-Chloropropan	157	19.046	19.040	0.006	95	4162852	8.00	11.7	
108 1,2,4,5-Tetramethylbenzene	119	19.391	19.384	0.007	98	10094348	8.00	8.42	
111 Dodecane	57	20.054	20.050	0.004	97	2761674	8.00	5.40	
112 1,2,4-Trichlorobenzene	180	20.168	20.164	0.004	94	3265387	8.00	7.04	
113 Naphthalene	128	20.292	20.287	0.005	99	7433321	8.00	6.94	
114 Hexachlorobutadiene	225	20.524	20.521	0.003	94	3633973	8.00	8.13	
115 1,2,3-Trichlorobenzene	180	20.567	20.562	0.005	96	2601150	8.00	6.04	
117 2-Methylnaphthalene	142	21.354	21.354	0.000	99	2965322	18.4	6.22	
118 1-Methylnaphthalene	142	21.543	21.542	0.001	100	2331460	18.4	5.11	
S 119 Xylenes, Total	100				0		24.0	24.5	
S 120 1,2-Dichloroethene, Total	1				0		16.0	15.2	

Reagents:

40L8DNP_00015	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

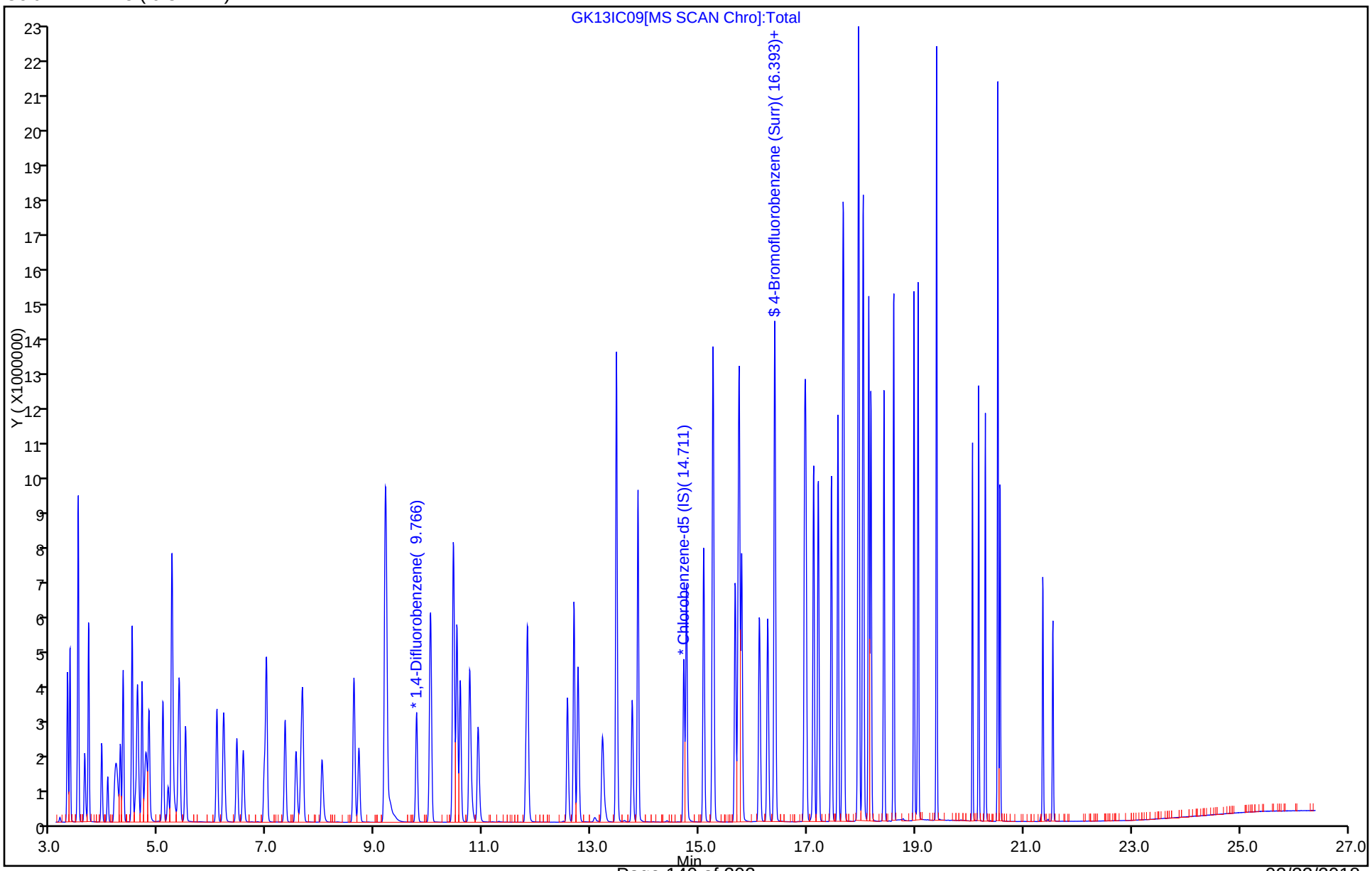
Report Date: 15-Nov-2017 15:41:09 Chrom Revision: 2.2 13-Nov-2017 17:19:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC09.D

Injection Date:	13-Nov-2017 21:54:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	IC L9			Worklist Smp#:	11
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D
Lims ID: IC L10
Client ID:
Sample Type: IC Calib Level: 10
Inject. Date: 13-Nov-2017 22:37:30 ALS Bottle#: 8 Worklist Smp#: 12
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006586-012
Misc. Info.: 123602
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub14

Method: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 15-Nov-2017 15:41:11 Calib Date: 13-Nov-2017 22:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: tajh Date: 14-Nov-2017 14:00:44

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.641	7.613	0.028	97	560730	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.777	9.753	0.024	95	3113925	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.721	14.703	0.018	87	3144665	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.409	16.389	0.020	96	2379169	4.00	4.05	
6 Chlorodifluoromethane	67	3.306	3.306	0.000	96	776367	16.0	13.8	
7 Propene	41	3.311	3.312	-0.001	99	2198206	16.0	13.1	
8 Dichlorodifluoromethane	85	3.354	3.354	0.000	99	8013096	16.0	14.3	
9 Chloromethane	52	3.495	3.492	0.002	100	827117	16.0	13.7	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.511	3.507	0.004	92	5850706	16.0	16.6	
11 Vinyl chloride	62	3.629	3.625	0.004	99	3126086	16.0	14.2	
13 Butane	43	3.699	3.696	0.003	84	4119438	16.0	13.1	
12 Butadiene	54	3.699	3.696	0.003	71	2298877	16.0	14.1	
15 Bromomethane	94	3.942	3.937	0.005	99	3004925	16.0	15.4	
16 Chloroethane	64	4.055	4.048	0.007	99	1652929	16.0	15.2	
17 Ethanol	31	4.222	4.184	0.038	95	6392242	80.0	65.3	
18 Vinyl bromide	106	4.293	4.281	0.012	99	2988838	16.0	15.7	
19 2-Methylbutane	43	4.341	4.332	0.009	89	3438323	16.0	13.8	
20 Trichlorofluoromethane	101	4.508	4.500	0.008	99	8824574	16.0	15.2	
21 Acrolein	56	4.514	4.509	0.005	91	758574	16.0	16.3	
22 Acetonitrile	40	4.578	4.551	0.027	99	1009777	16.0	14.5	
23 Acetone	58	4.611	4.606	0.005	97	3235879	48.0	37.2	
24 Pentane	72	4.692	4.682	0.010	99	607693	16.0	15.8	
25 Isopropyl alcohol	45	4.783	4.739	0.044	95	4656390	48.0	19.3	
26 Ethyl ether	31	4.821	4.827	-0.006	94	2845941	16.0	14.5	
27 1,1-Dichloroethene	96	5.080	5.066	0.014	97	3094497	16.0	15.7	
28 Acrylonitrile	53	5.182	5.158	0.024	95	1870672	16.0	15.2	
30 1,1,2-Trichloro-1,2,2-trif	101	5.247	5.233	0.014	96	6646009	16.0	15.7	
29 2-Methyl-2-propanol	59	5.285	5.261	0.024	93	5236389	16.0	16.4	
31 Methylene Chloride	84	5.371	5.353	0.018	97	2614182	16.0	13.1	
32 3-Chloro-1-propene	39	5.387	5.371	0.016	98	2712084	16.0	14.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.500	5.485	0.015	98	8619899	16.0	16.1	
34 trans-1,2-Dichloroethene	96	6.077	6.061	0.016	99	3190481	16.0	16.0	
35 Methyl tert-butyl ether	73	6.207	6.218	-0.011	96	7400547	16.0	15.0	
36 1,1-Dichloroethane	63	6.450	6.427	0.023	100	5922596	16.0	14.9	
37 Vinyl acetate	43	6.574	6.553	0.021	100	7200595	16.0	15.0	
39 2-Butanone (MEK)	72	6.967	6.954	0.013	98	1231198	16.0	14.1	
40 Hexane	56	6.994	6.984	0.010	91	2425623	16.0	14.6	
41 cis-1,2-Dichloroethene	96	7.345	7.319	0.026	94	3286404	16.0	15.8	
42 Ethyl acetate	43	7.550	7.536	0.014	99	5587753	16.0	14.7	
43 Chloroform	83	7.668	7.639	0.029	97	6841071	16.0	14.9	
44 Tetrahydrofuran	42	8.029	8.034	-0.005	92	2902098	16.0	14.5	
45 1,1,1-Trichloroethane	97	8.617	8.598	0.019	95	7363783	16.0	15.3	
46 1,2-Dichloroethane	62	8.709	8.686	0.023	98	4709100	16.0	15.0	
47 Benzene	78	9.194	9.173	0.021	96	9164238	16.0	15.0	
48 Cyclohexane	69	9.194	9.180	0.014	78	1500344	16.0	15.4	
49 Carbon tetrachloride	117	9.221	9.203	0.018	99	8101116	16.0	17.1	
50 n-Butanol	31	9.318	9.315	0.003	88	1222672	16.0	18.1	
53 Isooctane	57	10.030	10.019	0.011	99	14975770	16.0	14.9	
54 n-Heptane	71	10.451	10.437	0.014	87	3422405	16.0	15.7	
55 1,2-Dichloropropane	63	10.472	10.447	0.025	87	3380117	16.0	14.9	
56 Trichloroethene	130	10.521	10.503	0.018	97	4984487	16.0	17.4	
57 Dibromomethane	93	10.585	10.560	0.025	90	4101555	16.0	15.8	
58 Dichlorobromomethane	83	10.758	10.735	0.023	99	7486541	16.0	16.8	
59 1,4-Dioxane	88	10.796	10.795	0.001	88	1328311	16.0	16.7	
60 Methyl methacrylate	41	10.920	10.901	0.019	97	3601729	16.0	16.3	
62 4-Methyl-2-pentanone (MIBK	43	11.815	11.805	0.010	96	6102839	16.0	16.4	
63 cis-1,3-Dichloropropene	75	11.831	11.811	0.020	96	5847515	16.0	16.8	
64 trans-1,3-Dichloropropene	75	12.564	12.548	0.016	97	5551856	16.0	17.1	
65 Toluene	91	12.688	12.671	0.017	94	11056815	16.0	15.8	
66 1,1,2-Trichloroethane	83	12.764	12.741	0.023	98	3308788	16.0	15.8	
68 2-Hexanone	58	13.222	13.214	0.008	94	3512737	16.0	18.1	
70 Chlorodibromomethane	129	13.481	13.455	0.026	97	8344619	16.0	19.4	
71 n-Octane	85	13.470	13.461	0.009	96	4015158	16.0	16.4	
72 Ethylene Dibromide	107	13.767	13.745	0.022	98	6596127	16.0	17.6	
73 Tetrachloroethene	129	13.869	13.857	0.012	97	4599494	16.0	17.1	
74 Chlorobenzene	112	14.770	14.752	0.018	94	9289454	16.0	16.6	
75 Ethylbenzene	91	15.088	15.070	0.018	98	14157820	16.0	15.8	
77 m-Xylene & p-Xylene	91	15.266	15.242	0.024	0	21806256	32.0	32.1	
79 Bromoform	173	15.676	15.650	0.026	98	8882803	16.0	21.6	
80 Styrene	104	15.735	15.710	0.025	96	9309265	16.0	19.6	
81 n-Nonane	57	15.746	15.732	0.014	88	6699885	16.0	14.4	
82 o-Xylene	91	15.794	15.771	0.023	99	11358762	16.0	15.7	
83 1,1,2,2-Tetrachloroethane	83	16.123	16.096	0.027	99	8035941	16.0	16.3	
84 1,2,3-Trichloropropane	110	16.274	16.250	0.024	98	2536219	16.0	16.5	
85 Isopropylbenzene	105	16.404	16.381	0.023	96	15915639	16.0	15.9	
86 N-Propylbenzene	120	16.954	16.938	0.016	100	4715554	16.0	18.2	e
87 2-Chlorotoluene	126	16.954	16.958	-0.004	94	4402228	16.0	17.9	e
88 4-Ethyltoluene	105	17.121	17.102	0.019	98	15855587	16.0	16.9	
89 1,3,5-Trimethylbenzene	120	17.213	17.187	0.026	94	6779157	16.0	17.7	
90 Alpha Methyl Styrene	118	17.450	17.431	0.019	90	7215494	16.0	20.5	
91 n-Decane	57	17.574	17.556	0.018	92	8241480	16.0	15.0	
92 tert-Butylbenzene	119	17.666	17.645	0.021	93	15320211	16.0	17.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.682	17.659	0.023	94	13888395	16.0	17.0	
94 1,3-Dichlorobenzene	146	17.951	17.930	0.021	95	11673191	16.0	19.6	
95 sec-Butylbenzene	105	17.951	17.939	0.012	95	18086952	16.0	15.5	e
96 Benzyl chloride	91	18.032	18.014	0.018	99	12946207	16.0	18.2	
97 1,4-Dichlorobenzene	146	18.043	18.026	0.017	96	11143200	16.0	18.8	
98 4-Isopropyltoluene	119	18.135	18.124	0.011	97	14401186	16.0	14.9	e
99 1,2,3-Trimethylbenzene	105	18.183	18.164	0.019	97	14362227	16.0	16.6	
100 1,2-Dichlorobenzene	146	18.421	18.407	0.014	97	9822366	16.0	17.6	
103 n-Butylbenzene	91	18.599	18.588	0.011	98	15704176	16.0	16.9	e
105 Undecane	57	18.976	18.967	0.009	92	6304131	16.0	11.4	
106 1,2-Dibromo-3-Chloropropan	157	19.051	19.040	0.011	91	6715854	16.0	19.4	
108 1,2,4,5-Tetramethylbenzene	119	19.391	19.384	0.007	99	12222761	16.0	10.4	e
111 Dodecane	57	20.054	20.050	0.004	97	2886493	16.0	5.77	
112 1,2,4-Trichlorobenzene	180	20.168	20.164	0.004	94	3246608	16.0	7.17	
113 Naphthalene	128	20.292	20.287	0.005	99	7428269	16.0	7.09	
114 Hexachlorobutadiene	225	20.524	20.521	0.003	94	3772578	16.0	8.63	
115 1,2,3-Trichlorobenzene	180	20.567	20.562	0.005	96	2427089	16.0	5.77	
117 2-Methylnaphthalene	142	21.354	21.354	0.000	99	2301036	36.8	4.94	
118 1-Methylnaphthalene	142	21.543	21.542	0.001	100	1578729	36.8	3.54	
S 119 Xylenes, Total	100				0		48.0	47.8	
S 120 1,2-Dichloroethene, Total	1				0		32.0	31.8	

QC Flag Legend

Processing Flags

e - Potential Peak Saturated

Reagents:

40L9DNP_00018	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

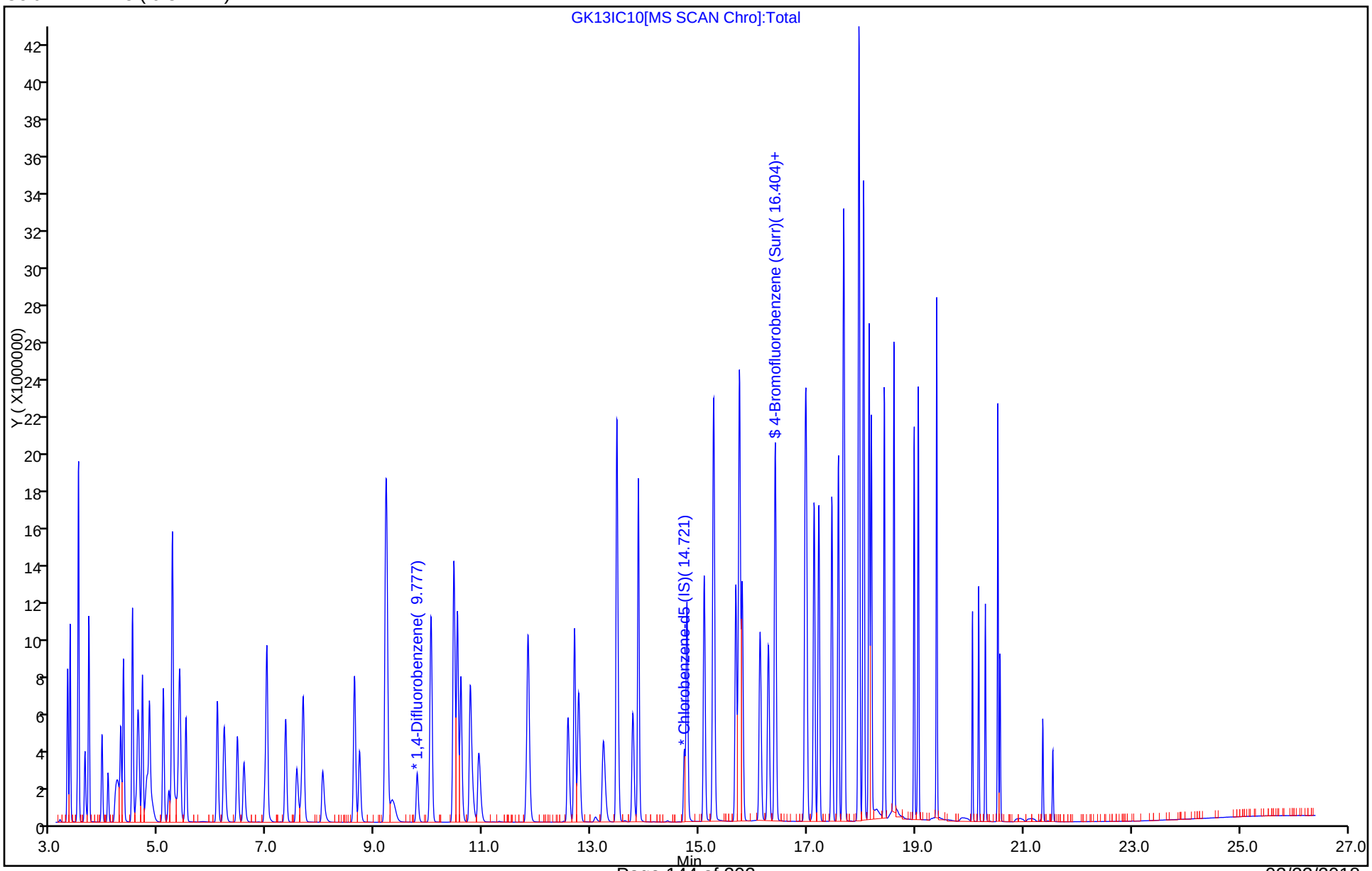
Report Date: 15-Nov-2017 15:41:12 Chrom Revision: 2.2 13-Nov-2017 17:19:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D

Injection Date:	13-Nov-2017 22:37:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	IC L10			Worklist Smp#:	12
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1

SDG No.:

Lab Sample ID: ICV 140-15917/14 Calibration Date: 11/14/2017 00:02

Instrument ID: MG Calib Start Date: 11/13/2017 16:15

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/13/2017 22:37

Lab File ID: GICVK13.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4002	0.3895		1.95	2.00	-2.7	35.0
Propene	Ave	1.197	1.174		1.96	2.00	-1.9	35.0
Dichlorodifluoromethane	Ave	3.993	4.061		2.03	2.00	1.7	35.0
Chloromethane	Ave	0.4317	0.4323		2.00	2.00	0.1	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.517	2.694		2.14	2.00	7.0	35.0
Vinyl chloride	Ave	1.570	1.603		2.04	2.00	2.1	35.0
1,3-Butadiene	Ave	1.162	1.186		2.04	2.00	2.1	35.0
Butane	Ave	2.250	2.306		2.05	2.00	2.5	35.0
Bromomethane	Ave	1.391	1.453		2.09	2.00	4.5	35.0
Chloroethane	Ave	0.7778	0.8308		2.14	2.00	6.8	35.0
Ethanol	Ave	0.6982	0.5950		8.52	10.0	-14.8	35.0
Vinyl bromide	Ave	1.358	1.556		2.29	2.00	14.5	35.0
2-Methylbutane	Ave	1.784	1.797		2.01	2.00	0.7	35.0
Trichlorofluoromethane	Ave	4.135	4.239		2.05	2.00	2.5	35.0
Acrolein	Ave	0.3329	0.3377		2.03	2.00	1.4	35.0
Acetonitrile	Ave	0.4975	0.4865		1.96	2.00	-2.2	35.0
Acetone	Ave	0.6202	0.5335		5.16	6.00	-14.0	35.0
Pentane	Ave	0.2737	0.3148		2.30	2.00	15.0	35.0
Isopropyl alcohol	Ave	1.723	1.633		5.69	6.00	-5.2	35.0
Ethyl ether	Ave	1.399	1.267		1.81	2.00	-9.4	35.0
1,1-Dichloroethene	Ave	1.408	1.524		2.16	2.00	8.2	35.0
Acrylonitrile	Ave	0.8775	0.8709		1.98	2.00	-0.8	35.0
tert-Butyl alcohol	Ave	2.280	2.356		2.07	2.00	3.3	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.017	3.223		2.14	2.00	6.8	35.0
Methylene Chloride	Ave	1.424	1.388		1.95	2.00	-2.6	35.0
3-Chloropropene	Ave	1.325	1.246		1.88	2.00	-5.9	35.0
Carbon disulfide	Ave	3.831	4.206		2.20	2.00	9.8	35.0
trans-1,2-Dichloroethene	Ave	1.424	1.532		2.15	2.00	7.6	35.0
Methyl tert-butyl ether	Ave	3.511	3.407		1.94	2.00	-3.0	35.0
1,1-Dichloroethane	Ave	2.834	2.904		2.05	2.00	2.5	35.0
Vinyl acetate	Ave	3.417	3.254		1.90	2.00	-4.8	35.0
2-Butanone (MEK)	Ave	0.6209	0.5708		1.84	2.00	-8.1	35.0
Hexane	Ave	1.184	1.245		2.10	2.00	5.2	35.0
cis-1,2-Dichloroethene	Ave	1.483	1.601		2.16	2.00	7.9	35.0
Ethyl acetate	Ave	2.710	2.380		1.76	2.00	-12.2	35.0
Chloroform	Ave	3.265	3.269		2.00	2.00	0.1	35.0
Tetrahydrofuran	Ave	1.427	1.341		1.88	2.00	-6.0	35.0
1,1,1-Trichloroethane	Ave	3.438	3.456		2.01	2.00	0.5	35.0
1,2-Dichloroethane	Ave	0.4028	0.3981		1.98	2.00	-1.2	35.0
Benzene	Ave	0.7871	0.8305		2.11	2.00	5.5	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1

SDG No.:

Lab Sample ID: ICV 140-15917/14 Calibration Date: 11/14/2017 00:02

Instrument ID: MG Calib Start Date: 11/13/2017 16:15

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/13/2017 22:37

Lab File ID: GICVK13.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Cyclohexane	Ave	0.1251	0.1403		2.24	2.00	12.2	35.0
Carbon tetrachloride	Ave	0.6083	0.6766		2.22	2.00	11.2	35.0
1-Butanol	Ave	0.0867	0.0887		2.04	2.00	2.2	35.0
2,2,4-Trimethylpentane	Ave	1.292	1.388		2.15	2.00	7.4	35.0
Heptane	Ave	0.2801	0.3067		2.19	2.00	9.5	35.0
1,2-Dichloropropane	Ave	0.2921	0.3018		2.07	2.00	3.3	35.0
Trichloroethene	Ave	0.3686	0.4205		2.28	2.00	14.1	35.0
Dibromomethane	Ave	0.3335	0.3527		2.12	2.00	5.8	35.0
Bromodichloromethane	Ave	0.5724	0.6227		2.18	2.00	8.8	35.0
1,4-Dioxane	Ave	0.1022	0.1067		2.09	2.00	4.4	35.0
Methyl methacrylate	Ave	0.2832	0.2751		1.94	2.00	-2.9	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4776	0.4730		1.98	2.00	-1.0	35.0
cis-1,3-Dichloropropene	Ave	0.4483	0.4940		2.20	2.00	10.2	35.0
trans-1,3-Dichloropropene	Ave	0.4139	0.4356		2.10	2.00	5.2	35.0
Toluene	Ave	0.8891	0.8985		2.02	2.00	1.1	35.0
1,1,2-Trichloroethane	Ave	0.2665	0.2662		2.00	2.00	-0.1	35.0
2-Hexanone	Ave	0.2473	0.2492		2.01	2.00	0.7	35.0
Dibromochloromethane	Ave	0.5479	0.5920		2.16	2.00	8.0	35.0
Octane	Ave	0.3111	0.3432		2.21	2.00	10.3	35.0
1,2-Dibromoethane (EDB)	Ave	0.4779	0.5168		2.16	2.00	8.1	35.0
Tetrachloroethene	Ave	0.3430	0.3560		2.08	2.00	3.8	35.0
Chlorobenzene	Ave	0.7131	0.7452		2.09	2.00	4.5	35.0
Ethylbenzene	Ave	1.141	1.122		1.97	2.00	-1.7	35.0
m-Xylene & p-Xylene	Ave	0.8653	0.8696		4.02	4.00	0.5	35.0
Bromoform	Ave	0.5240	0.5445		2.08	2.00	3.9	35.0
Styrene	Ave	0.6042	0.6718		2.22	2.00	11.2	35.0
Nonane	Ave	0.5902	0.6101		2.07	2.00	3.4	35.0
o-Xylene	Ave	0.9204	0.8793		1.91	2.00	-4.5	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6266	0.6177		1.97	2.00	-1.4	35.0
1,2,3-Trichloropropane	Ave	0.1960	0.1919		1.96	2.00	-2.1	35.0
Isopropylbenzene	Ave	1.272	1.276		2.01	2.00	0.3	35.0
Propylbenzene	Ave	0.3295	0.3450		2.09	2.00	4.7	35.0
2-Chlorotoluene	Ave	0.3120	0.3305		2.12	2.00	5.9	35.0
4-Ethyltoluene	Ave	1.197	1.161		1.94	2.00	-3.0	35.0
1,3,5-Trimethylbenzene	Ave	0.4863	0.4840		1.99	2.00	-0.5	35.0
Alpha Methyl Styrene	Ave	0.4487	0.5063		2.26	2.00	12.8	35.0
Decane	Ave	0.6981	0.7015		2.01	2.00	0.5	35.0
tert-Butylbenzene	Ave	1.099	1.091		1.99	2.00	-0.7	35.0
1,2,4-Trimethylbenzene	Ave	1.039	1.014		1.95	2.00	-2.4	35.0
1,3-Dichlorobenzene	Ave	0.7589	0.7482		1.97	2.00	-1.4	35.0
sec-Butylbenzene	Ave	1.481	1.499		2.02	2.00	1.2	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1

SDG No.:

Lab Sample ID: ICV 140-15917/14 Calibration Date: 11/14/2017 00:02

Instrument ID: MG Calib Start Date: 11/13/2017 16:15

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/13/2017 22:37

Lab File ID: GICVK13.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzyl chloride	Ave	0.9028	0.9351		2.07	2.00	3.6	35.0
1,4-Dichlorobenzene	Ave	0.7542	0.7438		1.97	2.00	-1.4	35.0
4-Isopropyltoluene	Ave	1.232	1.220		1.98	2.00	-1.0	35.0
1,2,3-Trimethylbenzene	Ave	1.102	0.9788		1.78	2.00	-11.1	35.0
1,2-Dichlorobenzene	Ave	0.7112	0.6972		1.96	2.00	-2.0	35.0
Butylbenzene	Ave	1.182	1.167		1.97	2.00	-1.3	35.0
Undecane	Ave	0.7036	0.6966		1.98	2.00	-1.0	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.4410	0.2779		1.26	2.00	-37.0*	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.491	1.085		1.45	2.00	-27.3	35.0
Dodecane	Ave	0.6359	0.6663		2.10	2.00	4.8	35.0
1,2,4-Trichlorobenzene	Ave	0.5763	0.5970		2.07	2.00	3.6	35.0
Naphthalene	Ave	1.332	1.326		1.99	2.00	-0.4	35.0
Hexachlorobutadiene	Ave	0.5558	0.5688		2.05	2.00	2.3	35.0
1,2,3-Trichlorobenzene	Ave	0.5354	0.5806		2.17	2.00	8.5	35.0
2-Methylnaphthalene	Ave	0.5930	0.3864		2.99	4.59	-34.8	50.0
1-Methylnaphthalene	Ave	0.5668	0.4031		3.27	4.60	-28.9	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7464	0.7320		3.92	4.00	-1.9	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GICVK13.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 14-Nov-2017 00:02:30 ALS Bottle#: 9 Worklist Smp#: 14
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0006586-014
Misc. Info.: 123596
Operator ID: 7126 Instrument ID: MG
Sublist:

Method: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 15-Nov-2017 16:08:32 Calib Date: 13-Nov-2017 22:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa Date: 14-Nov-2017 16:11:42

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.609	7.613	-0.004	93	572242	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.750	9.753	-0.003	95	3126736	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.700	14.703	-0.003	86	3200010	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.388	16.389	-0.001	93	2342340	4.00	3.92	
6 Chlorodifluoromethane	67	3.300	3.306	-0.006	96	111449	2.00	1.95	
7 Propene	41	3.311	3.312	-0.001	99	335930	2.00	1.96	
8 Dichlorodifluoromethane	85	3.349	3.354	-0.005	100	1161966	2.00	2.03	
9 Chloromethane	52	3.489	3.492	-0.003	99	123688	2.00	2.00	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.500	3.507	-0.007	98	770874	2.00	2.14	
11 Vinyl chloride	62	3.624	3.625	-0.001	99	458710	2.00	2.04	
12 Butadiene	54	3.694	3.696	-0.002	91	339392	2.00	2.04	
13 Butane	43	3.694	3.696	-0.002	91	659874	2.00	2.05	
15 Bromomethane	94	3.931	3.937	-0.006	99	415817	2.00	2.09	
16 Chloroethane	64	4.045	4.048	-0.003	99	237712	2.00	2.14	
17 Ethanol	31	4.169	4.184	-0.015	95	851193	10.0	8.52	
18 Vinyl bromide	106	4.276	4.281	-0.005	98	445171	2.00	2.29	
19 2-Methylbutane	43	4.330	4.332	-0.002	90	514019	2.00	2.01	
20 Trichlorofluoromethane	101	4.492	4.500	-0.008	99	1212943	2.00	2.05	
21 Acrolein	56	4.497	4.509	-0.012	91	96627	2.00	2.03	
22 Acetonitrile	40	4.551	4.551	0.000	100	139208	2.00	1.96	
23 Acetone	58	4.589	4.606	-0.017	97	457982	6.00	5.16	
24 Pentane	72	4.675	4.682	-0.007	98	90057	2.00	2.30	
25 Isopropyl alcohol	45	4.713	4.739	-0.026	92	1401652	6.00	5.69	
26 Ethyl ether	31	4.810	4.827	-0.017	96	362465	2.00	1.81	
27 1,1-Dichloroethene	96	5.064	5.066	-0.002	97	435910	2.00	2.16	
28 Acrylonitrile	53	5.150	5.158	-0.008	96	249172	2.00	1.98	
30 1,1,2-Trichloro-1,2,2-trif	101	5.231	5.233	-0.002	97	922286	2.00	2.14	
29 2-Methyl-2-propanol	59	5.209	5.261	-0.052	94	674108	2.00	2.07	
31 Methylene Chloride	84	5.349	5.353	-0.004	94	397063	2.00	1.95	
32 3-Chloro-1-propene	39	5.366	5.371	-0.005	97	356642	2.00	1.88	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.479	5.485	-0.006	98	1203510	2.00	2.20	
34 trans-1,2-Dichloroethene	96	6.056	6.061	-0.005	98	438267	2.00	2.15	
35 Methyl tert-butyl ether	73	6.196	6.218	-0.022	96	974671	2.00	1.94	
36 1,1-Dichloroethane	63	6.423	6.427	-0.004	100	830903	2.00	2.05	
37 Vinyl acetate	43	6.541	6.553	-0.012	100	930996	2.00	1.90	
39 2-Butanone (MEK)	72	6.935	6.954	-0.019	100	163321	2.00	1.84	
40 Hexane	56	6.978	6.984	-0.006	91	356300	2.00	2.10	
41 cis-1,2-Dichloroethene	96	7.318	7.319	-0.001	95	458014	2.00	2.16	
42 Ethyl acetate	43	7.517	7.536	-0.019	99	681017	2.00	1.76	
43 Chloroform	83	7.636	7.639	-0.003	97	935313	2.00	2.00	
44 Tetrahydrofuran	42	8.008	8.034	-0.026	93	383658	2.00	1.88	
45 1,1,1-Trichloroethane	97	8.596	8.598	-0.002	95	988849	2.00	2.01	
46 1,2-Dichloroethane	62	8.682	8.686	-0.004	98	622300	2.00	1.98	
47 Benzene	78	9.167	9.173	-0.006	96	1298410	2.00	2.11	
48 Cyclohexane	69	9.178	9.180	-0.002	98	219408	2.00	2.24	
49 Carbon tetrachloride	117	9.200	9.203	-0.003	98	1057710	2.00	2.22	
50 n-Butanol	31	9.243	9.315	-0.072	90	138604	2.00	2.04	
53 Isooctane	57	10.014	10.019	-0.005	99	2169710	2.00	2.15	
54 n-Heptane	71	10.434	10.437	-0.003	90	479526	2.00	2.19	
55 1,2-Dichloropropane	63	10.445	10.447	-0.002	92	471763	2.00	2.07	
56 Trichloroethene	130	10.499	10.503	-0.004	98	657457	2.00	2.28	
57 Dibromomethane	93	10.559	10.560	-0.002	95	551450	2.00	2.12	
58 Dichlorobromomethane	83	10.731	10.735	-0.004	99	973551	2.00	2.18	
59 1,4-Dioxane	88	10.763	10.795	-0.032	89	166777	2.00	2.09	
60 Methyl methacrylate	41	10.887	10.901	-0.014	95	430067	2.00	1.94	
62 4-Methyl-2-pentanone (MIBK	43	11.783	11.805	-0.022	96	739401	2.00	1.98	
63 cis-1,3-Dichloropropene	75	11.810	11.811	-0.001	96	772266	2.00	2.20	
64 trans-1,3-Dichloropropene	75	12.543	12.548	-0.005	98	696981	2.00	2.10	
65 Toluene	91	12.667	12.671	-0.004	94	1437602	2.00	2.02	
66 1,1,2-Trichloroethane	83	12.737	12.741	-0.004	98	425963	2.00	2.00	
68 2-Hexanone	58	13.195	13.214	-0.019	94	398652	2.00	2.01	
70 Chlorodibromomethane	129	13.454	13.455	-0.001	97	947191	2.00	2.16	
71 n-Octane	85	13.460	13.461	-0.001	92	549130	2.00	2.21	
72 Ethylene Dibromide	107	13.745	13.745	0.000	98	826852	2.00	2.16	
73 Tetrachloroethene	129	13.853	13.857	-0.004	96	569515	2.00	2.08	
74 Chlorobenzene	112	14.748	14.752	-0.004	93	1192305	2.00	2.09	
75 Ethylbenzene	91	15.067	15.070	-0.003	98	1794832	2.00	1.97	
77 m-Xylene & p-Xylene	91	15.239	15.242	-0.003	0	2782818	4.00	4.02	
79 Bromoform	173	15.649	15.650	-0.001	97	871263	2.00	2.08	
80 Styrene	104	15.708	15.710	-0.002	98	1074825	2.00	2.22	
81 n-Nonane	57	15.730	15.732	-0.002	90	976203	2.00	2.07	
82 o-Xylene	91	15.768	15.771	-0.003	98	1406816	2.00	1.91	
83 1,1,2,2-Tetrachloroethane	83	16.096	16.096	0.000	99	988365	2.00	1.97	
84 1,2,3-Trichloropropane	110	16.247	16.250	-0.003	98	307005	2.00	1.96	
85 Isopropylbenzene	105	16.377	16.381	-0.004	97	2041697	2.00	2.01	
86 N-Propylbenzene	120	16.938	16.938	0.000	98	551984	2.00	2.09	
87 2-Chlorotoluene	126	16.959	16.958	0.001	95	528842	2.00	2.12	
88 4-Ethyltoluene	105	17.099	17.102	-0.003	99	1857053	2.00	1.94	
89 1,3,5-Trimethylbenzene	120	17.186	17.187	-0.001	93	774416	2.00	1.99	
90 Alpha Methyl Styrene	118	17.428	17.431	-0.003	89	810060	2.00	2.26	
91 n-Decane	57	17.552	17.556	-0.004	91	1122351	2.00	2.01	
92 tert-Butylbenzene	119	17.644	17.645	-0.001	92	1746243	2.00	1.99	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.660	17.659	0.001	96	1622715	2.00	1.95	
94 1,3-Dichlorobenzene	146	17.930	17.930	0.000	99	1197161	2.00	1.97	
95 sec-Butylbenzene	105	17.941	17.939	0.002	98	2397630	2.00	2.02	
96 Benzyl chloride	91	18.011	18.014	-0.003	98	1496121	2.00	2.07	
97 1,4-Dichlorobenzene	146	18.027	18.026	0.001	95	1190059	2.00	1.97	
98 4-Isopropyltoluene	119	18.124	18.124	0.000	97	1951867	2.00	1.98	
99 1,2,3-Trimethylbenzene	105	18.162	18.164	-0.002	97	1566045	2.00	1.78	
100 1,2-Dichlorobenzene	146	18.404	18.407	-0.003	95	1115485	2.00	1.96	
103 n-Butylbenzene	91	18.588	18.588	0.000	98	1866975	2.00	1.97	
105 Undecane	57	18.965	18.967	-0.002	95	1114524	2.00	1.98	
106 1,2-Dibromo-3-Chloropropan	157	19.041	19.040	0.001	99	444593	2.00	1.26	
108 1,2,4,5-Tetramethylbenzene	119	19.386	19.384	0.002	97	1735263	2.00	1.45	
111 Dodecane	57	20.049	20.050	-0.001	97	1066149	2.00	2.10	
112 1,2,4-Trichlorobenzene	180	20.162	20.164	-0.002	94	955226	2.00	2.07	
113 Naphthalene	128	20.286	20.287	-0.001	99	2122067	2.00	1.99	
114 Hexachlorobutadiene	225	20.524	20.521	0.003	96	910066	2.00	2.05	
115 1,2,3-Trichlorobenzene	180	20.561	20.562	-0.001	95	928992	2.00	2.17	
117 2-Methylnaphthalene	142	21.354	21.354	0.000	99	1418792	4.59	2.99	
118 1-Methylnaphthalene	142	21.543	21.542	0.001	99	1483415	4.60	3.27	
S 119 Xylenes, Total	100				0		6.00	5.93	
S 120 1,2-Dichloroethene, Total	1				0		4.00	4.31	

Reagents:

40CV101S_00051	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

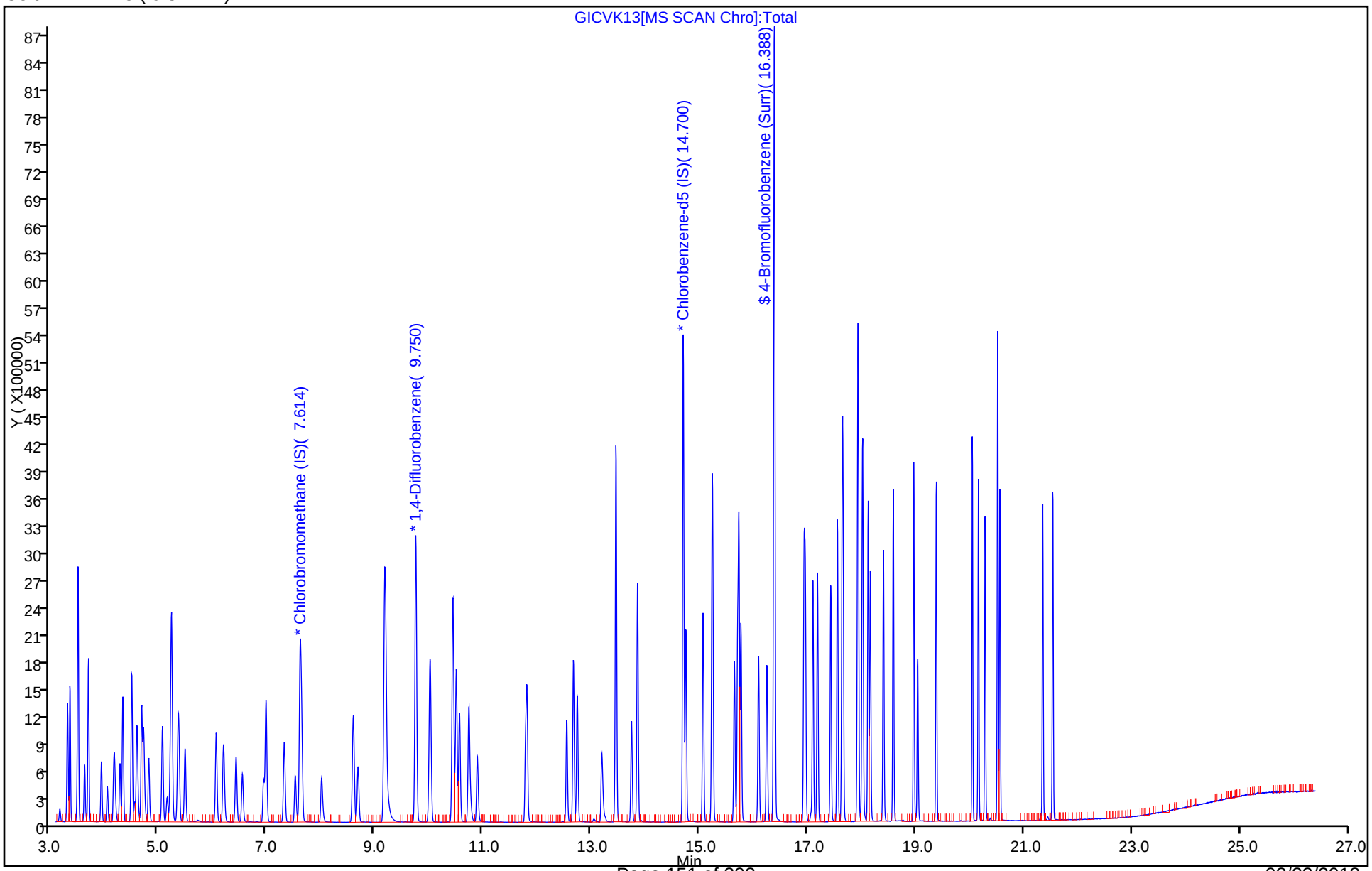
Report Date: 15-Nov-2017 16:10:06 Chrom Revision: 2.2 13-Nov-2017 17:19:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GICVK13.D

Injection Date:	14-Nov-2017 00:02:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	ICV			Worklist Smp#:	14
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1

SDG No.:

Lab Sample ID: CCVIS 140-18252/2 Calibration Date: 02/19/2018 09:20

Instrument ID: MG Calib Start Date: 06/21/2017 17:00

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/21/2017 22:43

Lab File ID: GCCVB19.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetaldehyde	Ave	0.3260	0.0284			10.0	-91.3*	30.0
2,3-Dimethylpentane	Ave	0.1678	0.1803			2.00	7.4	30.0
Thiophene	Ave	0.4073	0.0024			2.00	-99.4*	30.0
Methylcyclohexane	Ave	0.5656	0.4482			2.00	-20.8	30.0
2,3-Dimethylheptane	Ave	0.6663	0.0029			2.00	-99.6*	30.0
Butylcyclohexane	Ave	0.8168	0.0021			2.00	-99.7*	30.0
Indane	Ave	1.093	0.8674			2.00	-20.7	30.0
Indene	QuaF		0.7338			2.00		30.0
2-Methylpentane	Ave	1.922				2.00		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GCCVB19.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 19-Feb-2018 09:20:30 ALS Bottle#: 15 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007419-002
Misc. Info.: P55
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub17

Method: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 20-Feb-2018 10:50:48 Calib Date: 13-Nov-2017 22:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 19-Feb-2018 14:39:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.566	7.566	0.000	95	280634	4.00	4.00	s
* 2 1,4-Difluorobenzene	114	9.706	9.706	0.000	97	1767087	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.667	14.667	0.000	91	1720815	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.355	16.355	0.000	87	1413913	4.00	4.40	
6 Chlorodifluoromethane	67	3.300	3.300	0.000	96	69959	2.00	2.49	
7 Propene	41	3.306	3.306	0.000	98	223499	2.00	2.66	
8 Dichlorodifluoromethane	85	3.349	3.349	0.000	100	677450	2.00	2.42	
9 Chloromethane	52	3.484	3.484	0.000	98	79521	2.00	2.63	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.494	3.494	0.000	96	362009	2.00	2.05	
11 Vinyl chloride	62	3.613	3.613	0.000	99	258144	2.00	2.34	
14 Butane	43	3.683	3.683	0.000	93	415744	2.00	2.63	
13 Acetaldehyde	44	3.683	3.683	0.000	20	19931	NC	NC	
12 Butadiene	54	3.683	3.683	0.000	92	204925	2.00	2.51	
15 Bromomethane	94	3.920	3.920	0.000	99	213366	2.00	2.19	
16 Chloroethane	64	4.028	4.028	0.000	98	130426	2.00	2.39	
17 Ethanol	31	4.141	4.141	0.000	96	470258	10.0	9.60	
18 Vinyl bromide	106	4.265	4.265	0.000	98	195971	2.00	2.06	
19 2-Methylbutane	43	4.309	4.309	0.000	91	298138	2.00	2.38	
20 Acrolein	56	4.476	4.476	0.000	93	53677	2.00	2.30	
21 Trichlorofluoromethane	101	4.476	4.476	0.000	99	665190	2.00	2.29	
22 Acetonitrile	40	4.524	4.524	0.000	98	90022	2.00	2.58	
23 Acetone	58	4.562	4.562	0.000	98	276942	6.00	6.36	
24 Pentane	72	4.659	4.659	0.000	97	42927	2.00	2.24	
25 Isopropyl alcohol	45	4.675	4.675	0.000	94	779371	6.00	6.45	
26 Ethyl ether	31	4.783	4.783	0.000	96	235370	2.00	2.40	
27 1,1-Dichloroethene	96	5.037	5.037	0.000	93	199651	2.00	2.02	
28 Acrylonitrile	53	5.117	5.117	0.000	94	143553	2.00	2.33	
29 2-Methyl-2-propanol	59	5.161	5.161	0.000	95	328469	2.00	2.05	
30 1,1,2-Trichloro-1,2,2-trif	101	5.204	5.204	0.000	93	431852	2.00	2.04	
31 Methylene Chloride	84	5.322	5.322	0.000	97	189769	2.00	1.90	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.338	5.338	0.000	95	216063	2.00	2.33	
33 Carbon disulfide	76	5.452	5.452	0.000	99	552575	2.00	2.06	
34 trans-1,2-Dichloroethene	96	6.023	6.023	0.000	93	202573	2.00	2.03	
35 Methyl tert-butyl ether	73	6.147	6.147	0.000	97	552651	2.00	2.24	
36 1,1-Dichloroethane	63	6.390	6.390	0.000	99	455121	2.00	2.29	
38 Vinyl acetate	43	6.498	6.498	0.000	100	585640	2.00	2.44	
39 2-Butanone (MEK)	72	6.886	6.886	0.000	99	84902	2.00	1.95	
40 Hexane	56	6.940	6.940	0.000	90	198121	2.00	2.38	
41 cis-1,2-Dichloroethene	96	7.280	7.280	0.000	98	207853	2.00	2.00	
42 Ethyl acetate	43	7.474	7.474	0.000	98	453574	2.00	2.39	
43 Chloroform	83	7.598	7.598	0.000	98	508552	2.00	2.22	
44 Tetrahydrofuran	42	7.959	7.959	0.000	95	237518	2.00	2.37	
45 1,1,1-Trichloroethane	97	8.552	8.552	0.000	95	542598	2.00	2.25	
46 1,2-Dichloroethane	62	8.639	8.639	0.000	98	377842	2.00	2.12	
47 Benzene	78	9.124	9.124	0.000	97	650424	2.00	1.87	
48 Cyclohexane	69	9.129	9.129	0.000	97	113178	2.00	2.05	
49 Carbon tetrachloride	117	9.156	9.156	0.000	97	499198	2.00	1.86	
50 n-Butanol	31	9.178	9.178	0.000	67	63486	2.00	1.66	
51 2,3-Dimethylpentane	71	9.296	9.296	0.000	90	159269	NC	NC	
52 Thiophene	84	9.706	9.706	0.000	39	2085	NC	NC	
53 Isooctane	57	9.971	9.971	0.000	98	1198815	2.00	2.10	
54 n-Heptane	71	10.391	10.391	0.000	93	245519	2.00	1.98	
55 1,2-Dichloropropane	63	10.402	10.402	0.000	88	268408	2.00	2.08	
56 Trichloroethene	130	10.456	10.456	0.000	93	277461	2.00	1.70	
57 Dibromomethane	93	10.515	10.515	0.000	87	269069	2.00	1.83	
58 Dichlorobromomethane	83	10.688	10.688	0.000	99	537985	2.00	2.13	
59 1,4-Dioxane	88	10.715	10.715	0.000	93	71996	2.00	1.59	
60 Methyl methacrylate	41	10.844	10.844	0.000	92	271036	2.00	2.17	
61 Methylcyclohexane	83	11.286	11.286	0.000	91	395958	NC	NC	
62 4-Methyl-2-pentanone (MIBK	43	11.739	11.739	0.000	98	407265	2.00	1.93	
63 cis-1,3-Dichloropropene	75	11.766	11.766	0.000	98	412904	2.00	2.08	
64 trans-1,3-Dichloropropene	75	12.505	12.505	0.000	97	379786	2.00	2.13	
65 Toluene	91	12.629	12.629	0.000	93	699206	2.00	1.83	
66 1,1,2-Trichloroethane	83	12.699	12.699	0.000	97	220032	2.00	1.92	
69 2-Hexanone	58	13.152	13.152	0.000	92	183820	2.00	1.73	
70 Chlorodibromomethane	129	13.416	13.416	0.000	98	465173	2.00	1.97	
71 n-Octane	85	13.427	13.427	0.000	94	261391	2.00	1.95	
72 Ethylene Dibromide	107	13.707	13.707	0.000	98	389292	2.00	1.89	
73 Tetrachloroethene	129	13.821	13.821	0.000	92	254805	2.00	1.73	
74 Chlorobenzene	112	14.716	14.716	0.000	89	532681	2.00	1.74	
75 2,3-Dimethylheptane	43	14.958	14.958	0.000	79	2471	NC	NC	
76 Ethylbenzene	91	15.034	15.034	0.000	100	921927	2.00	1.88	
78 m-Xylene & p-Xylene	91	15.207	15.207	0.000	99	1456421	4.00	3.91	
79 Bromoform	173	15.616	15.616	0.000	95	420038	2.00	1.86	
80 Styrene	104	15.676	15.676	0.000	97	498676	2.00	1.92	
81 n-Nonane	57	15.703	15.703	0.000	94	562305	2.00	2.21	
82 o-Xylene	91	15.735	15.735	0.000	97	760823	2.00	1.92	
83 1,1,2,2-Tetrachloroethane	83	16.064	16.064	0.000	99	529640	2.00	1.96	
84 1,2,3-Trichloropropane	110	16.215	16.215	0.000	98	156568	2.00	1.86	
85 Isopropylbenzene	105	16.350	16.350	0.000	98	1002011	2.00	1.83	
86 N-Propylbenzene	120	16.911	16.911	0.000	99	249438	2.00	1.76	
87 2-Chlorotoluene	126	16.932	16.932	0.000	96	237457	2.00	1.77	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 4-Ethyltoluene	105	17.072	17.072	0.000	98	958751	2.00	1.86	
89 1,3,5-Trimethylbenzene	120	17.159	17.159	0.000	91	368054	2.00	1.76	
90 Alpha Methyl Styrene	118	17.401	17.401	0.000	85	372582	2.00	1.93	
91 n-Decane	57	17.531	17.531	0.000	90	651505	2.00	2.17	
92 tert-Butylbenzene	119	17.617	17.617	0.000	91	852514	2.00	1.80	
93 1,2,4-Trimethylbenzene	105	17.633	17.633	0.000	96	846837	2.00	1.89	
94 1,3-Dichlorobenzene	146	17.903	17.903	0.000	97	537605	2.00	1.65	
95 sec-Butylbenzene	105	17.914	17.914	0.000	98	1199066	2.00	1.88	
96 Benzyl chloride	91	17.984	17.984	0.000	97	826754	2.00	2.13	
97 1,4-Dichlorobenzene	146	18.000	18.000	0.000	94	538882	2.00	1.66	
98 4-Isopropyltoluene	119	18.097	18.097	0.000	96	982790	2.00	1.85	
99 1,2,3-Trimethylbenzene	105	18.140	18.140	0.000	99	873355	2.00	1.84	
102 Butylcyclohexane	83	18.377	18.377	0.000	46	1783	NC	NC	
100 1,2-Dichlorobenzene	146	18.383	18.383	0.000	94	520699	2.00	1.70	
101 2,3-Dihydroindene	117	18.388	18.388	0.000	94	746281	NC	NC	
103 Indene	116	18.523	18.523	0.000	92	631387	NC	NC	
104 n-Butylbenzene	91	18.566	18.566	0.000	98	986146	2.00	1.94	
105 Undecane	57	18.949	18.949	0.000	96	640851	2.00	2.12	
106 1,2-Dibromo-3-Chloropropan	157	19.019	19.019	0.000	93	251723	2.00	1.33	
109 1,2,4,5-Tetramethylbenzene	119	19.364	19.364	0.000	96	856257	2.00	1.34	
111 Dodecane	57	20.038	20.038	0.000	97	496495	2.00	1.81	
112 1,2,4-Trichlorobenzene	180	20.146	20.146	0.000	93	416249	2.00	1.68	
114 Naphthalene	128	20.270	20.270	0.000	99	937968	2.00	1.64	
115 Hexachlorobutadiene	225	20.502	20.502	0.000	94	410420	2.00	1.72	
116 1,2,3-Trichlorobenzene	180	20.545	20.545	0.000	94	369006	2.00	1.60	
117 2-Methylnaphthalene	142	21.338	21.338	0.000	100	484567	6.25	1.90	
118 1-Methylnaphthalene	142	21.521	21.521	0.000	100	488245	6.25	2.00	
S 119 Xylenes, Total	100				0		6.00	5.83	
S 120 1,2-Dichloroethene, Total	1				0		4.00	4.03	

QC Flag Legend

Processing Flags

NC - Not Calibrated

s - Failed ISTD Recovery Test

Reagents:

40CV101P_00055	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

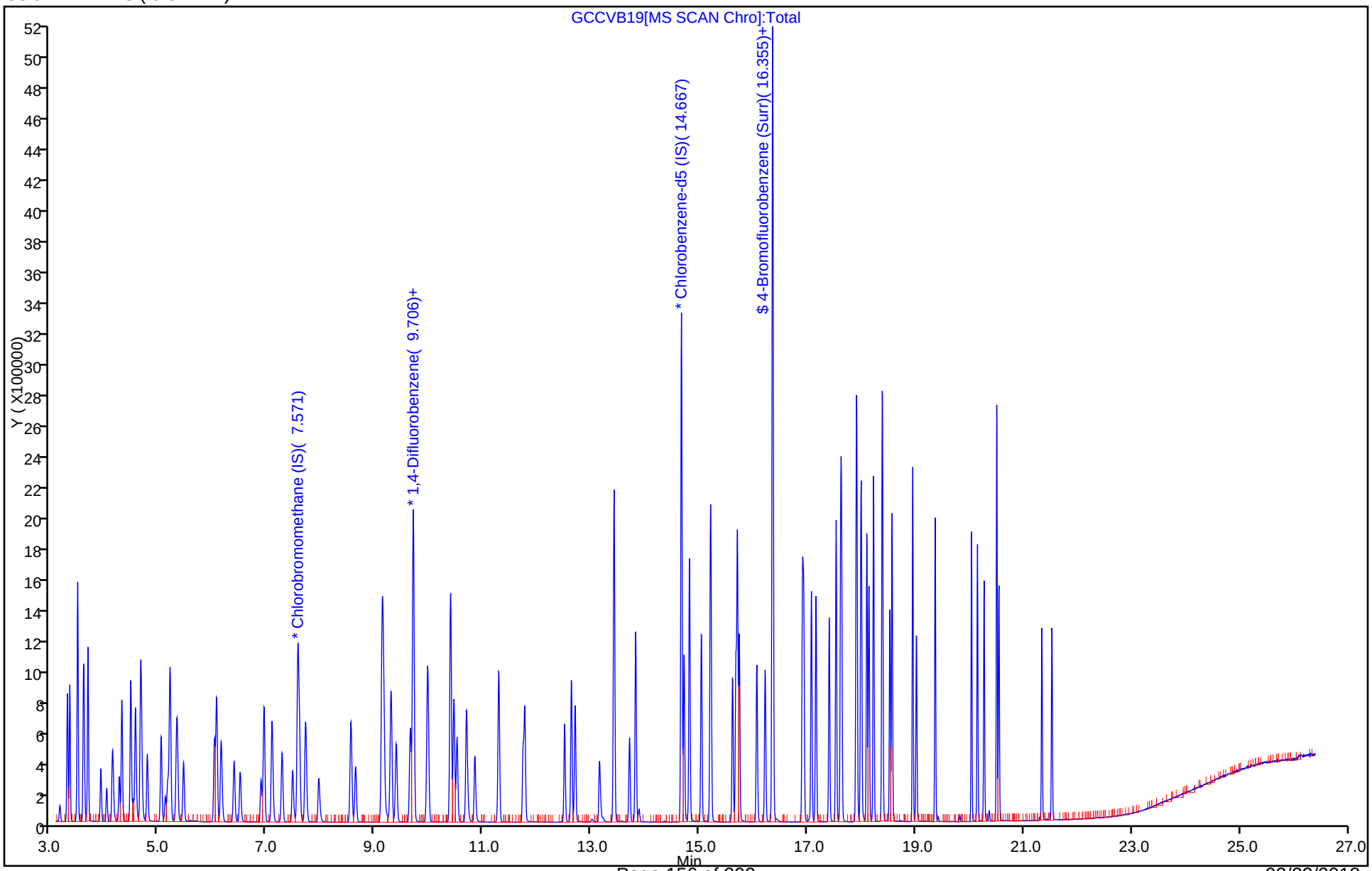
Report Date: 20-Feb-2018 10:50:48 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GCCVB19.D

Injection Date:	19-Feb-2018 09:20:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



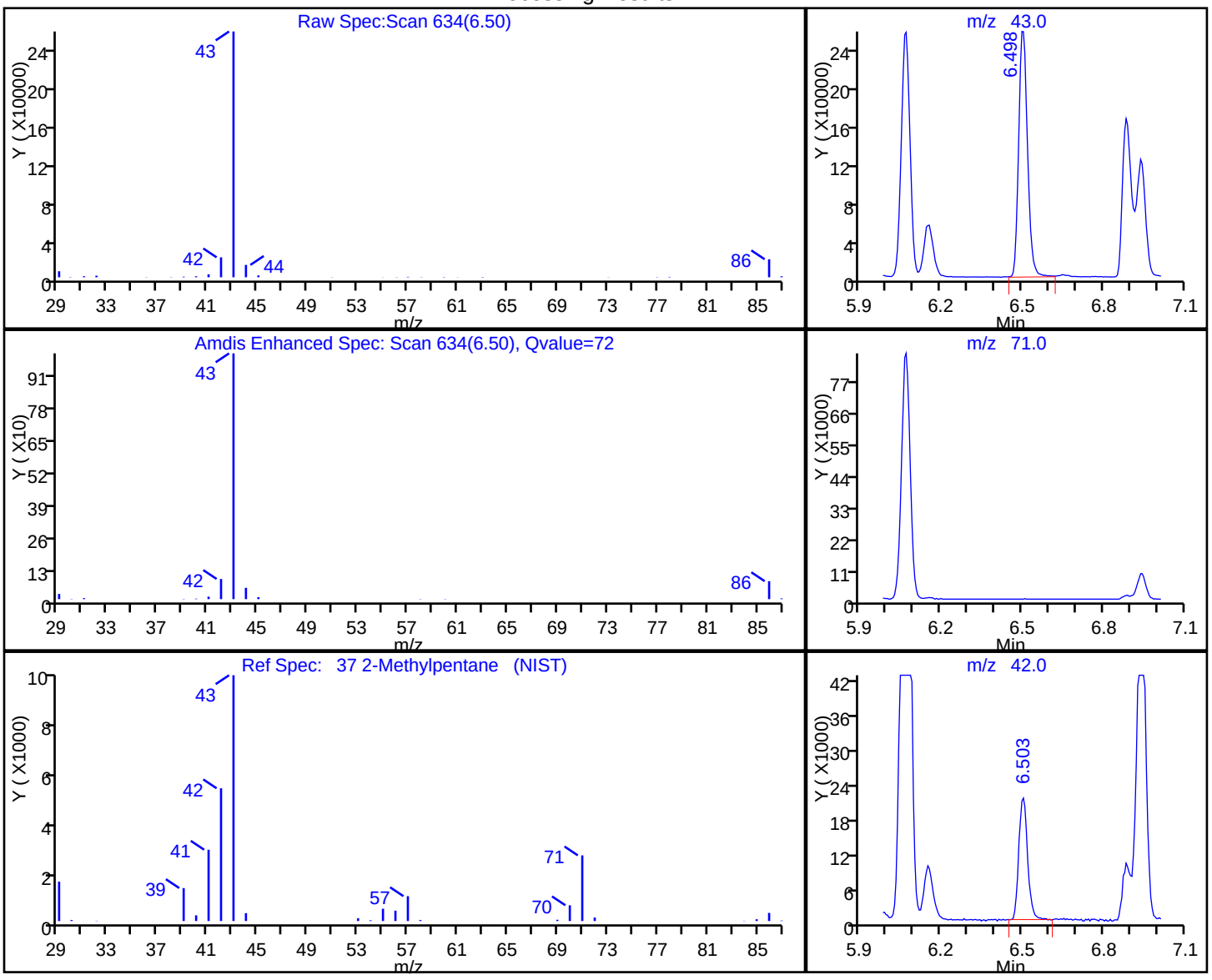
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GCCVB19.D				
Injection Date:	19-Feb-2018 09:20:30	Instrument ID:	MG		
Lims ID:	CCVIS				
Client ID:					
Operator ID:	7126	ALS Bottle#:	15	Worklist Smp#:	2
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

37 2-Methylpentane, CAS: 107-83-5

Processing Results



RT	Mass	Response	Amount
6.50	43.00	585586	
6.50	42.00	47896	
6.49	71.00	0	

Reviewer: tajh, 19-Feb-2018 14:39:57

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1

SDG No.:

Lab Sample ID: CCVIS 140-18252/2 Calibration Date: 02/19/2018 09:20

Instrument ID: MG Calib Start Date: 11/13/2017 16:15

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/13/2017 22:37

Lab File ID: GCCVB19.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4002	0.4986		2.49	2.00	24.6	30.0
Propene	Ave	1.197	1.593		2.66	2.00	33.1*	30.0
Dichlorodifluoromethane	Ave	3.993	4.828		2.42	2.00	20.9	30.0
Chloromethane	Ave	0.4317	0.5667		2.63	2.00	31.3*	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.517	2.580		2.05	2.00	2.5	30.0
Vinyl chloride	Ave	1.570	1.840		2.34	2.00	17.2	30.0
1,3-Butadiene	Ave	1.162	1.460		2.51	2.00	25.7	30.0
Butane	Ave	2.250	2.963		2.63	2.00	31.7*	30.0
Bromomethane	Ave	1.391	1.521		2.19	2.00	9.3	30.0
Chloroethane	Ave	0.7778	0.9295		2.39	2.00	19.5	30.0
Ethanol	Ave	0.6982	0.6703		9.60	10.0	-4.0	30.0
Vinyl bromide	Ave	1.358	1.397		2.06	2.00	2.8	30.0
2-Methylbutane	Ave	1.784	2.125		2.38	2.00	19.1	30.0
Acrolein	Ave	0.3329	0.3825		2.30	2.00	14.9	30.0
Trichlorofluoromethane	Ave	4.135	4.741		2.29	2.00	14.6	30.0
Acetonitrile	Ave	0.4975	0.6416		2.58	2.00	29.0	30.0
Acetone	Ave	0.6202	0.6579		6.36	6.00	6.1	30.0
Pentane	Ave	0.2737	0.3059		2.24	2.00	11.8	30.0
Isopropyl alcohol	Ave	1.723	1.851		6.45	6.00	7.5	30.0
Ethyl ether	Ave	1.399	1.677		2.40	2.00	19.9	30.0
1,1-Dichloroethene	Ave	1.408	1.423		2.02	2.00	1.1	30.0
Acrylonitrile	Ave	0.8775	1.023		2.33	2.00	16.6	30.0
tert-Butyl alcohol	Ave	2.280	2.341		2.05	2.00	2.7	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.017	3.078		2.04	2.00	2.0	30.0
Methylene Chloride	Ave	1.424	1.352		1.90	2.00	-5.0	30.0
3-Chloropropene	Ave	1.325	1.540		2.33	2.00	16.3	30.0
Carbon disulfide	Ave	3.831	3.938		2.06	2.00	2.8	30.0
trans-1,2-Dichloroethene	Ave	1.424	1.444		2.03	2.00	1.4	30.0
Methyl tert-butyl ether	Ave	3.511	3.939		2.24	2.00	12.2	30.0
1,1-Dichloroethane	Ave	2.834	3.244		2.29	2.00	14.5	30.0
Vinyl acetate	Ave	3.417	4.174		2.44	2.00	22.2	30.0
2-Butanone (MEK)	Ave	0.6209	0.6051		1.95	2.00	-2.6	30.0
Hexane	Ave	1.184	1.412		2.38	2.00	19.2	30.0
cis-1,2-Dichloroethene	Ave	1.483	1.481		2.00	2.00	-0.1	30.0
Ethyl acetate	Ave	2.710	3.232		2.39	2.00	19.3	30.0
Chloroform	Ave	3.265	3.624		2.22	2.00	11.0	30.0
Tetrahydrofuran	Ave	1.427	1.693		2.37	2.00	18.6	30.0
1,1,1-Trichloroethane	Ave	3.438	3.867		2.25	2.00	12.5	30.0
1,2-Dichloroethane	Ave	0.4028	0.4276		2.12	2.00	6.2	30.0
Benzene	Ave	0.7871	0.7362		1.87	2.00	-6.5	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1

SDG No.:

Lab Sample ID: CCVIS 140-18252/2 Calibration Date: 02/19/2018 09:20

Instrument ID: MG Calib Start Date: 11/13/2017 16:15

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/13/2017 22:37

Lab File ID: GCCVB19.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Cyclohexane	Ave	0.1251	0.1281		2.05	2.00	2.4	30.0
Carbon tetrachloride	Ave	0.6083	0.5650		1.86	2.00	-7.1	30.0
1-Butanol	Ave	0.0867	0.0719		1.66	2.00	-17.2	30.0
2,2,4-Trimethylpentane	Ave	1.292	1.357		2.10	2.00	5.0	30.0
Heptane	Ave	0.2801	0.2779		1.98	2.00	-0.8	30.0
1,2-Dichloropropane	Ave	0.2921	0.3038		2.08	2.00	4.0	30.0
Trichloroethene	Ave	0.3686	0.3140		1.70	2.00	-14.8	30.0
Dibromomethane	Ave	0.3335	0.3045		1.83	2.00	-8.7	30.0
Bromodichloromethane	Ave	0.5724	0.6089		2.13	2.00	6.4	30.0
1,4-Dioxane	Ave	0.1022	0.0815		1.59	2.00	-20.3	30.0
Methyl methacrylate	Ave	0.2832	0.3068		2.17	2.00	8.3	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4776	0.4610		1.93	2.00	-3.5	30.0
cis-1,3-Dichloropropene	Ave	0.4483	0.4673		2.08	2.00	4.2	30.0
trans-1,3-Dichloropropene	Ave	0.4139	0.4414		2.13	2.00	6.6	30.0
Toluene	Ave	0.8891	0.8127		1.83	2.00	-8.6	30.0
1,1,2-Trichloroethane	Ave	0.2665	0.2557		1.92	2.00	-4.0	30.0
2-Hexanone	Ave	0.2473	0.2136		1.73	2.00	-13.6	30.0
Dibromochloromethane	Ave	0.5479	0.5406		1.97	2.00	-1.3	30.0
Octane	Ave	0.3111	0.3038		1.95	2.00	-2.3	30.0
1,2-Dibromoethane (EDB)	Ave	0.4779	0.4525		1.89	2.00	-5.3	30.0
Tetrachloroethene	Ave	0.3430	0.2961		1.73	2.00	-13.7	30.0
Chlorobenzene	Ave	0.7131	0.6191		1.74	2.00	-13.2	30.0
Ethylbenzene	Ave	1.141	1.072		1.88	2.00	-6.1	30.0
m-Xylene & p-Xylene	Ave	0.8653	0.8464		3.91	4.00	-2.2	30.0
Bromoform	Ave	0.5240	0.4882		1.86	2.00	-6.8	30.0
Styrene	Ave	0.6042	0.5796		1.92	2.00	-4.1	30.0
Nonane	Ave	0.5902	0.6535		2.21	2.00	10.7	30.0
o-Xylene	Ave	0.9204	0.8843		1.92	2.00	-3.9	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6266	0.6156		1.96	2.00	-1.8	30.0
1,2,3-Trichloropropane	Ave	0.1960	0.1820		1.86	2.00	-7.2	30.0
Isopropylbenzene	Ave	1.272	1.165		1.83	2.00	-8.4	30.0
Propylbenzene	Ave	0.3295	0.2899		1.76	2.00	-12.0	30.0
2-Chlorotoluene	Ave	0.3120	0.2760		1.77	2.00	-11.6	30.0
4-Ethyltoluene	Ave	1.197	1.114		1.86	2.00	-6.9	30.0
1,3,5-Trimethylbenzene	Ave	0.4863	0.4278		1.76	2.00	-12.0	30.0
Alpha Methyl Styrene	Ave	0.4487	0.4330		1.93	2.00	-3.5	30.0
Decane	Ave	0.6981	0.7572		2.17	2.00	8.5	30.0
tert-Butylbenzene	Ave	1.099	0.9908		1.80	2.00	-9.8	30.0
1,2,4-Trimethylbenzene	Ave	1.039	0.9842		1.89	2.00	-5.3	30.0
1,3-Dichlorobenzene	Ave	0.7589	0.6248		1.65	2.00	-17.7	30.0
sec-Butylbenzene	Ave	1.481	1.394		1.88	2.00	-5.9	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1

SDG No.:

Lab Sample ID: CCVIS 140-18252/2 Calibration Date: 02/19/2018 09:20

Instrument ID: MG Calib Start Date: 11/13/2017 16:15

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/13/2017 22:37

Lab File ID: GCCVB19.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzyl chloride	Ave	0.9028	0.9609		2.13	2.00	6.4	30.0
1,4-Dichlorobenzene	Ave	0.7542	0.6263		1.66	2.00	-17.0	30.0
4-Isopropyltoluene	Ave	1.232	1.142		1.85	2.00	-7.3	30.0
1,2,3-Trimethylbenzene	Ave	1.102	1.015		1.84	2.00	-7.9	30.0
1,2-Dichlorobenzene	Ave	0.7112	0.6052		1.70	2.00	-14.9	30.0
Butylbenzene	Ave	1.182	1.146		1.94	2.00	-3.1	30.0
Undecane	Ave	0.7036	0.7448		2.12	2.00	5.9	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.4410	0.2926		1.33	2.00	-33.7*	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.491	0.995		1.34	2.00	-33.2*	30.0
Dodecane	Ave	0.6359	0.5771		1.81	2.00	-9.3	30.0
1,2,4-Trichlorobenzene	Ave	0.5763	0.4838		1.68	2.00	-16.1	30.0
Naphthalene	Ave	1.332	1.090		1.64	2.00	-18.2	30.0
Hexachlorobutadiene	Ave	0.5558	0.4770		1.72	2.00	-14.2	30.0
1,2,3-Trichlorobenzene	Ave	0.5354	0.4289		1.60	2.00	-19.9	30.0
2-Methylnaphthalene	Ave	0.5930	0.1802		1.90	6.25	-69.6*	50.0
1-Methylnaphthalene	Ave	0.5668	0.1816		2.00	6.25	-68.0*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7464	0.8217		4.40	4.00	10.1	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GCCVB19.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 19-Feb-2018 09:20:30 ALS Bottle#: 15 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007419-002
Misc. Info.: P55
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub17

Method: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 20-Feb-2018 10:50:48 Calib Date: 13-Nov-2017 22:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 19-Feb-2018 14:39:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.566	7.566	0.000	95	280634	4.00	4.00	s
* 2 1,4-Difluorobenzene	114	9.706	9.706	0.000	97	1767087	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.667	14.667	0.000	91	1720815	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.355	16.355	0.000	87	1413913	4.00	4.40	
6 Chlorodifluoromethane	67	3.300	3.300	0.000	96	69959	2.00	2.49	
7 Propene	41	3.306	3.306	0.000	98	223499	2.00	2.66	
8 Dichlorodifluoromethane	85	3.349	3.349	0.000	100	677450	2.00	2.42	
9 Chloromethane	52	3.484	3.484	0.000	98	79521	2.00	2.63	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.494	3.494	0.000	96	362009	2.00	2.05	
11 Vinyl chloride	62	3.613	3.613	0.000	99	258144	2.00	2.34	
14 Butane	43	3.683	3.683	0.000	93	415744	2.00	2.63	
13 Acetaldehyde	44	3.683	3.683	0.000	20	19931	NC	NC	
12 Butadiene	54	3.683	3.683	0.000	92	204925	2.00	2.51	
15 Bromomethane	94	3.920	3.920	0.000	99	213366	2.00	2.19	
16 Chloroethane	64	4.028	4.028	0.000	98	130426	2.00	2.39	
17 Ethanol	31	4.141	4.141	0.000	96	470258	10.0	9.60	
18 Vinyl bromide	106	4.265	4.265	0.000	98	195971	2.00	2.06	
19 2-Methylbutane	43	4.309	4.309	0.000	91	298138	2.00	2.38	
20 Acrolein	56	4.476	4.476	0.000	93	53677	2.00	2.30	
21 Trichlorofluoromethane	101	4.476	4.476	0.000	99	665190	2.00	2.29	
22 Acetonitrile	40	4.524	4.524	0.000	98	90022	2.00	2.58	
23 Acetone	58	4.562	4.562	0.000	98	276942	6.00	6.36	
24 Pentane	72	4.659	4.659	0.000	97	42927	2.00	2.24	
25 Isopropyl alcohol	45	4.675	4.675	0.000	94	779371	6.00	6.45	
26 Ethyl ether	31	4.783	4.783	0.000	96	235370	2.00	2.40	
27 1,1-Dichloroethene	96	5.037	5.037	0.000	93	199651	2.00	2.02	
28 Acrylonitrile	53	5.117	5.117	0.000	94	143553	2.00	2.33	
29 2-Methyl-2-propanol	59	5.161	5.161	0.000	95	328469	2.00	2.05	
30 1,1,2-Trichloro-1,2,2-trif	101	5.204	5.204	0.000	93	431852	2.00	2.04	
31 Methylene Chloride	84	5.322	5.322	0.000	97	189769	2.00	1.90	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.338	5.338	0.000	95	216063	2.00	2.33	
33 Carbon disulfide	76	5.452	5.452	0.000	99	552575	2.00	2.06	
34 trans-1,2-Dichloroethene	96	6.023	6.023	0.000	93	202573	2.00	2.03	
35 Methyl tert-butyl ether	73	6.147	6.147	0.000	97	552651	2.00	2.24	
36 1,1-Dichloroethane	63	6.390	6.390	0.000	99	455121	2.00	2.29	
38 Vinyl acetate	43	6.498	6.498	0.000	100	585640	2.00	2.44	
39 2-Butanone (MEK)	72	6.886	6.886	0.000	99	84902	2.00	1.95	
40 Hexane	56	6.940	6.940	0.000	90	198121	2.00	2.38	
41 cis-1,2-Dichloroethene	96	7.280	7.280	0.000	98	207853	2.00	2.00	
42 Ethyl acetate	43	7.474	7.474	0.000	98	453574	2.00	2.39	
43 Chloroform	83	7.598	7.598	0.000	98	508552	2.00	2.22	
44 Tetrahydrofuran	42	7.959	7.959	0.000	95	237518	2.00	2.37	
45 1,1,1-Trichloroethane	97	8.552	8.552	0.000	95	542598	2.00	2.25	
46 1,2-Dichloroethane	62	8.639	8.639	0.000	98	377842	2.00	2.12	
47 Benzene	78	9.124	9.124	0.000	97	650424	2.00	1.87	
48 Cyclohexane	69	9.129	9.129	0.000	97	113178	2.00	2.05	
49 Carbon tetrachloride	117	9.156	9.156	0.000	97	499198	2.00	1.86	
50 n-Butanol	31	9.178	9.178	0.000	67	63486	2.00	1.66	
51 2,3-Dimethylpentane	71	9.296	9.296	0.000	90	159269	NC	NC	
52 Thiophene	84	9.706	9.706	0.000	39	2085	NC	NC	
53 Isooctane	57	9.971	9.971	0.000	98	1198815	2.00	2.10	
54 n-Heptane	71	10.391	10.391	0.000	93	245519	2.00	1.98	
55 1,2-Dichloropropane	63	10.402	10.402	0.000	88	268408	2.00	2.08	
56 Trichloroethene	130	10.456	10.456	0.000	93	277461	2.00	1.70	
57 Dibromomethane	93	10.515	10.515	0.000	87	269069	2.00	1.83	
58 Dichlorobromomethane	83	10.688	10.688	0.000	99	537985	2.00	2.13	
59 1,4-Dioxane	88	10.715	10.715	0.000	93	71996	2.00	1.59	
60 Methyl methacrylate	41	10.844	10.844	0.000	92	271036	2.00	2.17	
61 Methylcyclohexane	83	11.286	11.286	0.000	91	395958	NC	NC	
62 4-Methyl-2-pentanone (MIBK	43	11.739	11.739	0.000	98	407265	2.00	1.93	
63 cis-1,3-Dichloropropene	75	11.766	11.766	0.000	98	412904	2.00	2.08	
64 trans-1,3-Dichloropropene	75	12.505	12.505	0.000	97	379786	2.00	2.13	
65 Toluene	91	12.629	12.629	0.000	93	699206	2.00	1.83	
66 1,1,2-Trichloroethane	83	12.699	12.699	0.000	97	220032	2.00	1.92	
69 2-Hexanone	58	13.152	13.152	0.000	92	183820	2.00	1.73	
70 Chlorodibromomethane	129	13.416	13.416	0.000	98	465173	2.00	1.97	
71 n-Octane	85	13.427	13.427	0.000	94	261391	2.00	1.95	
72 Ethylene Dibromide	107	13.707	13.707	0.000	98	389292	2.00	1.89	
73 Tetrachloroethene	129	13.821	13.821	0.000	92	254805	2.00	1.73	
74 Chlorobenzene	112	14.716	14.716	0.000	89	532681	2.00	1.74	
75 2,3-Dimethylheptane	43	14.958	14.958	0.000	79	2471	NC	NC	
76 Ethylbenzene	91	15.034	15.034	0.000	100	921927	2.00	1.88	
78 m-Xylene & p-Xylene	91	15.207	15.207	0.000	99	1456421	4.00	3.91	
79 Bromoform	173	15.616	15.616	0.000	95	420038	2.00	1.86	
80 Styrene	104	15.676	15.676	0.000	97	498676	2.00	1.92	
81 n-Nonane	57	15.703	15.703	0.000	94	562305	2.00	2.21	
82 o-Xylene	91	15.735	15.735	0.000	97	760823	2.00	1.92	
83 1,1,2,2-Tetrachloroethane	83	16.064	16.064	0.000	99	529640	2.00	1.96	
84 1,2,3-Trichloropropane	110	16.215	16.215	0.000	98	156568	2.00	1.86	
85 Isopropylbenzene	105	16.350	16.350	0.000	98	1002011	2.00	1.83	
86 N-Propylbenzene	120	16.911	16.911	0.000	99	249438	2.00	1.76	
87 2-Chlorotoluene	126	16.932	16.932	0.000	96	237457	2.00	1.77	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 4-Ethyltoluene	105	17.072	17.072	0.000	98	958751	2.00	1.86	
89 1,3,5-Trimethylbenzene	120	17.159	17.159	0.000	91	368054	2.00	1.76	
90 Alpha Methyl Styrene	118	17.401	17.401	0.000	85	372582	2.00	1.93	
91 n-Decane	57	17.531	17.531	0.000	90	651505	2.00	2.17	
92 tert-Butylbenzene	119	17.617	17.617	0.000	91	852514	2.00	1.80	
93 1,2,4-Trimethylbenzene	105	17.633	17.633	0.000	96	846837	2.00	1.89	
94 1,3-Dichlorobenzene	146	17.903	17.903	0.000	97	537605	2.00	1.65	
95 sec-Butylbenzene	105	17.914	17.914	0.000	98	1199066	2.00	1.88	
96 Benzyl chloride	91	17.984	17.984	0.000	97	826754	2.00	2.13	
97 1,4-Dichlorobenzene	146	18.000	18.000	0.000	94	538882	2.00	1.66	
98 4-Isopropyltoluene	119	18.097	18.097	0.000	96	982790	2.00	1.85	
99 1,2,3-Trimethylbenzene	105	18.140	18.140	0.000	99	873355	2.00	1.84	
102 Butylcyclohexane	83	18.377	18.377	0.000	46	1783	NC	NC	
100 1,2-Dichlorobenzene	146	18.383	18.383	0.000	94	520699	2.00	1.70	
101 2,3-Dihydroindene	117	18.388	18.388	0.000	94	746281	NC	NC	
103 Indene	116	18.523	18.523	0.000	92	631387	NC	NC	
104 n-Butylbenzene	91	18.566	18.566	0.000	98	986146	2.00	1.94	
105 Undecane	57	18.949	18.949	0.000	96	640851	2.00	2.12	
106 1,2-Dibromo-3-Chloropropan	157	19.019	19.019	0.000	93	251723	2.00	1.33	
109 1,2,4,5-Tetramethylbenzene	119	19.364	19.364	0.000	96	856257	2.00	1.34	
111 Dodecane	57	20.038	20.038	0.000	97	496495	2.00	1.81	
112 1,2,4-Trichlorobenzene	180	20.146	20.146	0.000	93	416249	2.00	1.68	
114 Naphthalene	128	20.270	20.270	0.000	99	937968	2.00	1.64	
115 Hexachlorobutadiene	225	20.502	20.502	0.000	94	410420	2.00	1.72	
116 1,2,3-Trichlorobenzene	180	20.545	20.545	0.000	94	369006	2.00	1.60	
117 2-Methylnaphthalene	142	21.338	21.338	0.000	100	484567	6.25	1.90	
118 1-Methylnaphthalene	142	21.521	21.521	0.000	100	488245	6.25	2.00	
S 119 Xylenes, Total	100				0		6.00	5.83	
S 120 1,2-Dichloroethene, Total	1				0		4.00	4.03	

QC Flag Legend

Processing Flags

NC - Not Calibrated

s - Failed ISTD Recovery Test

Reagents:

40CV101P_00055	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

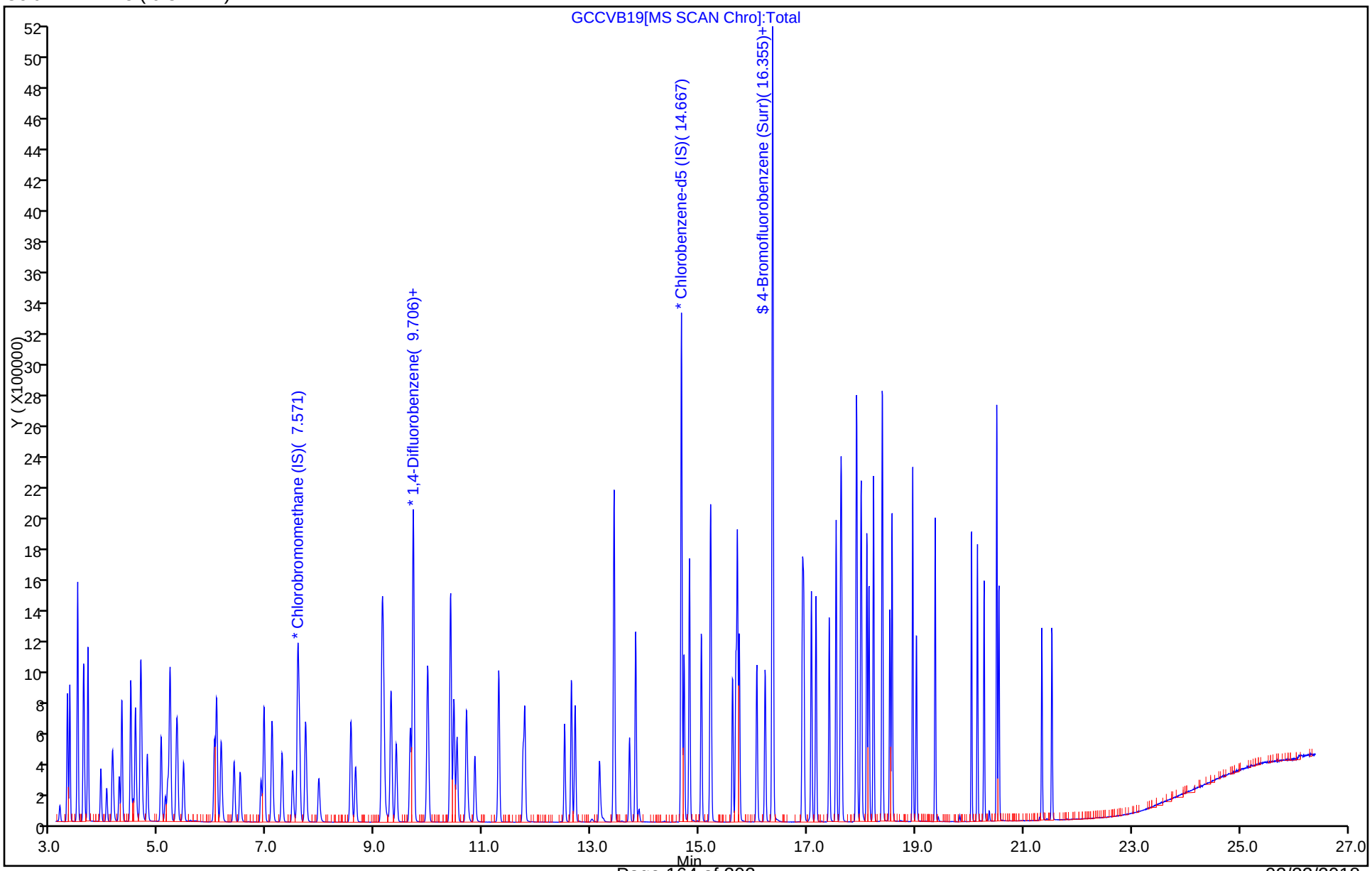
Report Date: 20-Feb-2018 10:50:48 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GCCVB19.D

Injection Date:	19-Feb-2018 09:20:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GBFBK13.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	13-Nov-2017 14:59:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0006586-001				
Misc. Info.:	TUNE				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	15-Nov-2017 15:45:51	Calib Date:	13-Nov-2017 22:37:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK031				

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.410	4.372	0.038	0	2142508	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

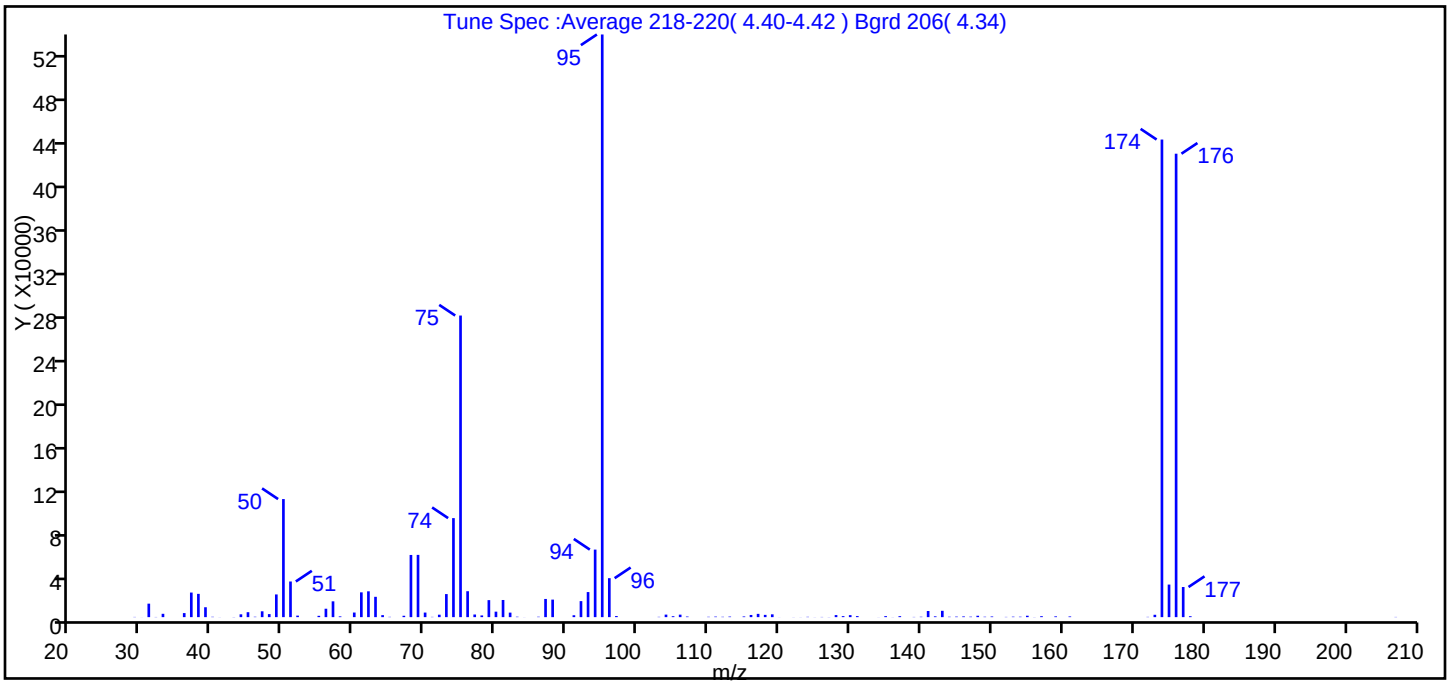
40MXSUR_00002 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GBFBK13.D
Injection Date: 13-Nov-2017 14:59:30 Instrument ID: MG
Lims ID: BFB
Client ID:
Operator ID: 7126 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	20.3
75	30 to 60% of m/z 95	51.8
96	5 to 9% of m/z 95	6.7
173	Less than 2% of m/z 174	0.4 (0.5)
174	50 to 120% of m/z 95	82.0
175	5 to 9% of m/z 174	5.6 (6.8)
176	Greater than 95% but less than 101% of m/z 174	79.5 (97.0)
177	5 to 9% of m/z 176	5.2 (6.5)

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GBFBK13.D\MG_TO15.rslt\spectra.d
Injection Date: 13-Nov-2017 14:59:30
Spectrum: Tune Spec :Average 218-220(4.40-4.42) Bgrd 206(4.34)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 117

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	193	64.00	1849	103.00	268	140.00	356
30.00	33	65.00	263	104.00	2336	141.00	5657
31.00	12441	67.00	1266	105.00	848	142.00	723
32.00	164	68.00	57344	106.00	2305	143.00	5841
33.00	3082	69.00	57408	107.00	549	144.00	370
36.00	3740	70.00	4220	110.00	319	145.00	487
37.00	22680	71.00	238	111.00	499	146.00	660
38.00	21472	72.00	2254	112.00	319	147.00	439
39.00	9133	73.00	21272	113.00	521	148.00	1279
40.00	317	74.00	91328	115.00	638	149.00	370
41.00	74	75.00	278144	116.00	2002	150.00	609
43.00	135	76.00	23912	117.00	3029	152.00	216
44.00	2603	77.00	2434	118.00	2093	153.00	436
45.00	4556	78.00	1566	119.00	2593	154.00	393
46.00	356	79.00	15685	120.00	51	155.00	1300
47.00	5392	80.00	5065	122.00	77	156.00	104
48.00	2807	81.00	15821	123.00	71	157.00	863
49.00	20944	82.00	4178	124.00	286	159.00	724
50.00	108888	83.00	395	125.00	75	161.00	637
51.00	32880	84.00	59	126.00	186	172.00	241
52.00	1403	86.00	377	127.00	107	173.00	2183
54.00	11	87.00	16776	128.00	1895	174.00	440448
55.00	1218	88.00	16171	129.00	922	175.00	30040
56.00	7759	91.00	1741	130.00	1845	176.00	427392
57.00	14585	92.00	14773	131.00	959	177.00	27784
58.00	687	93.00	23128	134.00	61	178.00	833
60.00	4251	94.00	62288	135.00	936	207.00	192
61.00	22872	95.00	537344	136.00	83		
62.00	23816	96.00	35936	137.00	894		
63.00	18744	97.00	1019	139.00	196		

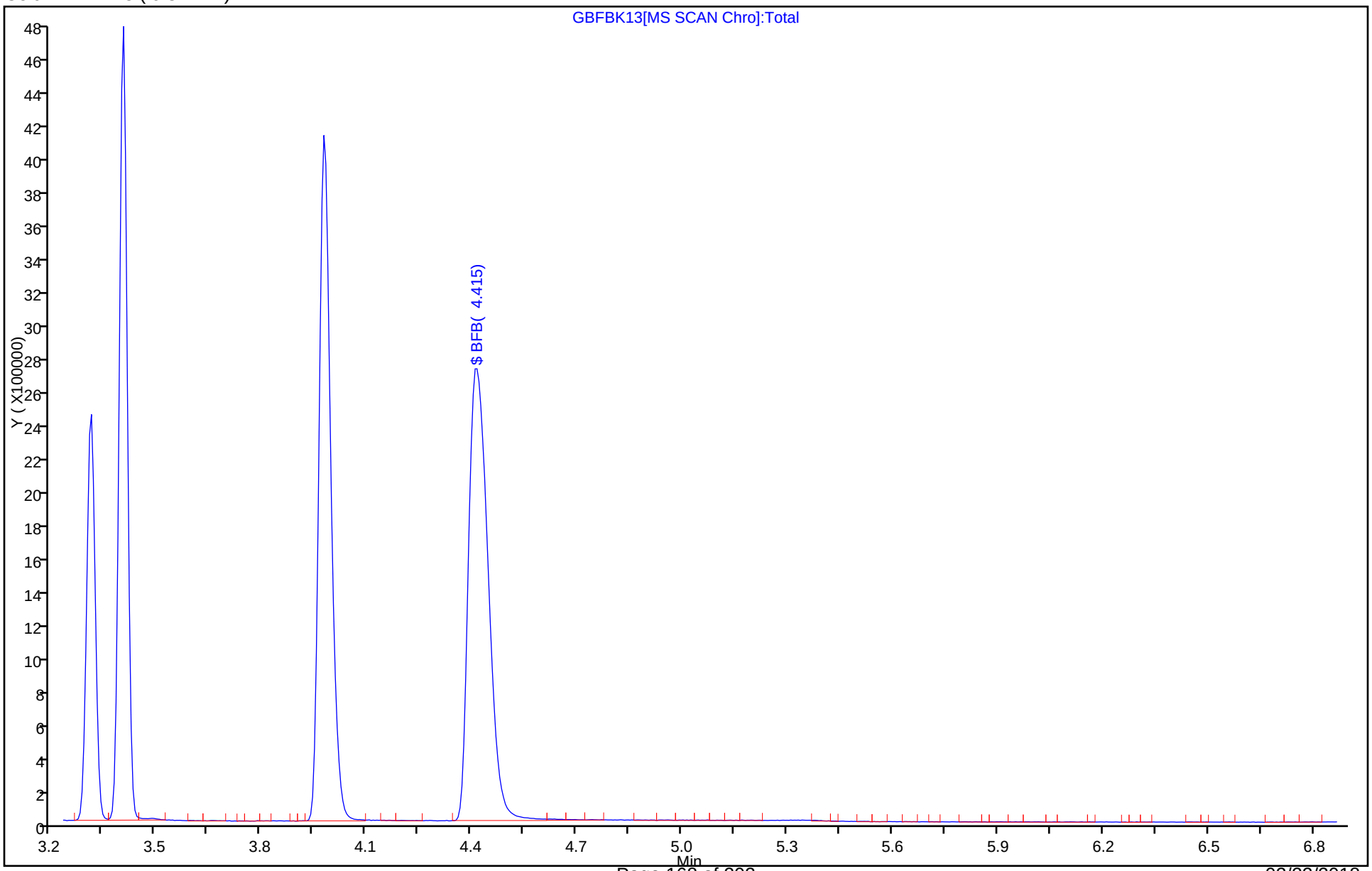
Report Date: 15-Nov-2017 15:45:52 Chrom Revision: 2.2 13-Nov-2017 17:19:06

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GBFBK13.D

Injection Date:	13-Nov-2017 14:59:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GBFBB19.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	19-Feb-2018 08:47:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007419-001				
Misc. Info.:	TUNE				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Feb-2018 10:50:46	Calib Date:	13-Nov-2017 22:37:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.345	4.345	0.000	0	1498880	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

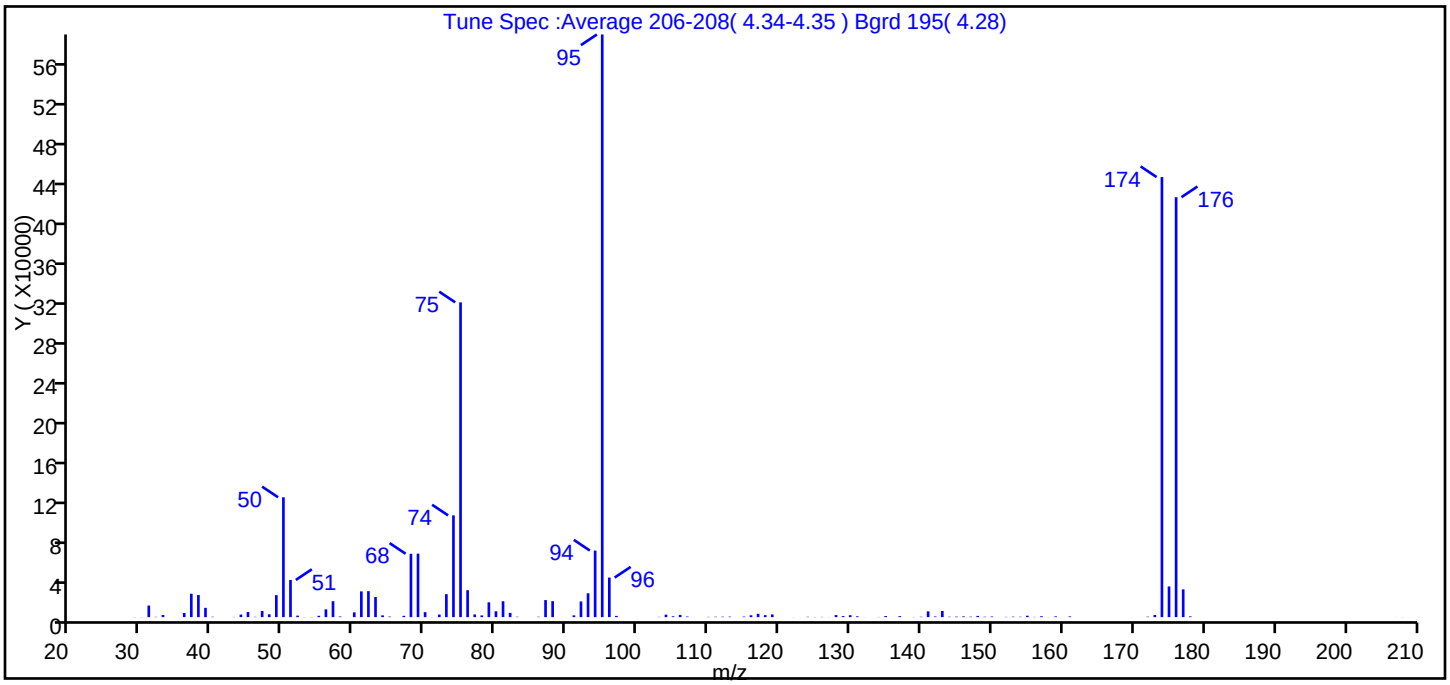
40MXSUR_00002 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GBFBB19.D
Injection Date: 19-Feb-2018 08:47:30 Instrument ID: MG
Lims ID: BFB
Client ID:
Operator ID: 7126 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	20.6
75	30 to 60% of m/z 95	54.0
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.4 (0.5)
174	50 to 120% of m/z 95	75.5
175	5 to 9% of m/z 174	5.3 (7.0)
176	Greater than 95% but less than 101% of m/z 174	72.1 (95.4)
177	5 to 9% of m/z 176	4.8 (6.6)

Data File: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GBFBB19.D\MG_TO15.rslt\spectra.d
Injection Date: 19-Feb-2018 08:47:30
Spectrum: Tune Spec :Average 206-208(4.34-4.35) Bgrd 195(4.28)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 117

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	133	64.00	1779	104.00	2463	142.00	677
30.00	100	65.00	528	105.00	844	143.00	6107
31.00	11539	67.00	1308	106.00	2235	144.00	384
32.00	315	68.00	63152	107.00	576	145.00	518
33.00	2163	69.00	63264	110.00	253	146.00	714
36.00	4121	70.00	4977	111.00	408	147.00	440
37.00	23312	71.00	131	112.00	441	148.00	1235
38.00	22040	72.00	2615	113.00	483	149.00	404
39.00	9277	73.00	22928	115.00	543	150.00	600
40.00	368	74.00	101360	116.00	1871	152.00	248
43.00	221	75.00	313664	117.00	3328	153.00	469
44.00	2542	76.00	26848	118.00	2003	154.00	351
45.00	5138	77.00	2685	119.00	2698	155.00	1405
46.00	334	78.00	1723	122.00	71	156.00	217
47.00	6102	79.00	14767	123.00	58	157.00	891
48.00	2832	80.00	5846	124.00	350	158.00	69
49.00	21936	81.00	15822	125.00	152	159.00	761
50.00	119432	82.00	4225	126.00	223	161.00	726
51.00	37056	83.00	387	127.00	67	172.00	463
52.00	1496	86.00	393	128.00	2082	173.00	2153
53.00	142	87.00	17000	129.00	1025	174.00	438464
54.00	149	88.00	15934	130.00	1927	175.00	30552
55.00	1350	91.00	1791	131.00	836	176.00	418432
56.00	7785	92.00	15638	132.00	51	177.00	27688
57.00	15893	93.00	23792	134.00	189	178.00	747
58.00	626	94.00	66360	135.00	1081	207.00	56
60.00	4764	95.00	580544	137.00	967	208.00	72
61.00	25672	96.00	39424	139.00	159		
62.00	25888	97.00	1241	140.00	383		
63.00	20072	103.00	263	141.00	5775		

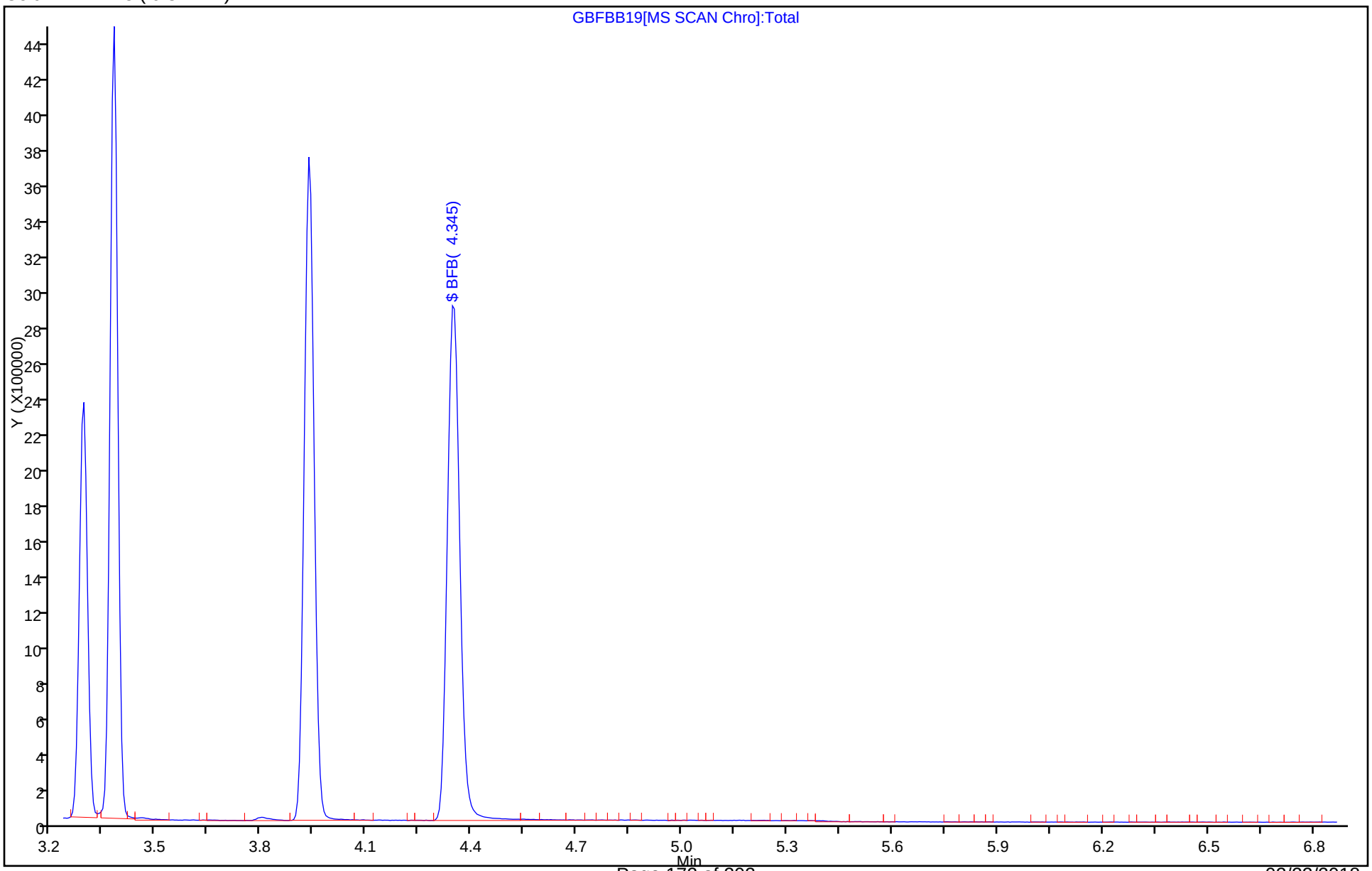
Report Date: 20-Feb-2018 10:50:47 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GBFBB19.D

Injection Date:	19-Feb-2018 08:47:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10674-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-18252/4

Matrix: Air | Lab File ID: G500BB19.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 02/19/2018 11:11

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18252 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-18252/4

Matrix: Air Lab File ID: G500BB19.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 02/19/2018 11:11

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18252 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\G500BB19.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 19-Feb-2018 11:11:30 ALS Bottle#: 16 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007419-004
Misc. Info.: 500ML BLK
Operator ID: 7126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 20-Feb-2018 10:50:48 Calib Date: 13-Nov-2017 22:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 19-Feb-2018 11:53:22

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.576	7.566	0.010	97	316429	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.712	9.706	0.006	96	1986147	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.667	14.667	0.000	90	1795132	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.355	16.355	0.000	86	1328867	4.00	3.97	
14 Butane	43	3.705	3.683	0.022	93	6819		0.0383	
13 Acetaldehyde	44	3.634	3.683	-0.049	20	10966		NC	
37 2-Methylpentane	43	6.697	6.498	0.199	74	2776		NC	
52 Thiophene	84	9.706	9.706	0.000	39	1733		NC	
101 2,3-Dihydroindene	117	18.383	18.388	-0.005	1	425		NC	
103 Indene	116	18.539	18.523	0.016	1	259		NC	
108 1,2-Dimethyl-4-Ethylbenzen	119	19.364	19.370	-0.005	1	823		NC	
107 1,2,3,5-Tetramethylbenzene	119	19.364	19.370	-0.005	1	823		NC	
110 1,2,3,4-Tetramethylbenzene	119	19.828	19.823	0.006	1	103		NC	
113 Benzo(b)thiophene	134	20.356	20.211	0.145	1	168		NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

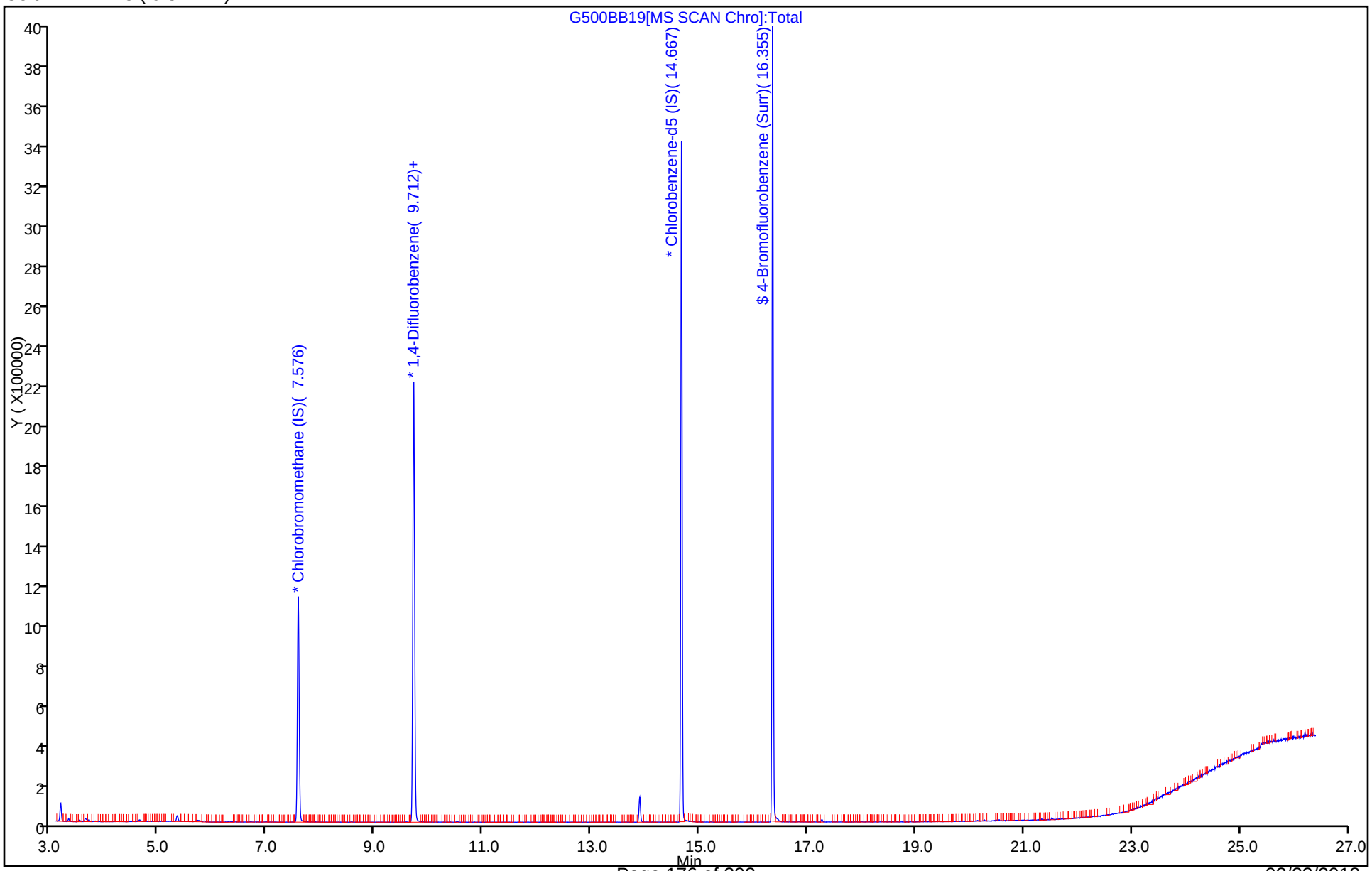
Report Date: 20-Feb-2018 10:50:52 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\G500BB19.D

Injection Date:	19-Feb-2018 11:11:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	MB			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\G500BB19.D				
Lims ID:	MB				
Client ID:					
Sample Type:	MB				
Inject. Date:	19-Feb-2018 11:11:30	ALS Bottle#:	16	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007419-004				
Misc. Info.:	500ML BLK				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Feb-2018 10:50:48	Calib Date:	13-Nov-2017 22:37:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				
First Level Reviewer: tajh		Date:	19-Feb-2018 11:53:22		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.97	99.18

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10674-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 140-18252/1002

Matrix: Air | Lab File ID: GCCVB19-LCS.d

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 02/19/2018 09:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18252 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.87		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	1.86		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.49		0.080	0.015
67-66-3	Chloroform	119.38	2.22		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	2.00		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.42		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	2.29		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	2.12		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	2.02		0.080	0.014
100-41-4	Ethylbenzene	106.17	1.88		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.90		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	2.24		0.40	0.068
91-20-3	Naphthalene	128.17	1.64		0.040	0.040
127-18-4	Tetrachloroethene	165.83	1.73		0.080	0.016
108-88-3	Toluene	92.14	1.83		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	2.03		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	1.68		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	2.25		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	1.92		0.080	0.021
79-01-6	Trichloroethene	131.39	1.70		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	1.84		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	1.89		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.76		0.080	0.026
75-01-4	Vinyl chloride	62.50	2.34		0.040	0.029
1330-20-7	Xylenes, Total	106.17	5.83		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	110		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GCCVB19-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 19-Feb-2018 09:20:30 ALS Bottle#: 15 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007419-002
Misc. Info.: P55
Operator ID: 7126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 20-Feb-2018 10:50:48 Calib Date: 13-Nov-2017 22:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 19-Feb-2018 14:39:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.566	7.566	0.000	95	280634	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.706	9.706	0.000	97	1767087	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.667	14.667	0.000	91	1720815	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.355	16.355	0.000	87	1413913	4.00	4.40	
6 Chlorodifluoromethane	67	3.300	3.300	0.000	96	69959	2.00	2.49	
7 Propene	41	3.306	3.306	0.000	98	223499	2.00	2.66	
8 Dichlorodifluoromethane	85	3.349	3.349	0.000	100	677450	2.00	2.42	
9 Chloromethane	52	3.484	3.484	0.000	98	79521	2.00	2.63	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.494	3.494	0.000	96	362009	2.00	2.05	
11 Vinyl chloride	62	3.613	3.613	0.000	99	258144	2.00	2.34	
14 Butane	43	3.683	3.683	0.000	93	415744	2.00	2.63	
13 Acetaldehyde	44	3.683	3.683	0.000	20	19931	NC	NC	
12 Butadiene	54	3.683	3.683	0.000	92	204925	2.00	2.51	
15 Bromomethane	94	3.920	3.920	0.000	99	213366	2.00	2.19	
16 Chloroethane	64	4.028	4.028	0.000	98	130426	2.00	2.39	
17 Ethanol	31	4.141	4.141	0.000	96	470258	10.0	9.60	
18 Vinyl bromide	106	4.265	4.265	0.000	98	195971	2.00	2.06	
19 2-Methylbutane	43	4.309	4.309	0.000	91	298138	2.00	2.38	
20 Acrolein	56	4.476	4.476	0.000	93	53677	2.00	2.30	
21 Trichlorofluoromethane	101	4.476	4.476	0.000	99	665190	2.00	2.29	
22 Acetonitrile	40	4.524	4.524	0.000	98	90022	2.00	2.58	
23 Acetone	58	4.562	4.562	0.000	98	276942	6.00	6.36	
24 Pentane	72	4.659	4.659	0.000	97	42927	2.00	2.24	
25 Isopropyl alcohol	45	4.675	4.675	0.000	94	779371	6.00	6.45	
26 Ethyl ether	31	4.783	4.783	0.000	96	235370	2.00	2.40	
27 1,1-Dichloroethene	96	5.037	5.037	0.000	93	199651	2.00	2.02	
28 Acrylonitrile	53	5.117	5.117	0.000	94	143553	2.00	2.33	
29 2-Methyl-2-propanol	59	5.161	5.161	0.000	95	328469	2.00	2.05	
30 1,1,2-Trichloro-1,2,2-trif	101	5.204	5.204	0.000	93	431852	2.00	2.04	
31 Methylene Chloride	84	5.322	5.322	0.000	97	189769	2.00	1.90	
32 3-Chloro-1-propene	39	5.338	5.338	0.000	95	216063	2.00	2.33	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.452	5.452	0.000	99	552575	2.00	2.06	
34 trans-1,2-Dichloroethene	96	6.023	6.023	0.000	93	202573	2.00	2.03	
35 Methyl tert-butyl ether	73	6.147	6.147	0.000	97	552651	2.00	2.24	
36 1,1-Dichloroethane	63	6.390	6.390	0.000	99	455121	2.00	2.29	
38 Vinyl acetate	43	6.498	6.498	0.000	100	585640	2.00	2.44	
39 2-Butanone (MEK)	72	6.886	6.886	0.000	99	84902	2.00	1.95	
40 Hexane	56	6.940	6.940	0.000	90	198121	2.00	2.38	
41 cis-1,2-Dichloroethene	96	7.280	7.280	0.000	98	207853	2.00	2.00	
42 Ethyl acetate	43	7.474	7.474	0.000	98	453574	2.00	2.39	
43 Chloroform	83	7.598	7.598	0.000	98	508552	2.00	2.22	
44 Tetrahydrofuran	42	7.959	7.959	0.000	95	237518	2.00	2.37	
45 1,1,1-Trichloroethane	97	8.552	8.552	0.000	95	542598	2.00	2.25	
46 1,2-Dichloroethane	62	8.639	8.639	0.000	98	377842	2.00	2.12	
47 Benzene	78	9.124	9.124	0.000	97	650424	2.00	1.87	
48 Cyclohexane	69	9.129	9.129	0.000	97	113178	2.00	2.05	
49 Carbon tetrachloride	117	9.156	9.156	0.000	97	499198	2.00	1.86	
50 n-Butanol	31	9.178	9.178	0.000	67	63486	2.00	1.66	
51 2,3-Dimethylpentane	71	9.296	9.296	0.000	90	159269	NC	NC	
52 Thiophene	84	9.706	9.706	0.000	39	2085	NC	NC	
53 Isooctane	57	9.971	9.971	0.000	98	1198815	2.00	2.10	
54 n-Heptane	71	10.391	10.391	0.000	93	245519	2.00	1.98	
55 1,2-Dichloropropane	63	10.402	10.402	0.000	88	268408	2.00	2.08	
56 Trichloroethene	130	10.456	10.456	0.000	93	277461	2.00	1.70	
57 Dibromomethane	93	10.515	10.515	0.000	87	269069	2.00	1.83	
58 Dichlorobromomethane	83	10.688	10.688	0.000	99	537985	2.00	2.13	
59 1,4-Dioxane	88	10.715	10.715	0.000	93	71996	2.00	1.59	
60 Methyl methacrylate	41	10.844	10.844	0.000	92	271036	2.00	2.17	
61 Methylcyclohexane	83	11.286	11.286	0.000	91	395958	NC	NC	
62 4-Methyl-2-pentanone (MIBK	43	11.739	11.739	0.000	98	407265	2.00	1.93	
63 cis-1,3-Dichloropropene	75	11.766	11.766	0.000	98	412904	2.00	2.08	
64 trans-1,3-Dichloropropene	75	12.505	12.505	0.000	97	379786	2.00	2.13	
65 Toluene	91	12.629	12.629	0.000	93	699206	2.00	1.83	
66 1,1,2-Trichloroethane	83	12.699	12.699	0.000	97	220032	2.00	1.92	
69 2-Hexanone	58	13.152	13.152	0.000	92	183820	2.00	1.73	
70 Chlorodibromomethane	129	13.416	13.416	0.000	98	465173	2.00	1.97	
71 n-Octane	85	13.427	13.427	0.000	94	261391	2.00	1.95	
72 Ethylene Dibromide	107	13.707	13.707	0.000	98	389292	2.00	1.89	
73 Tetrachloroethene	129	13.821	13.821	0.000	92	254805	2.00	1.73	
74 Chlorobenzene	112	14.716	14.716	0.000	89	532681	2.00	1.74	
75 2,3-Dimethylheptane	43	14.958	14.958	0.000	79	2471	NC	NC	
76 Ethylbenzene	91	15.034	15.034	0.000	100	921927	2.00	1.88	
78 m-Xylene & p-Xylene	91	15.207	15.207	0.000	99	1456421	4.00	3.91	
79 Bromoform	173	15.616	15.616	0.000	95	420038	2.00	1.86	
80 Styrene	104	15.676	15.676	0.000	97	498676	2.00	1.92	
81 n-Nonane	57	15.703	15.703	0.000	94	562305	2.00	2.21	
82 o-Xylene	91	15.735	15.735	0.000	97	760823	2.00	1.92	
83 1,1,2,2-Tetrachloroethane	83	16.064	16.064	0.000	99	529640	2.00	1.96	
84 1,2,3-Trichloropropane	110	16.215	16.215	0.000	98	156568	2.00	1.86	
85 Isopropylbenzene	105	16.350	16.350	0.000	98	1002011	2.00	1.83	
86 N-Propylbenzene	120	16.911	16.911	0.000	99	249438	2.00	1.76	
87 2-Chlorotoluene	126	16.932	16.932	0.000	96	237457	2.00	1.77	
88 4-Ethyltoluene	105	17.072	17.072	0.000	98	958751	2.00	1.86	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
89 1,3,5-Trimethylbenzene	120	17.159	17.159	0.000	91	368054	2.00	1.76	
90 Alpha Methyl Styrene	118	17.401	17.401	0.000	85	372582	2.00	1.93	
91 n-Decane	57	17.531	17.531	0.000	90	651505	2.00	2.17	
92 tert-Butylbenzene	119	17.617	17.617	0.000	91	852514	2.00	1.80	
93 1,2,4-Trimethylbenzene	105	17.633	17.633	0.000	96	846837	2.00	1.89	
94 1,3-Dichlorobenzene	146	17.903	17.903	0.000	97	537605	2.00	1.65	
95 sec-Butylbenzene	105	17.914	17.914	0.000	98	1199066	2.00	1.88	
96 Benzyl chloride	91	17.984	17.984	0.000	97	826754	2.00	2.13	
97 1,4-Dichlorobenzene	146	18.000	18.000	0.000	94	538882	2.00	1.66	
98 4-Isopropyltoluene	119	18.097	18.097	0.000	96	982790	2.00	1.85	
99 1,2,3-Trimethylbenzene	105	18.140	18.140	0.000	99	873355	2.00	1.84	
102 Butylcyclohexane	83	18.377	18.377	0.000	46	1783	NC	NC	
100 1,2-Dichlorobenzene	146	18.383	18.383	0.000	94	520699	2.00	1.70	
101 2,3-Dihydroindene	117	18.388	18.388	0.000	94	746281	NC	NC	
103 Indene	116	18.523	18.523	0.000	92	631387	NC	NC	
104 n-Butylbenzene	91	18.566	18.566	0.000	98	986146	2.00	1.94	
105 Undecane	57	18.949	18.949	0.000	96	640851	2.00	2.12	
106 1,2-Dibromo-3-Chloropropan	157	19.019	19.019	0.000	93	251723	2.00	1.33	
109 1,2,4,5-Tetramethylbenzene	119	19.364	19.364	0.000	96	856257	2.00	1.34	
111 Dodecane	57	20.038	20.038	0.000	97	496495	2.00	1.81	
112 1,2,4-Trichlorobenzene	180	20.146	20.146	0.000	93	416249	2.00	1.68	
114 Naphthalene	128	20.270	20.270	0.000	99	937968	2.00	1.64	
115 Hexachlorobutadiene	225	20.502	20.502	0.000	94	410420	2.00	1.72	
116 1,2,3-Trichlorobenzene	180	20.545	20.545	0.000	94	369006	2.00	1.60	
117 2-Methylnaphthalene	142	21.338	21.338	0.000	100	484567	6.25	1.90	
118 1-Methylnaphthalene	142	21.521	21.521	0.000	100	488245	6.25	2.00	
S 119 Xylenes, Total	100				0		6.00	5.83	
S 120 1,2-Dichloroethene, Total	1				0		4.00	4.03	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101P_00055	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

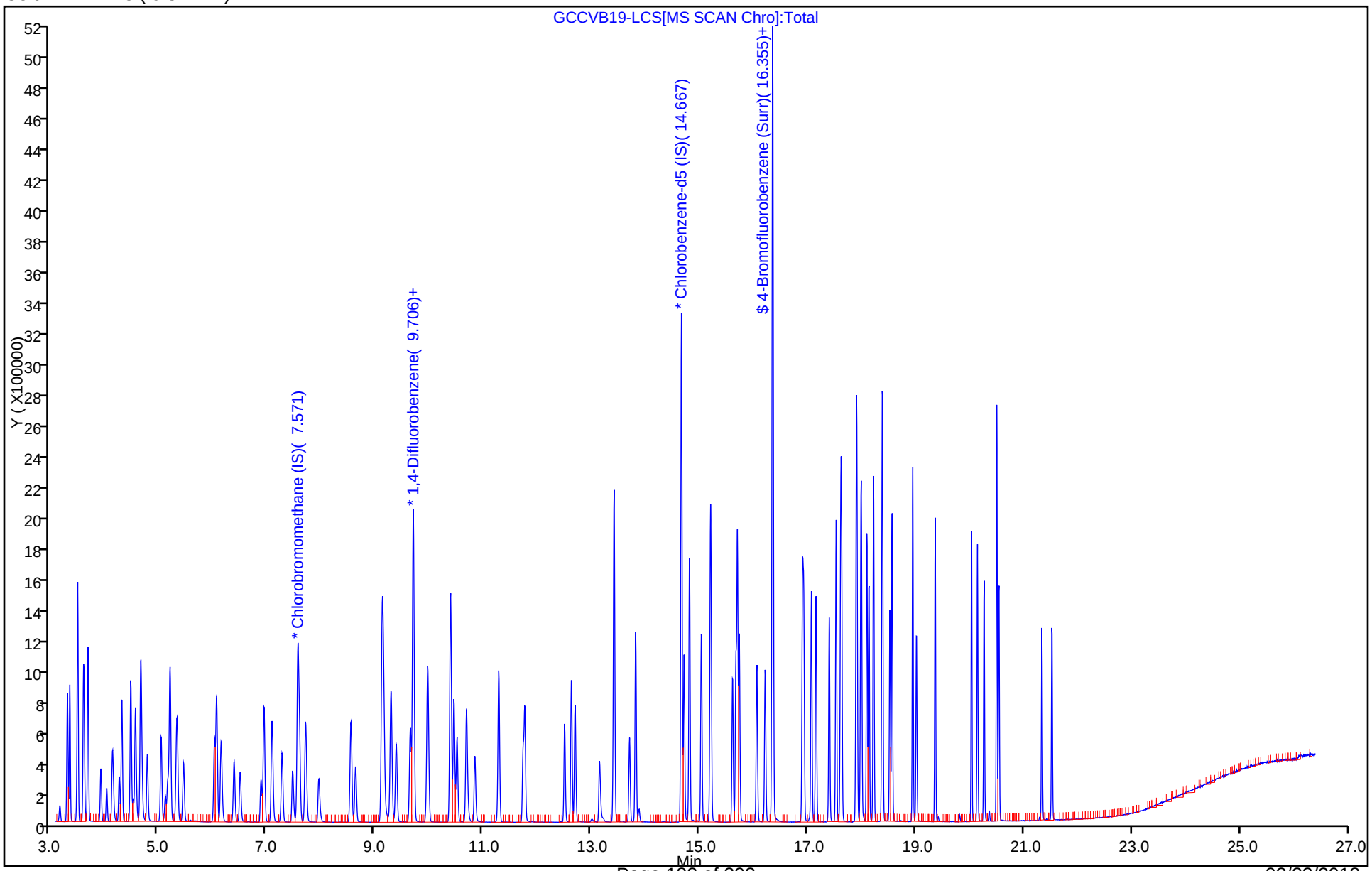
Report Date: 20-Feb-2018 10:50:50 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Laboratories

Data File: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GCCVB19-LCS.d

Injection Date:	19-Feb-2018 09:20:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	LCS			Worklist Smp#:	1002
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\GCCVB19-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 19-Feb-2018 09:20:30 ALS Bottle#: 15 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007419-002
Misc. Info.: P55
Operator ID: 7126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20180218-7419.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 20-Feb-2018 10:50:48 Calib Date: 13-Nov-2017 22:37:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20171108-6586.b\GK13IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 19-Feb-2018 14:39:57

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.40	110.09

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1

SDG No.:

Instrument ID: MG Start Date: 11/13/2017 14:59

Analysis Batch Number: 15917 End Date: 11/14/2017 02:10

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-15917/1		11/13/2017 14:59	1	GBFBK13.D	RTX-5 0.32(mm)
IC 140-15917/3		11/13/2017 16:15	1	GK13IC01.D	RTX-5 0.32(mm)
IC 140-15917/4		11/13/2017 16:57	1	GK13IC02.D	RTX-5 0.32(mm)
140-9800-A-1 MDLV		11/13/2017 16:57	1		RTX-5 0.32(mm)
IC 140-15917/5		11/13/2017 17:39	1	GK13IC03.D	RTX-5 0.32(mm)
140-9800-A-2 MDLV		11/13/2017 17:39	1		RTX-5 0.32(mm)
IC 140-15917/6		11/13/2017 18:22	1	GK13IC04.D	RTX-5 0.32(mm)
140-9800-A-3 MDLV		11/13/2017 18:22	1		RTX-5 0.32(mm)
IC 140-15917/7		11/13/2017 19:05	1	GK13IC05.D	RTX-5 0.32(mm)
140-9800-A-4 MDLV		11/13/2017 19:05	1		RTX-5 0.32(mm)
IC 140-15917/8		11/13/2017 19:47	1	GK13IC06.D	RTX-5 0.32(mm)
140-9800-A-5 MDLV		11/13/2017 19:47	1		RTX-5 0.32(mm)
ICIS 140-15917/9		11/13/2017 20:29	1	GK13IC07.D	RTX-5 0.32(mm)
IC 140-15917/10		11/13/2017 21:11	1	GK13IC08.D	RTX-5 0.32(mm)
IC 140-15917/11		11/13/2017 21:54	1	GK13IC09.D	RTX-5 0.32(mm)
IC 140-15917/12		11/13/2017 22:37	1	GK13IC10.D	RTX-5 0.32(mm)
ICV 140-15917/14		11/14/2017 00:02	1	GICVK13.D	RTX-5 0.32(mm)
ZZZZZ		11/14/2017 02:10	1		RTX-5 0.32(mm)

171113.ZZZ

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 101 mL	20.4	11/13/2017	10:49:09 AM
BFB	16 - 101 mL	20.4	11/13/2017	11:22:55 AM
BLK	16 - 101 mL	20.3	11/13/2017	11:57:10 AM
BLK	16 - 101 mL	20.3	11/13/2017	12:39:36 PM
CCV	15 - 100 mL	32.5	11/13/2017	1:22:04 PM
BFB	16 - 101 mL	20.2	11/13/2017	2:27:34 PM
BFB	16 - 100 mL	20	11/13/2017	2:59:34 PM
BLK	16 - 100 mL	20	11/13/2017	3:32:31 PM
IC	1 - 51 mL	30.7	11/13/2017	4:15:41 PM
IC	1 - 100 mL	29.7	11/13/2017	4:57:10 PM
IC	2 - 101 mL	30.7	11/13/2017	5:39:54 PM
IC	2 - 200 mL	29.9	11/13/2017	6:22:36 PM
IC	3 - 201 mL	30.5	11/13/2017	7:05:02 PM
IC	4 - 200 mL	31.4	11/13/2017	7:47:23 PM
IC	5 - 200 mL	31.7	11/13/2017	8:29:50 PM
IC	6 - 200 mL	29.5	11/13/2017	9:11:58 PM
IC	7 - 201 mL	28.4	11/13/2017	9:54:22 PM
IC	8 - 200 mL	31.4	11/13/2017	10:37:10 PM
BLK	16 - 100 mL	19.6	11/13/2017	11:19:36 PM
ICV	9 - 101 mL	26	11/14/2017	12:02:13 AM
LCS	10 - 101 mL	32	11/14/2017	12:44:43 AM
BLK	16 - 101 mL	19.5	11/14/2017	1:27:03 AM
BLK	16 - 501 mL	18.6	11/14/2017	2:10:54 AM

MG ICAL WL 6586

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 18 & KNOX-MS-0023, Rev 2

Analysis Date:	11/13/17	Instrument:	MG	Chrom WL #:	6586	TALS Batch & Event #	TO14/15: 15917 1337
							DOD: 16021 1339 OHIO: 16020/ 1338

Chrom/Worklist Review	1st	Comments	2nd
1. Re-read each Limit Group [method editor-limit groups]	✓		na
2. Verify LODV in Chrom [method editor -> edit -> MDL]	✓		na
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]	✓		✓
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]	✓		✓
5. Did BFB meet tune criteria? [F8]	✓		✓
6. Were all standards injected within 24 hr of BFB? [F7]	✓		✓
7. High point checked for saturation and point removed if so? [Chrom]	✓	⑤ n-propyl benzene, 2 chlorotol	✓
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]	NA	sec. butyl benz, 4 isopropyl tol. n-butyl benz, 1245 TMB2	NA
9. RT for each IS ±20 sec avg. RT? [F6 IstdRec]	✓		✓
10. Area for each IS ± 40% avg. area? [F6 IstdRec]	✓		✓
11. Each analyte ± 0.06 RRT of avg. RRT? [F6 - ERT]	✓		✓
12. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/ sec-butylbenzene/1,2,3-trimethylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	NA		NA
• 1,2,4- and 1,2,3-trichlorobenzenes	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	✓		NA

MLG Review	TO	DOD	OH	Comments	TO-	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1& 2 methylnaphthalene ≤ 50% [F6 Σ]	✓	✓	✓		✓	✓	✓
15. Were at least 5 levels of each compound analyzed? [F6]	✓	✓	✓		✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.? [F6]	✓	✓	✓		✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? (Note: Ohio does not allow quad) [F6]	na →				NA	NA	NA
18. If curves were used, is correlation coefficient ≥0.990? [F6]	na →						
19. Is the intercept less than the RL for each curve? [F6]	na →						
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntrl-C, details]	na →		na				na
21. Is low point RSE ≤ 50 %? [F6] Meth @ 57%, lab cont.	✓	✓	✓		✓	✓	✓
22. Is the second source analysis within limits? [F8 - iav]				12 Dibrom 3 chloropropane @ 63%,	✓		✓
Analyst/Date: 11/13/17				2nd Level Reviewer/Date: 11/15/17			

TALS Review	TO	DOD	OH	Comments	TO	DOD	OH
23. Upload ICAL	✓				na	na	na
24. Graphics uploaded? [paperclip]	✓	✓	✓		✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events –'Fix ICAL linkage' if needed]	✓	✓	✓		✓	✓	✓
26. Runs linked to BFB? [QC Links]	✓	✓	✓				
27. Run Checklist and acknowledge findings [F8]	✓	✓	✓		✓	✓	✓
28. If criteria not met, was a NCM generated?	NA →				NA	NA	NA
29. After review in TALS, approve the method in TALS.	na	na	na		✓	✓	✓
30. After verifying TALS is correct, lock method in Chrom <resolve any error issues>		na	na		✓	✓	✓
31. Checklist & Entech report scanned, attached & assigned properly?		na	na		✓	✓	✓

Analyst/date: 11/13/17	2nd Level Reviewer/date: 11/15/17
Comments: Sec, 124 TMB2 Naph, Hexa, 123 TMB2, UR 8: N-propylbenz, 2 Chlorotol. Sec. butyl benz, 4- Iso propyl tol, n-butyl benz, 1245 TMB2, IPA 1+2 Methyl Naph. (12-Dibromo 3 chloropropane DMS ICV @ 63%.	Comments: due to low MC in ICV10

MS017r42, 08/30/2017

02/22/2018

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-10674-1

SDG No.:

Instrument ID: MG Start Date: 02/19/2018 08:47

Analysis Batch Number: 18252 End Date: 02/20/2018 03:40

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-18252/1		02/19/2018 08:47	1	GBFBB19.D	RTX-5 0.32(mm)
CCVIS 140-18252/2		02/19/2018 09:20	1	GCCVB19.D	RTX-5 0.32(mm)
LCS 140-18252/1002		02/19/2018 09:20	1	GCCVB19-LCS.d	RTX-5 0.32(mm)
MB 140-18252/4		02/19/2018 11:11	1	G500BB19.D	RTX-5 0.32(mm)
ZZZZZ		02/19/2018 11:52	1		RTX-5 0.32(mm)
ZZZZZ		02/19/2018 13:54	1		RTX-5 0.32(mm)
ZZZZZ		02/19/2018 14:34	1		RTX-5 0.32(mm)
ZZZZZ		02/19/2018 15:15	1		RTX-5 0.32(mm)
ZZZZZ		02/19/2018 15:57	1		RTX-5 0.32(mm)
ZZZZZ		02/19/2018 16:38	1		RTX-5 0.32(mm)
ZZZZZ		02/19/2018 17:19	1		RTX-5 0.32(mm)
ZZZZZ		02/19/2018 17:59	1		RTX-5 0.32(mm)
ZZZZZ		02/19/2018 18:41	1		RTX-5 0.32(mm)
ZZZZZ		02/19/2018 19:22	1		RTX-5 0.32(mm)
ZZZZZ		02/19/2018 20:03	1		RTX-5 0.32(mm)
ZZZZZ		02/19/2018 20:44	1		RTX-5 0.32(mm)
ZZZZZ		02/19/2018 21:25	1		RTX-5 0.32(mm)
ZZZZZ		02/19/2018 22:06	1		RTX-5 0.32(mm)
ZZZZZ		02/19/2018 22:46	1		RTX-5 0.32(mm)
ZZZZZ		02/19/2018 23:27	1		RTX-5 0.32(mm)
140-10674-1		02/20/2018 00:08	1	GB19P115.D	RTX-5 0.32(mm)
140-10674-2		02/20/2018 00:48	1	GB19P116.D	RTX-5 0.32(mm)
140-10674-3		02/20/2018 01:29	1	GB19P201.D	RTX-5 0.32(mm)
ZZZZZ		02/20/2018 02:13	1		RTX-5 0.32(mm)
ZZZZZ		02/20/2018 03:40	1		RTX-5 0.32(mm)

180219.ZZZ

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 100 mL	20.6	2/19/2018	8:47:23 AM
CCVIS	15 - 101 mL	24.1	2/19/2018	9:19:59 AM
DNU	16 - 21 mL	31.3	2/19/2018	10:34:53 AM
BLK	16 - 501 mL	30.6	2/19/2018	11:11:55 AM
BLK	16 - 201 mL	30.7	2/19/2018	11:52:05 AM
DNU	16 - 21 mL	12.7	2/19/2018	1:22:31 PM
10695-05	1 - 21 mL	9.3	2/19/2018	1:54:13 PM
10695-01	2 - 200 mL	8.5	2/19/2018	2:34:58 PM
10695-02	3 - 200 mL	8.3	2/19/2018	3:15:56 PM
10695-03	4 - 200 mL	8	2/19/2018	3:57:47 PM
10695-04	5 - 200 mL	8.3	2/19/2018	4:38:24 PM
10695-06	6 - 200 mL	8.8	2/19/2018	5:19:01 PM
10695-07	7 - 202 mL	7.1	2/19/2018	5:59:51 PM
10695-08	8 - 200 mL	8.6	2/19/2018	6:41:18 PM
10695-09	9 - 200 mL	8.6	2/19/2018	7:22:06 PM
10695-10	10 - 200 mL	8.9	2/19/2018	8:03:34 PM
10695-11	11 - 200 mL	8	2/19/2018	8:44:44 PM
10695-12	12 - 200 mL	7.6	2/19/2018	9:25:34 PM
10695-13	13 - 200 mL	8	2/19/2018	10:06:07 PM
10695-14	14 - 21 mL	11.3	2/19/2018	10:46:48 PM
10674-01	15 - 100 mL	10.3	2/19/2018	11:27:16 PM
10674-01	15 - 100 mL	8.2	2/20/2018	12:08:17 AM
10674-02	16 - 21 mL	11.7	2/20/2018	12:48:25 AM
10674-03	1 - 21 mL	12.6	2/20/2018	1:29:27 AM
LOT10686	2 - 502 mL	18.7	2/20/2018	2:13:03 AM
LOT10686	2 - 500 mL	17.7	2/20/2018	2:56:54 AM
LOT10725	3 - 501 mL	23.1	2/20/2018	3:40:42 AM
LOT10725	3 - 500 mL	21.1	2/20/2018	4:24:22 AM

MG WL 7419

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 18 & KNOX-MS-0023, Rev 3

Instrument/Date	MG 2/19/18		Routine	DOD	OHIO
CCAL Chrom WL #	7M19	CCAL Batch #	18252		
ICAL Chrom WL #	6586	ICAL Batch # / Event #	15917 / 1337	/	

Chrom Review	1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	✓		✓
2. Did BFB meet tune criteria? [F8]	✓	□ [Failed TO-14A, but passes TO-15] (NCM#_____)	✓
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICal File batch #/start/end Cal date/time)? [F8]	✓		✓
4. Is the %D ≤ 30% for all target analytes? [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab] chlorobenzene meter	✓	□ CCV - %D - LCS criteria met (NCM# 11404) □ CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM#_____)	✓
5. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene/1,2,3-trimethylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	M		NA
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
6. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	M		NA
7. Has the RT been updated to the method?			✓
Analyst/date 2/20/18		**2nd Level Reviewer/date**	
8. Has the vol injected been verified vs Entech, & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]	✓		✓
9. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]	✓		✓
10. Were all samples/QC analyzed within 24 hr of BFB? [F7]	✓		✓
11. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). *If no, list blank ID:*	✓	□ Method Blank – Report, ND (NCM#_____) □ Method Blank – Report, 10X (NCM#_____)	✓
12. All runs - peaks ID'd correctly and false positives removed?	✓		✓
13. If manual integrations performed, are they properly performed, correctly ID'd, baseline clearly identified, and reason given?	✓		✓
14. IS/Surr within limits? *List samples and reason (e.g., 1 thru 5):* [Batch Results IS & SUR Tab] Sample / Reason / Sample / Reason	✓	□ (1) Surrogate – Matrix (NCM#_____) □ (2) Surrogate – High, ND (NCM#_____) □ (3) ISTD – RA/RA Concurs (NCM#_____) □ (4) Surrogate –RX concur, Report both (NCM#_____) □ (5) ISTD – Matrix, DL required (NCM#_____)	✓
15. Samples outside calibration range scheduled for dilution?	✓	□ ICAL – Range Exceeded; Minimum Dilution	✓
Chrom Review	**1st**	**If No, why is data reportable?**	**2nd**
16. For first analysis that is at a dilution, is highest target analyte >20% cal range? *List samples and reason:* Sample / Reason / Sample / Reason	✓	□ (1) Reporting Limit – Dilution, Matrix (NCM#_____) □ (2) Reporting Limit – Dilution, Non-Target (NCM#_____) □ (3) Issues with initial collection volume; see DRC.	✓
17. RIC inspected for proper integration for TPH?	M		NA
18. Obvious non-TPH peaks excluded?	✓		✓
19. Individual TPH peak area < octane high point area?	✓		✓

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 18 & KNOX-MS-0023, Rev 3

TALS Review	1st	If No, why is data reportable?	2nd
20. Graphics uploaded? [paperclip]	✓		✓
21. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	✓		na
22. Sample special instructions verified?	✓		✓
23. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	✓	☐ Marginal Exceedances - Within ME Limits and Random; Report (NCM# ___) ☐ LCS/LCSD - %R High (NCM#_____)	✓
24. Suffixes assigned properly (DL/RE)? [Sample List Tab]	✓		NA
25. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	✓		✓
26. Analytes over calibration range set to secondary [Conditions Review Tab]	✓		✓
27. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	✓		✓
28. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) *(If DUP not reported - set to 'Acceptable' for each job)*	✓	4	✓
29. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	✓	**500 mL blank ID:** _____ **200 mL blank ID:** 5	✓
30. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	✓		✓
31. Correct ICV linked to each MB? [QC Links]	✓		✓
32. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	✓		✓
33. Run Checklist and acknowledge findings [F8]	✓		✓
34. Runs set to 1st level review?	✓	Runs set to 2nd level review?	✓
35. QC checker run and items addressed?	-na-		✓
36. Checklist & Entech report scanned, attached & assigned properly?	-na-		✓

Analyst: [signature] **Date:** 2/20/18	**2nd Level Reviewer :** [signature] **Date:** 2/22/18
Comments:	**Comments:**
Example Calculation: 1064-2 111	
On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF	
5.4959 x 20mL x 1 = 137.4	✓

MS017r43, 10/10/2017

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10465-1

SDG No.:

Client Sample ID: 11626 | Lab Sample ID: 140-10465-6

Matrix: Air | Lab File ID: XLOT10465.D

Analysis Method: TO-15 | Date Collected: 01/17/2018 10:35

Sample wt/vol: 200(mL) | Date Analyzed: 01/18/2018 20:41

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17468 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	NC		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	NC		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10465-1

SDG No.:

Client Sample ID: 11626 | Lab Sample ID: 140-10465-6

Matrix: Air | Lab File ID: XLOT10465.D

Analysis Method: TO-15 | Date Collected: 01/17/2018 10:35

Sample wt/vol: 200(mL) | Date Analyzed: 01/18/2018 20:41

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17468 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10465-1

SDG No.:

Client Sample ID: 11626 Lab Sample ID: 140-10465-6

Matrix: Air Lab File ID: XLOT10465.D

Analysis Method: TO-15 Date Collected: 01/17/2018 10:35

Sample wt/vol: 200(mL) Date Analyzed: 01/18/2018 20:41

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 17468 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180116-7140.b\XLOT10465.D				
Lims ID:	140-10465-A-6				
Client ID:	11626				
Sample Type:	Client				
Inject. Date:	18-Jan-2018 20:41:30	ALS Bottle#:	6	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007140-017				
Misc. Info.:	11626				
Operator ID:	007126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20180116-7140.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	19-Jan-2018 09:42:20	Calib Date:	07-Sep-2017 22:36:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20170907-6007.b\JICI07L9.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK031				
First Level Reviewer: tajh		Date:	19-Jan-2018 09:41:57		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.678	9.683	-0.005	94	242155	4.00	
* 2 1,4-Difluorobenzene	114	11.786	11.792	-0.006	95	1130946	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.402	16.402	0.000	89	1046851	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	18.005	18.005	0.000	95	772276	4.04	
35 2-Methylpentane	43	7.897	8.016	-0.122	1	307	NC	
54 2,3-Dimethylpentane	71	11.781	11.581	0.192	27	1417	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

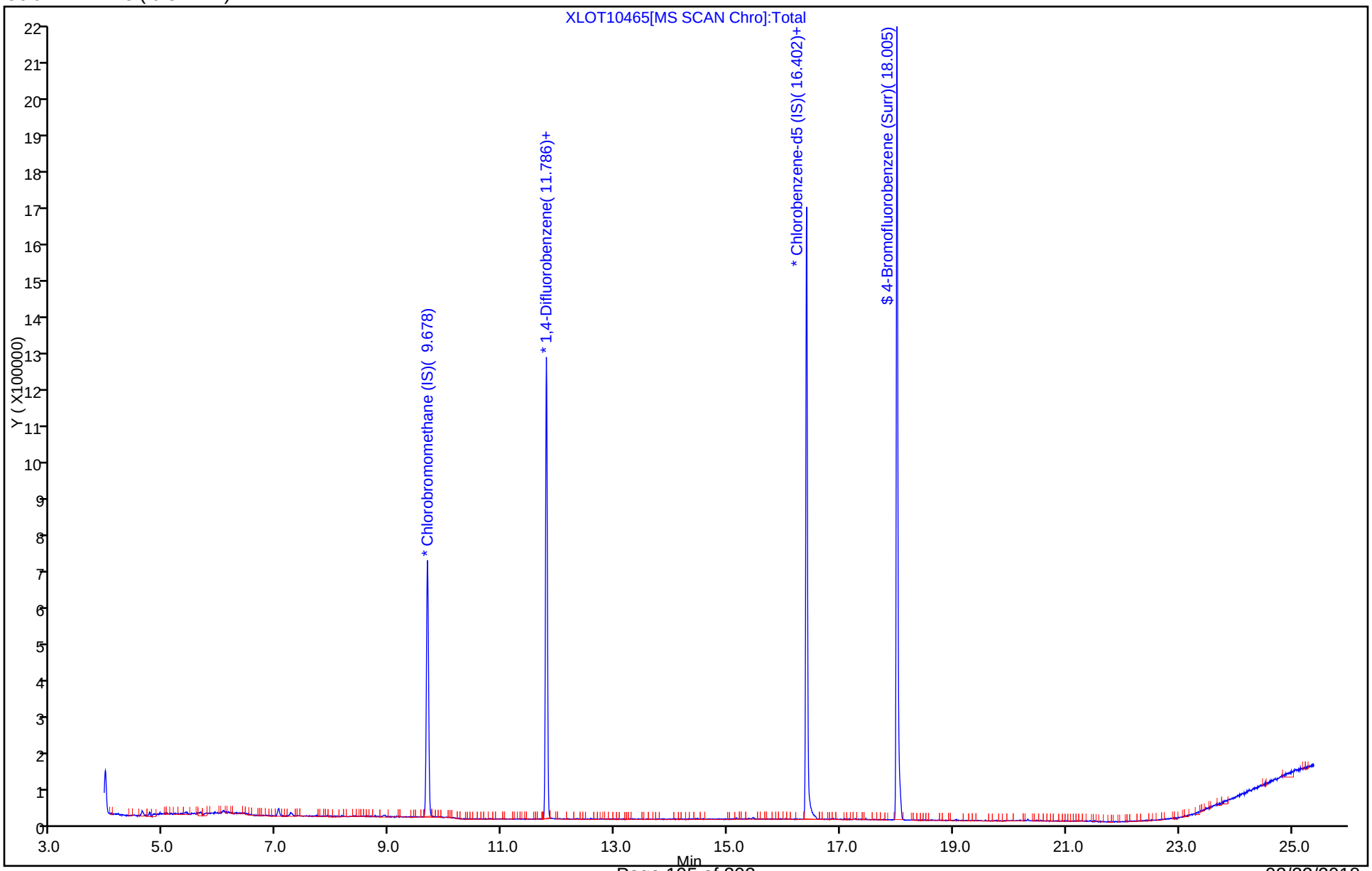
Report Date: 19-Jan-2018 09:42:27 Chrom Revision: 2.2 18-Jan-2018 16:19:58

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180116-7140.b\XLOT10465.D

Injection Date:	18-Jan-2018 20:41:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-10465-A-6	Lab Sample ID:	140-10465-6	Worklist Smp#:	17
Client ID:	11626				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

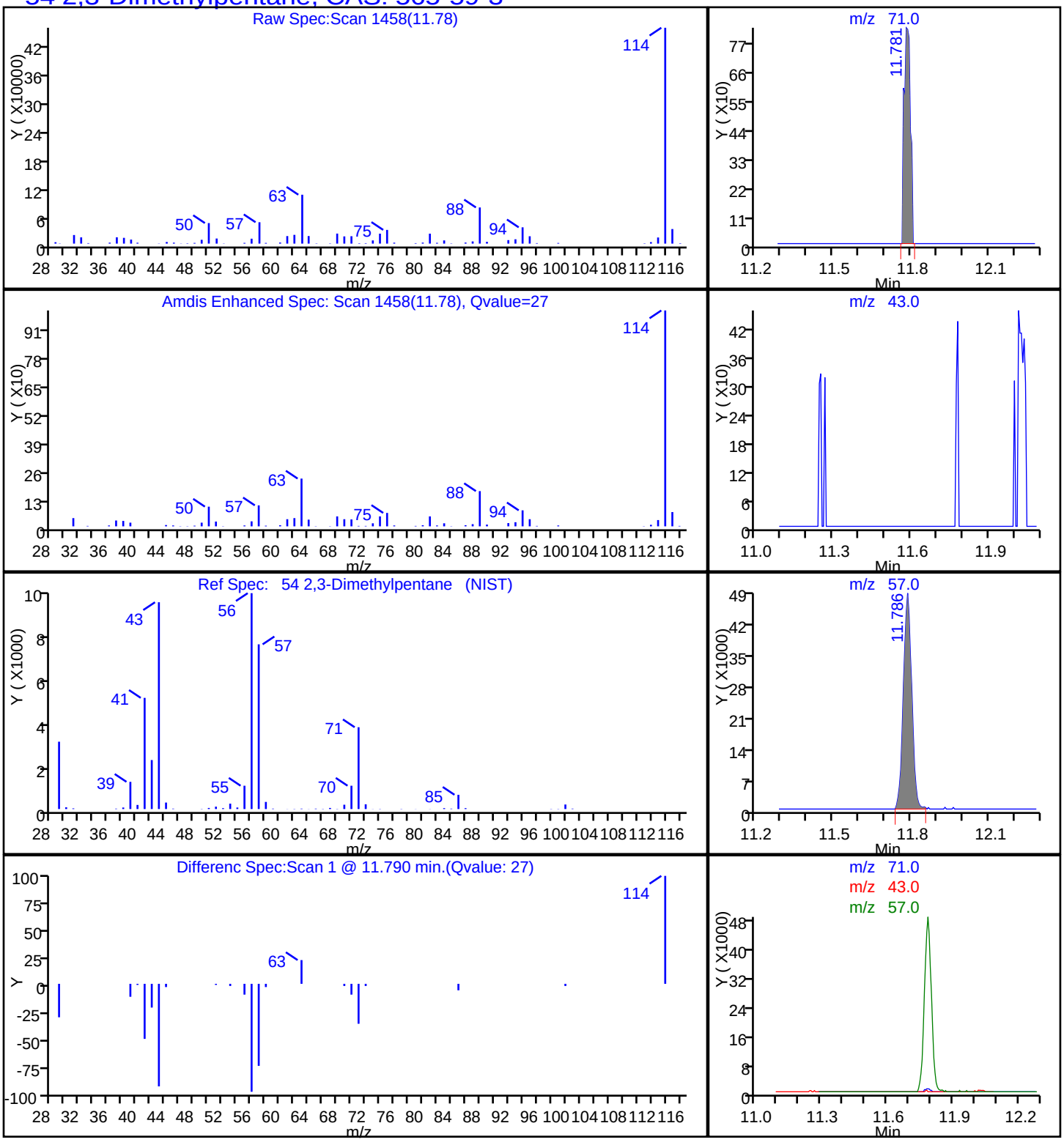
Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180116-7140.b\XLOT10465.D		
Injection Date:	18-Jan-2018 20:41:30	Instrument ID:	MJ
Lims ID:	140-10465-A-6	Lab Sample ID:	140-10465-6
Client ID:	11626		
Operator ID:	007126	ALS Bottle#:	6 Worklist Smp#: 17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

54 2,3-Dimethylpentane, CAS: 565-59-3



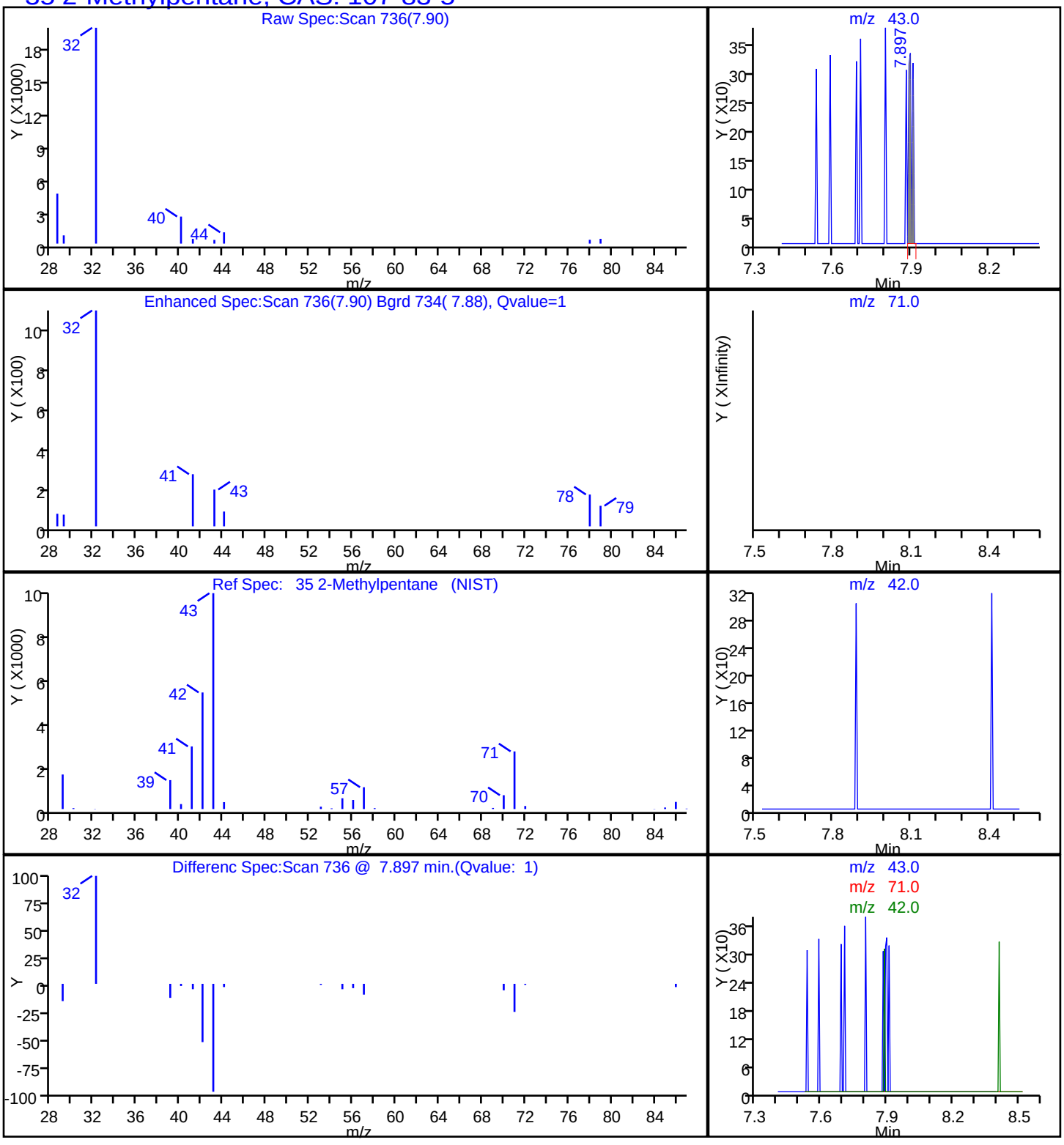
Report Date: 19-Jan-2018 09:42:27 Chrom Revision: 2.2 18-Jan-2018 16:19:58

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180116-7140.b\XLOT10465.D

Injection Date:	18-Jan-2018 20:41:30	Instrument ID:	MJ		
Lims ID:	140-10465-A-6	Lab Sample ID:	140-10465-6		
Client ID:	11626				
Operator ID:	007126	ALS Bottle#:	6	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

35 2-Methylpentane, CAS: 107-83-5



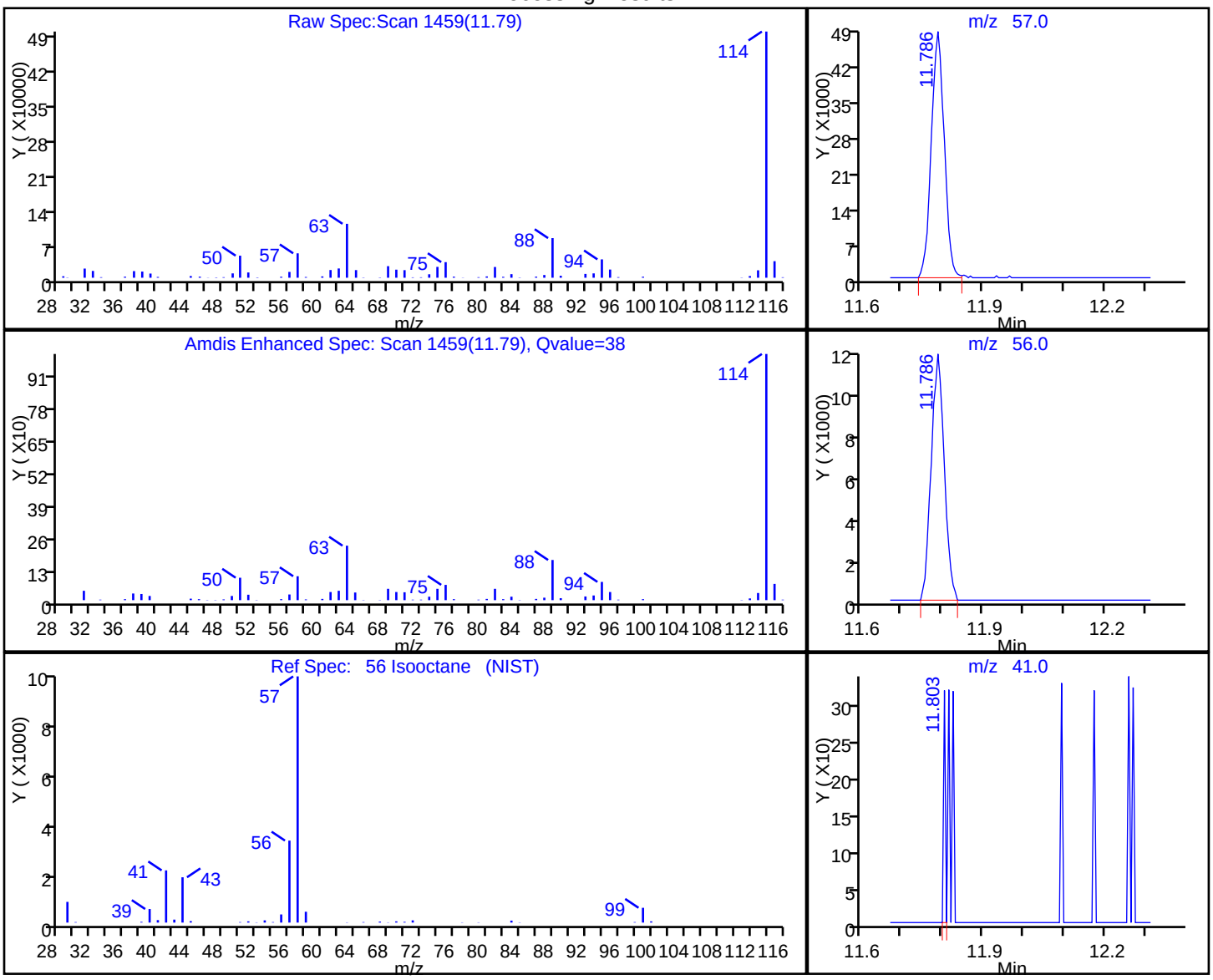
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20180116-7140.b\XLOT10465.D				
Injection Date:	18-Jan-2018 20:41:30	Instrument ID:	MJ		
Lims ID:	140-10465-A-6	Lab Sample ID:	140-10465-6		
Client ID:	11626				
Operator ID:	007126	ALS Bottle#:	6	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

56 Isooctane, CAS: 540-84-1

Processing Results



RT	Mass	Response	Amount
11.79	57.00	109362	0.278995
11.79	56.00	26140	
11.80	41.00	101	

Reviewer: tajh, 19-Jan-2018 09:41:57

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Shipping and Receiving Documents

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples. MM

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

180325
BALTIMORE

Client Contact Information	**Project Manager:** Peter Rich	**Sampled By:** J.M. Wilks	1 of 1 COCs
Company: Tetra Tech	Phone: 410-990-4607		
Address: 51 Franklin St	Site Contact:		
City/State/Zip Annapolis/MD/21401	TAL Contact:		
Phone: 410-990-4607			
FAX:			
Project Name: LMC MRC	**Analysis Turnaround Time**		
Site/location: MRAS/BLDG-A	Standard (Specify)		
PO # 117-051214D	Rush (Specify)		

140-10674 Chain of Custody

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
BLDG-A EFFLUENT	2-9-18	1117	1119	29	0	11594	09812	✓											
BLDG-A MID-GAC	↓	1121	1123	29.5	0	10614	11722	✓											
BLDG-A INFLUENT	↓	1125	1127	28.5	0	10104	11670	✓											

Sampled by :

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

Received @ ambient, 1 box
Fedex Tr#7714 4921 5881
Custody seal intact
KW 2/10/18

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time: 2-9-2018/1253	Canisters Received by:	
Samples Relinquished by:	Date/Time: 2-9-2018/1253	Received by:	
Relinquished by:	Date/Time:	Received by:	2/10/18 0910

3 Canv
3 KR

Loc: 140

10674

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST **Log In Number:**

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	/			☐ **Containers, Broken**
2. Were ambient air containers received intact?			/	☑ Checked in lab
3. The coolers/containers custody seal if present, is it intact?	/			☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			/	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	/			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	/			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	/			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	/			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	/			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?	/			☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	/			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	/			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	/			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	/			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	/			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			/	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			/	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			/	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			/	☐ If no, lab will adjust
20. For rad samples was sample activity info. Provided?			/	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: 14002921 PM Instructions: _____

Sample Receiving Associate: [signature] Date: 2/10/18

QA026R30.doc, 080916

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 2/13/2018

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
BKK	140-10674-A-1	09812	10465	B	1	1.1	1051	1/31
BKK	140-10674-A-2	11722	10465	B	1	1.2	1052	1/31
BKK	140-10674-A-3	11670	10465	B	1	1.2	1053	1/31

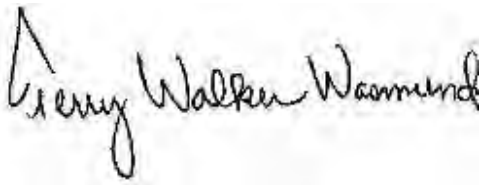
ANALYTICAL REPORT

Job Number: 140-10921-1

Job Description: LMC MRC - MRAS/BLDG-A 6-C

For:
Tetra Tech GEO
51 Franklin Street
Suite 400
Annapolis, MD 21401

Attention: Peter Rich



Approved for release.
Terry Walker Wasmund
Project Manager II
3/20/2018 10:15 AM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
03/20/2018

cc: Belssi Chang
Amy Thomson
Michael Wilks

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Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-10921-1

Receipt
The samples were received on 3/10/2018 at 9:10 AM. The samples arrived in good condition and properly preserved.

Air - GC/MS VOA - Method TO-15 LL
EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

The continuing calibration verification (CCV) associated with batch 140-18783 exhibited % difference of > 30% for ethanol, naphthalene and/or hexachlorobenzene; however, the results were within the LCS acceptance limits. The EPA method requires that all target analytes in the continuing calibration verification standard be within 30% difference from the initial calibration. According to the laboratory standard operating procedure, the continuing calibration is acceptable if it meets the laboratory control sample acceptance criteria and is within laboratory marginal exceedance limits.

The continuing calibration verification (CCV) associated with batch 140-18783 recovered above the upper control limit for 1,3,5-trimethylbenzene and 1,2,4-trichlorobenzene. The samples associated with this CCV were non-detects above the reporting limit (RL) for the affected analytes; therefore, the data have been reported.

The laboratory control sample (LCS) for analytical batch 140-18783 recovered outside control limits for 1,3,5-trimethylbenzene and 1,2,4-trichlorobenzene. These analytes were biased high in the LCS and were not detected in the associated samples above the reporting limit (RL); therefore, the data have been reported.

The continuing calibration verification (CCV) associated with batch 140-18835 exhibited % difference of > 30% for naphthalene; however, the results were within the LCS acceptance limits. The EPA method requires that all target analytes in the continuing calibration verification standard be within 30% difference from the initial calibration. According to the laboratory standard operating procedure, the continuing calibration is acceptable if it meets the laboratory control sample acceptance criteria.

The continuing calibration verification (CCV) associated with batch 140-18835 recovered above the upper control limit for 1,2,4-trichlorobenzene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

The laboratory control sample (LCS) for analytical batch 140-18835 recovered outside control limits for 1,2,4-trichlorobenzene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Can Certification Comments:
Due to the large number of analytes in the CCV, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for several analytes to recover outside criteria for this method when analyzing for a full list. The CCV associated with the can cleaning batches had analytes outside control limits. These results have been reported and qualified.

This report includes canister certification data for the batch certified and/or individually certified canisters used to collect samples as well as for any canisters used for dilution of those samples. All of the canisters used for sample collection or sample dilution for this job were certified to be clean to the levels listed on the results page. Please note that results for individually certified canisters that were not used for sample collection or sample dilution may also be included in the report because these canisters were in the same cleaning batch as the canisters used for this project. Since these canisters were not used for this job, the results have no bearing on the sample results.

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

Comments
No additional comments.

Detection Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/BLDG-A 6-C

TestAmerica Job ID: 140-10921-1

Client Sample ID: BLDG-A INFLUENT — Lab Sample ID: 140-10921-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	6.8		2.0	0.58	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.60	J	2.0	0.38	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	20		2.0	0.60	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.72	J	2.0	0.68	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	3.4		2.0	0.25	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	27		2.0	0.35	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	87		2.0	0.30	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	230		1.0	0.35	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	22		6.4	1.8	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	2.1	J	7.1	1.3	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	80		7.9	2.4	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	3.6	J	9.9	3.3	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	14		8.1	1.0	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	110		7.9	1.4	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	470		11	1.6	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	1200		5.4	1.9	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-A MIDGAC — Lab Sample ID: 140-10921-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.15	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.33	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.27	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	19		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.51		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	3.0		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	25		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.88	J	1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	4.7		0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.38	J	0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	43		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.48	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.3	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	77		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.5		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	12		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	98		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.1	J	3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	32		2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	1.5	J	1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	230		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-A EFFLUENT — Lab Sample ID: 140-10921-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.6		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.078	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BLDG-A EFFLUENT (Continued)

Lab Sample ID: 140-10921-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.27	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	8.4		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.44		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	2.6		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	20		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.73	J	1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.49		0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.20	J	0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	22		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.6		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	5.0		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.49	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.3	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	33		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	10		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	81		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.5	J	3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	3.3		2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.78	J	1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	120		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	8.5		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-C EFFLUENT

Lab Sample ID: 140-10921-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.6		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.3		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.40		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.16	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.96	J	1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.2		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.072	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.61		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.97		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.42		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.59	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	5.1		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	4.6		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.0		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.70	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.3	J	3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	4.5		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.39	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	3.3		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	4.8		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BLDG-C EFFLUENT (Continued) — Lab Sample ID: 140-10921-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,3,5-Trimethylbenzene	2.1		2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.6	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-C MIDGAC — Lab Sample ID: 140-10921-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2.8		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.3		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.85	J	1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.72		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.28	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.35		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.22	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.45	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	8.9		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	4.7		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.0	J	3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	2.7		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	1.5	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	1.9		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.1	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.0	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-C INFLUENT — Lab Sample ID: 140-10921-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.34	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.090	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.3		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.13	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	1.2		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.41		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.16	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.71	J	1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.73		0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.74		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.080	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	8.8		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.54		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.19	J *	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.75	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.1	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.57	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	4.5		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.63	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	4.9		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BLDG-C INFLUENT (Continued)

Lab Sample ID: 140-10921-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dichlorodifluoromethane	2.0		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.70	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.5	J	3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	5.0		2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	2.8		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.44	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	47		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	2.6		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.96	J *	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.3	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BLDG-A INFLUENT

Lab Sample ID: 140-10921-1

Date Collected: 03/08/18 13:33
Matrix: Air
Date Received: 03/10/18 09:10
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**6.8**		2.0	0.58	ppb v/v			03/15/18 20:21	1
Carbon tetrachloride	ND		2.0	0.38	ppb v/v			03/15/18 20:21	1
Chlorodifluoromethane	**0.60**	**J**	2.0	0.38	ppb v/v			03/15/18 20:21	1
Chloroform	ND		2.0	0.38	ppb v/v			03/15/18 20:21	1
cis-1,2-Dichloroethene	**20**		2.0	0.60	ppb v/v			03/15/18 20:21	1
Dichlorodifluoromethane	**0.72**	**J**	2.0	0.68	ppb v/v			03/15/18 20:21	1
1,1-Dichloroethane	**3.4**		2.0	0.25	ppb v/v			03/15/18 20:21	1
1,2-Dichloroethane	ND		2.0	0.48	ppb v/v			03/15/18 20:21	1
1,1-Dichloroethene	**27**		2.0	0.35	ppb v/v			03/15/18 20:21	1
Ethylbenzene	ND		2.0	0.68	ppb v/v			03/15/18 20:21	1
Methylene Chloride	ND		5.0	3.3	ppb v/v			03/15/18 20:21	1
Methyl tert-butyl ether	ND		10	1.7	ppb v/v			03/15/18 20:21	1
Naphthalene	ND		1.0	1.0	ppb v/v			03/15/18 20:21	1
Tetrachloroethene	ND		2.0	0.40	ppb v/v			03/15/18 20:21	1
Toluene	ND		3.0	3.0	ppb v/v			03/15/18 20:21	1
trans-1,2-Dichloroethene	ND		2.0	0.50	ppb v/v			03/15/18 20:21	1
1,2,4-Trichlorobenzene	ND	*	2.0	0.98	ppb v/v			03/15/18 20:21	1
1,1,1-Trichloroethane	**87**		2.0	0.30	ppb v/v			03/15/18 20:21	1
1,1,2-Trichloroethane	ND		2.0	0.53	ppb v/v			03/15/18 20:21	1
Trichloroethene	**230**		1.0	0.35	ppb v/v			03/15/18 20:21	1
1,2,3-Trimethylbenzene	ND		2.0	0.85	ppb v/v			03/15/18 20:21	1
1,2,4-Trimethylbenzene	ND		2.0	0.63	ppb v/v			03/15/18 20:21	1
1,3,5-Trimethylbenzene	ND	*	2.0	0.65	ppb v/v			03/15/18 20:21	1
Vinyl chloride	ND		1.0	0.73	ppb v/v			03/15/18 20:21	1
Xylenes, Total	ND		4.0	0.60	ppb v/v			03/15/18 20:21	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**22**		6.4	1.8	ug/m3			03/15/18 20:21	1
Carbon tetrachloride	ND		13	2.4	ug/m3			03/15/18 20:21	1
Chlorodifluoromethane	**2.1**	**J**	7.1	1.3	ug/m3			03/15/18 20:21	1
Chloroform	ND		9.8	1.8	ug/m3			03/15/18 20:21	1
cis-1,2-Dichloroethene	**80**		7.9	2.4	ug/m3			03/15/18 20:21	1
Dichlorodifluoromethane	**3.6**	**J**	9.9	3.3	ug/m3			03/15/18 20:21	1
1,1-Dichloroethane	**14**		8.1	1.0	ug/m3			03/15/18 20:21	1
1,2-Dichloroethane	ND		8.1	1.9	ug/m3			03/15/18 20:21	1
1,1-Dichloroethene	**110**		7.9	1.4	ug/m3			03/15/18 20:21	1
Ethylbenzene	ND		8.7	2.9	ug/m3			03/15/18 20:21	1
Methylene Chloride	ND		17	11	ug/m3			03/15/18 20:21	1
Methyl tert-butyl ether	ND		36	6.1	ug/m3			03/15/18 20:21	1
Naphthalene	ND		5.2	5.2	ug/m3			03/15/18 20:21	1
Tetrachloroethene	ND		14	2.7	ug/m3			03/15/18 20:21	1
Toluene	ND		11	11	ug/m3			03/15/18 20:21	1
trans-1,2-Dichloroethene	ND		7.9	2.0	ug/m3			03/15/18 20:21	1
1,2,4-Trichlorobenzene	ND	*	15	7.2	ug/m3			03/15/18 20:21	1
1,1,1-Trichloroethane	**470**		11	1.6	ug/m3			03/15/18 20:21	1
1,1,2-Trichloroethane	ND		11	2.9	ug/m3			03/15/18 20:21	1
Trichloroethene	**1200**		5.4	1.9	ug/m3			03/15/18 20:21	1
1,2,3-Trimethylbenzene	ND		9.8	4.2	ug/m3			03/15/18 20:21	1
1,2,4-Trimethylbenzene	ND		9.8	3.1	ug/m3			03/15/18 20:21	1

Client Sample ID: BLDG-A INFLUENT

Lab Sample ID: 140-10921-1

Date Collected: 03/08/18 13:33
Matrix: Air
Date Received: 03/10/18 09:10
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND	*	9.8	3.2	ug/m3			03/15/18 20:21	1
Vinyl chloride	ND		2.6	1.9	ug/m3			03/15/18 20:21	1
Xylenes, Total	ND		17	2.6	ug/m3			03/15/18 20:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*60 - 140*		*03/15/18 20:21*	*1*

Client Sample ID: BLDG-A MIDGAC

Lab Sample ID: 140-10921-2

Date Collected: 03/08/18 13:37
Matrix: Air
Date Received: 03/10/18 09:10
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.15**	**J**	0.40	0.12	ppb v/v			03/15/18 21:08	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			03/15/18 21:08	1
Chlorodifluoromethane	**0.33**	**J**	0.40	0.075	ppb v/v			03/15/18 21:08	1
Chloroform	**0.27**	**J**	0.40	0.075	ppb v/v			03/15/18 21:08	1
cis-1,2-Dichloroethene	**19**		0.40	0.12	ppb v/v			03/15/18 21:08	1
Dichlorodifluoromethane	**0.51**		0.40	0.14	ppb v/v			03/15/18 21:08	1
1,1-Dichloroethane	**3.0**		0.40	0.050	ppb v/v			03/15/18 21:08	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			03/15/18 21:08	1
1,1-Dichloroethene	**25**		0.40	0.070	ppb v/v			03/15/18 21:08	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			03/15/18 21:08	1
Methylene Chloride	**0.88**	**J**	1.0	0.65	ppb v/v			03/15/18 21:08	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			03/15/18 21:08	1
Naphthalene	ND		0.20	0.20	ppb v/v			03/15/18 21:08	1
Tetrachloroethene	**4.7**		0.40	0.080	ppb v/v			03/15/18 21:08	1
Toluene	ND		0.60	0.60	ppb v/v			03/15/18 21:08	1
trans-1,2-Dichloroethene	**0.38**	**J**	0.40	0.10	ppb v/v			03/15/18 21:08	1
1,2,4-Trichlorobenzene	ND	*	0.40	0.20	ppb v/v			03/15/18 21:08	1
1,1,1-Trichloroethane	**43**		0.40	0.060	ppb v/v			03/15/18 21:08	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			03/15/18 21:08	1
Trichloroethene	ND		0.20	0.070	ppb v/v			03/15/18 21:08	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			03/15/18 21:08	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			03/15/18 21:08	1
1,3,5-Trimethylbenzene	ND	*	0.40	0.13	ppb v/v			03/15/18 21:08	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			03/15/18 21:08	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			03/15/18 21:08	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.48**	**J**	1.3	0.37	ug/m3			03/15/18 21:08	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			03/15/18 21:08	1
Chlorodifluoromethane	**1.2**	**J**	1.4	0.27	ug/m3			03/15/18 21:08	1
Chloroform	**1.3**	**J**	2.0	0.37	ug/m3			03/15/18 21:08	1
cis-1,2-Dichloroethene	**77**		1.6	0.48	ug/m3			03/15/18 21:08	1
Dichlorodifluoromethane	**2.5**		2.0	0.67	ug/m3			03/15/18 21:08	1
1,1-Dichloroethane	**12**		1.6	0.20	ug/m3			03/15/18 21:08	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			03/15/18 21:08	1
1,1-Dichloroethene	**98**		1.6	0.28	ug/m3			03/15/18 21:08	1
Ethylbenzene	ND		1.7	0.59	ug/m3			03/15/18 21:08	1
Methylene Chloride	**3.1**	**J**	3.5	2.3	ug/m3			03/15/18 21:08	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			03/15/18 21:08	1
Naphthalene	ND		1.0	1.0	ug/m3			03/15/18 21:08	1
Tetrachloroethene	**32**		2.7	0.54	ug/m3			03/15/18 21:08	1
Toluene	ND		2.3	2.3	ug/m3			03/15/18 21:08	1
trans-1,2-Dichloroethene	**1.5**	**J**	1.6	0.40	ug/m3			03/15/18 21:08	1
1,2,4-Trichlorobenzene	ND	*	3.0	1.4	ug/m3			03/15/18 21:08	1
1,1,1-Trichloroethane	**230**		2.2	0.33	ug/m3			03/15/18 21:08	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			03/15/18 21:08	1
Trichloroethene	ND		1.1	0.38	ug/m3			03/15/18 21:08	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			03/15/18 21:08	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			03/15/18 21:08	1

Client Sample ID: BLDG-A MIDGAC

Date Collected: 03/08/18 13:37
Date Received: 03/10/18 09:10
Sample Container: Summa Canister 1L

Lab Sample ID: 140-10921-2

Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND	*	2.0	0.64	ug/m3			03/15/18 21:08	1
Vinyl chloride	ND		0.51	0.37	ug/m3			03/15/18 21:08	1
Xylenes, Total	ND		3.5	0.52	ug/m3			03/15/18 21:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*60 - 140*		*03/15/18 21:08*	*1*

Client Sample ID: BLDG-A EFFLUENT

Lab Sample ID: 140-10921-3

Date Collected: 03/08/18 13:43
Matrix: Air
Date Received: 03/10/18 09:10
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1.6**		0.40	0.12	ppb v/v			03/15/18 21:55	1
Carbon tetrachloride	**0.078**	**J**	0.40	0.075	ppb v/v			03/15/18 21:55	1
Chlorodifluoromethane	**0.34**	**J**	0.40	0.075	ppb v/v			03/15/18 21:55	1
Chloroform	**0.27**	**J**	0.40	0.075	ppb v/v			03/15/18 21:55	1
cis-1,2-Dichloroethene	**8.4**		0.40	0.12	ppb v/v			03/15/18 21:55	1
Dichlorodifluoromethane	**0.44**		0.40	0.14	ppb v/v			03/15/18 21:55	1
1,1-Dichloroethane	**2.6**		0.40	0.050	ppb v/v			03/15/18 21:55	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			03/15/18 21:55	1
1,1-Dichloroethene	**20**		0.40	0.070	ppb v/v			03/15/18 21:55	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			03/15/18 21:55	1
Methylene Chloride	**0.73**	**J**	1.0	0.65	ppb v/v			03/15/18 21:55	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			03/15/18 21:55	1
Naphthalene	ND		0.20	0.20	ppb v/v			03/15/18 21:55	1
Tetrachloroethene	**0.49**		0.40	0.080	ppb v/v			03/15/18 21:55	1
Toluene	ND		0.60	0.60	ppb v/v			03/15/18 21:55	1
trans-1,2-Dichloroethene	**0.20**	**J**	0.40	0.10	ppb v/v			03/15/18 21:55	1
1,2,4-Trichlorobenzene	ND	*	0.40	0.20	ppb v/v			03/15/18 21:55	1
1,1,1-Trichloroethane	**22**		0.40	0.060	ppb v/v			03/15/18 21:55	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			03/15/18 21:55	1
Trichloroethene	**1.6**		0.20	0.070	ppb v/v			03/15/18 21:55	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			03/15/18 21:55	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			03/15/18 21:55	1
1,3,5-Trimethylbenzene	ND	*	0.40	0.13	ppb v/v			03/15/18 21:55	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			03/15/18 21:55	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			03/15/18 21:55	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**5.0**		1.3	0.37	ug/m3			03/15/18 21:55	1
Carbon tetrachloride	**0.49**	**J**	2.5	0.47	ug/m3			03/15/18 21:55	1
Chlorodifluoromethane	**1.2**	**J**	1.4	0.27	ug/m3			03/15/18 21:55	1
Chloroform	**1.3**	**J**	2.0	0.37	ug/m3			03/15/18 21:55	1
cis-1,2-Dichloroethene	**33**		1.6	0.48	ug/m3			03/15/18 21:55	1
Dichlorodifluoromethane	**2.2**		2.0	0.67	ug/m3			03/15/18 21:55	1
1,1-Dichloroethane	**10**		1.6	0.20	ug/m3			03/15/18 21:55	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			03/15/18 21:55	1
1,1-Dichloroethene	**81**		1.6	0.28	ug/m3			03/15/18 21:55	1
Ethylbenzene	ND		1.7	0.59	ug/m3			03/15/18 21:55	1
Methylene Chloride	**2.5**	**J**	3.5	2.3	ug/m3			03/15/18 21:55	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			03/15/18 21:55	1
Naphthalene	ND		1.0	1.0	ug/m3			03/15/18 21:55	1
Tetrachloroethene	**3.3**		2.7	0.54	ug/m3			03/15/18 21:55	1
Toluene	ND		2.3	2.3	ug/m3			03/15/18 21:55	1
trans-1,2-Dichloroethene	**0.78**	**J**	1.6	0.40	ug/m3			03/15/18 21:55	1
1,2,4-Trichlorobenzene	ND	*	3.0	1.4	ug/m3			03/15/18 21:55	1
1,1,1-Trichloroethane	**120**		2.2	0.33	ug/m3			03/15/18 21:55	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			03/15/18 21:55	1
Trichloroethene	**8.5**		1.1	0.38	ug/m3			03/15/18 21:55	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			03/15/18 21:55	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			03/15/18 21:55	1

Client Sample ID: BLDG-A EFFLUENT

Lab Sample ID: 140-10921-3

Date Collected: 03/08/18 13:43
Matrix: Air
Date Received: 03/10/18 09:10
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND	*	2.0	0.64	ug/m3			03/15/18 21:55	1
Vinyl chloride	ND		0.51	0.37	ug/m3			03/15/18 21:55	1
Xylenes, Total	ND		3.5	0.52	ug/m3			03/15/18 21:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*60 - 140*		*03/15/18 21:55*	*1*

Client Sample ID: BLDG-C EFFLUENT

Lab Sample ID: 140-10921-4

Date Collected: 03/08/18 14:42
Matrix: Air
Date Received: 03/10/18 09:10
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1.6**		0.40	0.12	ppb v/v			03/17/18 05:58	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			03/17/18 05:58	1
Chlorodifluoromethane	**1.3**		0.40	0.075	ppb v/v			03/17/18 05:58	1
Chloroform	ND		0.40	0.075	ppb v/v			03/17/18 05:58	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			03/17/18 05:58	1
Dichlorodifluoromethane	**0.40**		0.40	0.14	ppb v/v			03/17/18 05:58	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			03/17/18 05:58	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			03/17/18 05:58	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			03/17/18 05:58	1
Ethylbenzene	**0.16**	**J**	0.40	0.14	ppb v/v			03/17/18 05:58	1
Methylene Chloride	**0.96**	**J**	1.0	0.65	ppb v/v			03/17/18 05:58	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			03/17/18 05:58	1
Naphthalene	ND		0.20	0.20	ppb v/v			03/17/18 05:58	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			03/17/18 05:58	1
Toluene	**1.2**		0.60	0.60	ppb v/v			03/17/18 05:58	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			03/17/18 05:58	1
1,2,4-Trichlorobenzene	ND	*	0.40	0.20	ppb v/v			03/17/18 05:58	1
1,1,1-Trichloroethane	**0.072**	**J**	0.40	0.060	ppb v/v			03/17/18 05:58	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			03/17/18 05:58	1
Trichloroethene	**0.61**		0.20	0.070	ppb v/v			03/17/18 05:58	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			03/17/18 05:58	1
1,2,4-Trimethylbenzene	**0.97**		0.40	0.13	ppb v/v			03/17/18 05:58	1
1,3,5-Trimethylbenzene	**0.42**		0.40	0.13	ppb v/v			03/17/18 05:58	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			03/17/18 05:58	1
Xylenes, Total	**0.59**	**J**	0.80	0.12	ppb v/v			03/17/18 05:58	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**5.1**		1.3	0.37	ug/m3			03/17/18 05:58	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			03/17/18 05:58	1
Chlorodifluoromethane	**4.6**		1.4	0.27	ug/m3			03/17/18 05:58	1
Chloroform	ND		2.0	0.37	ug/m3			03/17/18 05:58	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			03/17/18 05:58	1
Dichlorodifluoromethane	**2.0**		2.0	0.67	ug/m3			03/17/18 05:58	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			03/17/18 05:58	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			03/17/18 05:58	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			03/17/18 05:58	1
Ethylbenzene	**0.70**	**J**	1.7	0.59	ug/m3			03/17/18 05:58	1
Methylene Chloride	**3.3**	**J**	3.5	2.3	ug/m3			03/17/18 05:58	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			03/17/18 05:58	1
Naphthalene	ND		1.0	1.0	ug/m3			03/17/18 05:58	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			03/17/18 05:58	1
Toluene	**4.5**		2.3	2.3	ug/m3			03/17/18 05:58	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			03/17/18 05:58	1
1,2,4-Trichlorobenzene	ND	*	3.0	1.4	ug/m3			03/17/18 05:58	1
1,1,1-Trichloroethane	**0.39**	**J**	2.2	0.33	ug/m3			03/17/18 05:58	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			03/17/18 05:58	1
Trichloroethene	**3.3**		1.1	0.38	ug/m3			03/17/18 05:58	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			03/17/18 05:58	1
1,2,4-Trimethylbenzene	**4.8**		2.0	0.61	ug/m3			03/17/18 05:58	1

Client Sample ID: BLDG-C EFFLUENT
Lab Sample ID: 140-10921-4
Date Collected: 03/08/18 14:42
Matrix: Air
Date Received: 03/10/18 09:10
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	**2.1**		2.0	0.64	ug/m3			03/17/18 05:58	1
Vinyl chloride	ND		0.51	0.37	ug/m3			03/17/18 05:58	1
Xylenes, Total	**2.6**	**J**	3.5	0.52	ug/m3			03/17/18 05:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*60 - 140*		*03/17/18 05:58*	*1*

Client Sample ID: BLDG-C MIDGAC

Lab Sample ID: 140-10921-5

Date Collected: 03/08/18 14:46
Matrix: Air
Date Received: 03/10/18 09:10
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**2.8**		0.40	0.12	ppb v/v			03/15/18 23:29	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			03/15/18 23:29	1
Chlorodifluoromethane	**1.3**		0.40	0.075	ppb v/v			03/15/18 23:29	1
Chloroform	ND		0.40	0.075	ppb v/v			03/15/18 23:29	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			03/15/18 23:29	1
Dichlorodifluoromethane	**0.45**		0.40	0.14	ppb v/v			03/15/18 23:29	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			03/15/18 23:29	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			03/15/18 23:29	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			03/15/18 23:29	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			03/15/18 23:29	1
Methylene Chloride	**0.85**	**J**	1.0	0.65	ppb v/v			03/15/18 23:29	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			03/15/18 23:29	1
Naphthalene	ND		0.20	0.20	ppb v/v			03/15/18 23:29	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			03/15/18 23:29	1
Toluene	**0.72**		0.60	0.60	ppb v/v			03/15/18 23:29	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			03/15/18 23:29	1
1,2,4-Trichlorobenzene	ND	*	0.40	0.20	ppb v/v			03/15/18 23:29	1
1,1,1-Trichloroethane	**0.28**	**J**	0.40	0.060	ppb v/v			03/15/18 23:29	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			03/15/18 23:29	1
Trichloroethene	**0.35**		0.20	0.070	ppb v/v			03/15/18 23:29	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			03/15/18 23:29	1
1,2,4-Trimethylbenzene	**0.22**	**J**	0.40	0.13	ppb v/v			03/15/18 23:29	1
1,3,5-Trimethylbenzene	ND	*	0.40	0.13	ppb v/v			03/15/18 23:29	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			03/15/18 23:29	1
Xylenes, Total	**0.45**	**J**	0.80	0.12	ppb v/v			03/15/18 23:29	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**8.9**		1.3	0.37	ug/m3			03/15/18 23:29	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			03/15/18 23:29	1
Chlorodifluoromethane	**4.7**		1.4	0.27	ug/m3			03/15/18 23:29	1
Chloroform	ND		2.0	0.37	ug/m3			03/15/18 23:29	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			03/15/18 23:29	1
Dichlorodifluoromethane	**2.2**		2.0	0.67	ug/m3			03/15/18 23:29	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			03/15/18 23:29	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			03/15/18 23:29	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			03/15/18 23:29	1
Ethylbenzene	ND		1.7	0.59	ug/m3			03/15/18 23:29	1
Methylene Chloride	**3.0**	**J**	3.5	2.3	ug/m3			03/15/18 23:29	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			03/15/18 23:29	1
Naphthalene	ND		1.0	1.0	ug/m3			03/15/18 23:29	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			03/15/18 23:29	1
Toluene	**2.7**		2.3	2.3	ug/m3			03/15/18 23:29	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			03/15/18 23:29	1
1,2,4-Trichlorobenzene	ND	*	3.0	1.4	ug/m3			03/15/18 23:29	1
1,1,1-Trichloroethane	**1.5**	**J**	2.2	0.33	ug/m3			03/15/18 23:29	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			03/15/18 23:29	1
Trichloroethene	**1.9**		1.1	0.38	ug/m3			03/15/18 23:29	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			03/15/18 23:29	1
1,2,4-Trimethylbenzene	**1.1**	**J**	2.0	0.61	ug/m3			03/15/18 23:29	1

Client Sample ID: BLDG-C MIDGAC

Lab Sample ID: 140-10921-5

Date Collected: 03/08/18 14:46
Matrix: Air
Date Received: 03/10/18 09:10
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND	*	2.0	0.64	ug/m3			03/15/18 23:29	1
Vinyl chloride	ND		0.51	0.37	ug/m3			03/15/18 23:29	1
Xylenes, Total	**2.0**	**J**	3.5	0.52	ug/m3			03/15/18 23:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*60 - 140*		*03/15/18 23:29*	*1*

Client Sample ID: BLDG-C INFLUENT

Lab Sample ID: 140-10921-6

Date Collected: 03/08/18 14:52
Matrix: Air
Date Received: 03/10/18 09:10
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.34**	**J**	0.40	0.12	ppb v/v			03/16/18 00:17	1
Carbon tetrachloride	**0.090**	**J**	0.40	0.075	ppb v/v			03/16/18 00:17	1
Chlorodifluoromethane	**1.3**		0.40	0.075	ppb v/v			03/16/18 00:17	1
Chloroform	**0.13**	**J**	0.40	0.075	ppb v/v			03/16/18 00:17	1
cis-1,2-Dichloroethene	**1.2**		0.40	0.12	ppb v/v			03/16/18 00:17	1
Dichlorodifluoromethane	**0.41**		0.40	0.14	ppb v/v			03/16/18 00:17	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			03/16/18 00:17	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			03/16/18 00:17	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			03/16/18 00:17	1
Ethylbenzene	**0.16**	**J**	0.40	0.14	ppb v/v			03/16/18 00:17	1
Methylene Chloride	**0.71**	**J**	1.0	0.65	ppb v/v			03/16/18 00:17	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			03/16/18 00:17	1
Naphthalene	ND		0.20	0.20	ppb v/v			03/16/18 00:17	1
Tetrachloroethene	**0.73**		0.40	0.080	ppb v/v			03/16/18 00:17	1
Toluene	**0.74**		0.60	0.60	ppb v/v			03/16/18 00:17	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			03/16/18 00:17	1
1,2,4-Trichlorobenzene	ND	*	0.40	0.20	ppb v/v			03/16/18 00:17	1
1,1,1-Trichloroethane	**0.080**	**J**	0.40	0.060	ppb v/v			03/16/18 00:17	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			03/16/18 00:17	1
Trichloroethene	**8.8**		0.20	0.070	ppb v/v			03/16/18 00:17	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			03/16/18 00:17	1
1,2,4-Trimethylbenzene	**0.54**		0.40	0.13	ppb v/v			03/16/18 00:17	1
1,3,5-Trimethylbenzene	**0.19**	**J ***	0.40	0.13	ppb v/v			03/16/18 00:17	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			03/16/18 00:17	1
Xylenes, Total	**0.75**	**J**	0.80	0.12	ppb v/v			03/16/18 00:17	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1.1**	**J**	1.3	0.37	ug/m3			03/16/18 00:17	1
Carbon tetrachloride	**0.57**	**J**	2.5	0.47	ug/m3			03/16/18 00:17	1
Chlorodifluoromethane	**4.5**		1.4	0.27	ug/m3			03/16/18 00:17	1
Chloroform	**0.63**	**J**	2.0	0.37	ug/m3			03/16/18 00:17	1
cis-1,2-Dichloroethene	**4.9**		1.6	0.48	ug/m3			03/16/18 00:17	1
Dichlorodifluoromethane	**2.0**		2.0	0.67	ug/m3			03/16/18 00:17	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			03/16/18 00:17	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			03/16/18 00:17	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			03/16/18 00:17	1
Ethylbenzene	**0.70**	**J**	1.7	0.59	ug/m3			03/16/18 00:17	1
Methylene Chloride	**2.5**	**J**	3.5	2.3	ug/m3			03/16/18 00:17	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			03/16/18 00:17	1
Naphthalene	ND		1.0	1.0	ug/m3			03/16/18 00:17	1
Tetrachloroethene	**5.0**		2.7	0.54	ug/m3			03/16/18 00:17	1
Toluene	**2.8**		2.3	2.3	ug/m3			03/16/18 00:17	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			03/16/18 00:17	1
1,2,4-Trichlorobenzene	ND	*	3.0	1.4	ug/m3			03/16/18 00:17	1
1,1,1-Trichloroethane	**0.44**	**J**	2.2	0.33	ug/m3			03/16/18 00:17	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			03/16/18 00:17	1
Trichloroethene	**47**		1.1	0.38	ug/m3			03/16/18 00:17	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			03/16/18 00:17	1
1,2,4-Trimethylbenzene	**2.6**		2.0	0.61	ug/m3			03/16/18 00:17	1

Client Sample ID: BLDG-C INFLUENT

Lab Sample ID: 140-10921-6

Date Collected: 03/08/18 14:52
Matrix: Air
Date Received: 03/10/18 09:10
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	**0.96**	**J ***	2.0	0.64	ug/m3			03/16/18 00:17	1
Vinyl chloride	ND		0.51	0.37	ug/m3			03/16/18 00:17	1
Xylenes, Total	**3.3**	**J**	3.5	0.52	ug/m3			03/16/18 00:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*60 - 140*		*03/16/18 00:17*	*1*

Default Detection Limits

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/BLDG-A 6-C

TestAmerica Job ID: 140-10921-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.20	0.13	ppb v/v	TO 15 LL
Methylene Chloride	0.69	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/BLDG-A 6-C

TestAmerica Job ID: 140-10921-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)								
Lab Sample ID	Client Sample ID	BFB (60-140)								
140-10921-1	BLDG-A INFLUENT	97								
140-10921-2	BLDG-A MIDGAC	103								
140-10921-3	BLDG-A EFFLUENT	102								
140-10921-4	BLDG-C EFFLUENT	102								
140-10921-5	BLDG-C MIDGAC	101								
140-10921-6	BLDG-C INFLUENT	102								
LCS 140-18783/1002	Lab Control Sample	96								
LCS 140-18835/1002	Lab Control Sample	95								
MB 140-18783/5	Method Blank	99								
MB 140-18835/5	Method Blank	100								

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-18783/5
Matrix: Air
Analysis Batch: 18783

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			03/15/18 17:14	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			03/15/18 17:14	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			03/15/18 17:14	1
Chloroform	ND		0.080	0.015	ppb v/v			03/15/18 17:14	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			03/15/18 17:14	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			03/15/18 17:14	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			03/15/18 17:14	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			03/15/18 17:14	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			03/15/18 17:14	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			03/15/18 17:14	1
Methylene Chloride	ND		0.20	0.13	ppb v/v			03/15/18 17:14	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			03/15/18 17:14	1
Naphthalene	ND		0.040	0.040	ppb v/v			03/15/18 17:14	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			03/15/18 17:14	1
Toluene	ND		0.12	0.12	ppb v/v			03/15/18 17:14	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			03/15/18 17:14	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			03/15/18 17:14	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			03/15/18 17:14	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			03/15/18 17:14	1
Trichloroethene	ND		0.040	0.014	ppb v/v			03/15/18 17:14	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			03/15/18 17:14	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			03/15/18 17:14	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			03/15/18 17:14	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			03/15/18 17:14	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			03/15/18 17:14	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.26	0.073	ug/m3			03/15/18 17:14	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			03/15/18 17:14	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			03/15/18 17:14	1
Chloroform	ND		0.39	0.073	ug/m3			03/15/18 17:14	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			03/15/18 17:14	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			03/15/18 17:14	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			03/15/18 17:14	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			03/15/18 17:14	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			03/15/18 17:14	1
Ethylbenzene	ND		0.35	0.12	ug/m3			03/15/18 17:14	1
Methylene Chloride	ND		0.69	0.45	ug/m3			03/15/18 17:14	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			03/15/18 17:14	1
Naphthalene	ND		0.21	0.21	ug/m3			03/15/18 17:14	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			03/15/18 17:14	1
Toluene	ND		0.45	0.45	ug/m3			03/15/18 17:14	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			03/15/18 17:14	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			03/15/18 17:14	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			03/15/18 17:14	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			03/15/18 17:14	1
Trichloroethene	ND		0.21	0.075	ug/m3			03/15/18 17:14	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			03/15/18 17:14	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-18783/5
Matrix: Air
Analysis Batch: 18783

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			03/15/18 17:14	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			03/15/18 17:14	1
Vinyl chloride	ND		0.10	0.074	ug/m3			03/15/18 17:14	1
Xylenes, Total	ND		0.69	0.10	ug/m3			03/15/18 17:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*60 - 140*		*03/15/18 17:14*	*1*

Lab Sample ID: LCS 140-18783/1002
Matrix: Air
Analysis Batch: 18783

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2.00	1.96		ppb v/v		98	70 - 130
Carbon tetrachloride	2.00	2.19		ppb v/v		110	70 - 130
Chlorodifluoromethane	2.00	1.95		ppb v/v		98	60 - 140
Chloroform	2.00	1.89		ppb v/v		94	70 - 130
cis-1,2-Dichloroethene	2.00	1.95		ppb v/v		98	70 - 130
Dichlorodifluoromethane	2.00	2.13		ppb v/v		106	60 - 140
1,1-Dichloroethane	2.00	1.75		ppb v/v		87	70 - 130
1,2-Dichloroethane	2.00	1.91		ppb v/v		96	70 - 130
1,1-Dichloroethene	2.00	1.95		ppb v/v		97	70 - 130
Ethylbenzene	2.00	2.05		ppb v/v		103	70 - 130
Methylene Chloride	2.00	1.77		ppb v/v		89	70 - 130
Methyl tert-butyl ether	2.00	1.90		ppb v/v		95	60 - 140
Naphthalene	2.00	2.77		ppb v/v		139	60 - 140
Tetrachloroethene	2.00	2.24		ppb v/v		112	70 - 130
Toluene	2.00	2.04		ppb v/v		102	70 - 130
trans-1,2-Dichloroethene	2.00	1.97		ppb v/v		99	70 - 130
1,2,4-Trichlorobenzene	2.00	2.90	*	ppb v/v		145	60 - 140
1,1,1-Trichloroethane	2.00	1.95		ppb v/v		98	70 - 130
1,1,2-Trichloroethane	2.00	1.98		ppb v/v		99	70 - 130
Trichloroethene	2.00	2.14		ppb v/v		107	70 - 130
1,2,3-Trimethylbenzene	2.00	1.72		ppb v/v		86	70 - 130
1,2,4-Trimethylbenzene	2.00	2.41		ppb v/v		121	70 - 130
1,3,5-Trimethylbenzene	2.00	2.72	*	ppb v/v		136	70 - 130
Vinyl chloride	2.00	1.88		ppb v/v		94	70 - 130
Xylenes, Total	6.00	6.25		ppb v/v		104	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	6.25		ug/m3		98	70 - 130
Carbon tetrachloride	13	13.8		ug/m3		110	70 - 130
Chlorodifluoromethane	7.1	6.91		ug/m3		98	60 - 140
Chloroform	9.8	9.22		ug/m3		94	70 - 130
cis-1,2-Dichloroethene	7.9	7.74		ug/m3		98	70 - 130
Dichlorodifluoromethane	9.9	10.5		ug/m3		106	60 - 140
1,1-Dichloroethane	8.1	7.08		ug/m3		87	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-18783/1002
Matrix: Air
Analysis Batch: 18783

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	8.1	7.74		ug/m3		96	70 - 130
1,1-Dichloroethene	7.9	7.72		ug/m3		97	70 - 130
Ethylbenzene	8.7	8.90		ug/m3		103	70 - 130
Methylene Chloride	6.9	6.16		ug/m3		89	70 - 130
Methyl tert-butyl ether	7.2	6.83		ug/m3		95	60 - 140
Naphthalene	10	14.5		ug/m3		139	60 - 140
Tetrachloroethene	14	15.2		ug/m3		112	70 - 130
Toluene	7.5	7.68		ug/m3		102	70 - 130
trans-1,2-Dichloroethene	7.9	7.82		ug/m3		99	70 - 130
1,2,4-Trichlorobenzene	15	21.6	*	ug/m3		145	60 - 140
1,1,1-Trichloroethane	11	10.7		ug/m3		98	70 - 130
1,1,2-Trichloroethane	11	10.8		ug/m3		99	70 - 130
Trichloroethene	11	11.5		ug/m3		107	70 - 130
1,2,3-Trimethylbenzene	9.8	8.45		ug/m3		86	70 - 130
1,2,4-Trimethylbenzene	9.8	11.9		ug/m3		121	70 - 130
1,3,5-Trimethylbenzene	9.8	13.4	*	ug/m3		136	70 - 130
Vinyl chloride	5.1	4.81		ug/m3		94	70 - 130
Xylenes, Total	26	27.1		ug/m3		104	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*60 - 140*

Lab Sample ID: MB 140-18835/5
Matrix: Air
Analysis Batch: 18835

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			03/16/18 15:10	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			03/16/18 15:10	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			03/16/18 15:10	1
Chloroform	ND		0.080	0.015	ppb v/v			03/16/18 15:10	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			03/16/18 15:10	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			03/16/18 15:10	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			03/16/18 15:10	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			03/16/18 15:10	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			03/16/18 15:10	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			03/16/18 15:10	1
Methylene Chloride	ND		0.20	0.13	ppb v/v			03/16/18 15:10	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			03/16/18 15:10	1
Naphthalene	ND		0.040	0.040	ppb v/v			03/16/18 15:10	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			03/16/18 15:10	1
Toluene	ND		0.12	0.12	ppb v/v			03/16/18 15:10	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			03/16/18 15:10	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			03/16/18 15:10	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			03/16/18 15:10	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			03/16/18 15:10	1
Trichloroethene	ND		0.040	0.014	ppb v/v			03/16/18 15:10	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-18835/5
Matrix: Air
Analysis Batch: 18835

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			03/16/18 15:10	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			03/16/18 15:10	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			03/16/18 15:10	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			03/16/18 15:10	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			03/16/18 15:10	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.26	0.073	ug/m3			03/16/18 15:10	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			03/16/18 15:10	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			03/16/18 15:10	1
Chloroform	ND		0.39	0.073	ug/m3			03/16/18 15:10	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			03/16/18 15:10	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			03/16/18 15:10	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			03/16/18 15:10	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			03/16/18 15:10	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			03/16/18 15:10	1
Ethylbenzene	ND		0.35	0.12	ug/m3			03/16/18 15:10	1
Methylene Chloride	ND		0.69	0.45	ug/m3			03/16/18 15:10	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			03/16/18 15:10	1
Naphthalene	ND		0.21	0.21	ug/m3			03/16/18 15:10	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			03/16/18 15:10	1
Toluene	ND		0.45	0.45	ug/m3			03/16/18 15:10	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			03/16/18 15:10	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			03/16/18 15:10	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			03/16/18 15:10	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			03/16/18 15:10	1
Trichloroethene	ND		0.21	0.075	ug/m3			03/16/18 15:10	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			03/16/18 15:10	1
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			03/16/18 15:10	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			03/16/18 15:10	1
Vinyl chloride	ND		0.10	0.074	ug/m3			03/16/18 15:10	1
Xylenes, Total	ND		0.69	0.10	ug/m3			03/16/18 15:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*60 - 140*		*03/16/18 15:10*	*1*

Lab Sample ID: LCS 140-18835/1002
Matrix: Air
Analysis Batch: 18835

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2.00	1.98		ppb v/v		99	70 - 130
Carbon tetrachloride	2.00	2.12		ppb v/v		106	70 - 130
Chlorodifluoromethane	2.00	1.96		ppb v/v		98	60 - 140
Chloroform	2.00	1.95		ppb v/v		97	70 - 130
cis-1,2-Dichloroethene	2.00	2.00		ppb v/v		100	70 - 130
Dichlorodifluoromethane	2.00	1.69		ppb v/v		84	60 - 140

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-18835/1002
Matrix: Air
Analysis Batch: 18835

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	2.00	1.81		ppb v/v		90	70 - 130
1,2-Dichloroethane	2.00	1.94		ppb v/v		97	70 - 130
1,1-Dichloroethene	2.00	2.01		ppb v/v		101	70 - 130
Ethylbenzene	2.00	2.07		ppb v/v		103	70 - 130
Methylene Chloride	2.00	1.84		ppb v/v		92	70 - 130
Methyl tert-butyl ether	2.00	1.96		ppb v/v		98	60 - 140
Naphthalene	2.00	2.78		ppb v/v		139	60 - 140
Tetrachloroethene	2.00	2.24		ppb v/v		112	70 - 130
Toluene	2.00	2.07		ppb v/v		104	70 - 130
trans-1,2-Dichloroethene	2.00	2.07		ppb v/v		104	70 - 130
1,2,4-Trichlorobenzene	2.00	2.88	*	ppb v/v		144	60 - 140
1,1,1-Trichloroethane	2.00	2.01		ppb v/v		100	70 - 130
1,1,2-Trichloroethane	2.00	2.08		ppb v/v		104	70 - 130
Trichloroethene	2.00	2.17		ppb v/v		109	70 - 130
1,2,3-Trimethylbenzene	2.00	2.21		ppb v/v		111	70 - 130
1,2,4-Trimethylbenzene	2.00	2.34		ppb v/v		117	70 - 130
1,3,5-Trimethylbenzene	2.00	2.34		ppb v/v		117	70 - 130
Vinyl chloride	2.00	1.82		ppb v/v		91	70 - 130
Xylenes, Total	6.00	6.25		ppb v/v		104	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	6.32		ug/m3		99	70 - 130
Carbon tetrachloride	13	13.3		ug/m3		106	70 - 130
Chlorodifluoromethane	7.1	6.95		ug/m3		98	60 - 140
Chloroform	9.8	9.51		ug/m3		97	70 - 130
cis-1,2-Dichloroethene	7.9	7.93		ug/m3		100	70 - 130
Dichlorodifluoromethane	9.9	8.34		ug/m3		84	60 - 140
1,1-Dichloroethane	8.1	7.32		ug/m3		90	70 - 130
1,2-Dichloroethane	8.1	7.84		ug/m3		97	70 - 130
1,1-Dichloroethene	7.9	7.98		ug/m3		101	70 - 130
Ethylbenzene	8.7	8.99		ug/m3		103	70 - 130
Methylene Chloride	6.9	6.39		ug/m3		92	70 - 130
Methyl tert-butyl ether	7.2	7.06		ug/m3		98	60 - 140
Naphthalene	10	14.6		ug/m3		139	60 - 140
Tetrachloroethene	14	15.2		ug/m3		112	70 - 130
Toluene	7.5	7.80		ug/m3		104	70 - 130
trans-1,2-Dichloroethene	7.9	8.21		ug/m3		104	70 - 130
1,2,4-Trichlorobenzene	15	21.4	*	ug/m3		144	60 - 140
1,1,1-Trichloroethane	11	11.0		ug/m3		100	70 - 130
1,1,2-Trichloroethane	11	11.3		ug/m3		104	70 - 130
Trichloroethene	11	11.7		ug/m3		109	70 - 130
1,2,3-Trimethylbenzene	9.8	10.9		ug/m3		111	70 - 130
1,2,4-Trimethylbenzene	9.8	11.5		ug/m3		117	70 - 130
1,3,5-Trimethylbenzene	9.8	11.5		ug/m3		117	70 - 130
Vinyl chloride	5.1	4.66		ug/m3		91	70 - 130
Xylenes, Total	26	27.1		ug/m3		104	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-18835/1002
Matrix: Air
Analysis Batch: 18835

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		60 - 140

Air - GC/MS VOA

Analysis Batch: 18783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-10921-1	BLDG-A INFLUENT	Total/NA	Air	TO 15 LL	
140-10921-2	BLDG-A MIDGAC	Total/NA	Air	TO 15 LL	
140-10921-3	BLDG-A EFFLUENT	Total/NA	Air	TO 15 LL	
140-10921-5	BLDG-C MIDGAC	Total/NA	Air	TO 15 LL	
140-10921-6	BLDG-C INFLUENT	Total/NA	Air	TO 15 LL	
MB 140-18783/5	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-18783/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 18835

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-10921-4	BLDG-C EFFLUENT	Total/NA	Air	TO 15 LL	
MB 140-18835/5	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-18835/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Client Sample ID: BLDG-A INFLUENT
Lab Sample ID: 140-10921-1
Date Collected: 03/08/18 13:33
Matrix: Air
Date Received: 03/10/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	20 mL	500 mL	18783	03/15/18 20:21	AFB	TAL KNX
	Instrument ID: MR									

Client Sample ID: BLDG-A MIDGAC
Lab Sample ID: 140-10921-2
Date Collected: 03/08/18 13:37
Matrix: Air
Date Received: 03/10/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	18783	03/15/18 21:08	AFB	TAL KNX
	Instrument ID: MR									

Client Sample ID: BLDG-A EFFLUENT
Lab Sample ID: 140-10921-3
Date Collected: 03/08/18 13:43
Matrix: Air
Date Received: 03/10/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	18783	03/15/18 21:55	AFB	TAL KNX
	Instrument ID: MR									

Client Sample ID: BLDG-C EFFLUENT
Lab Sample ID: 140-10921-4
Date Collected: 03/08/18 14:42
Matrix: Air
Date Received: 03/10/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	18835	03/17/18 05:58	AFB	TAL KNX
	Instrument ID: MR									

Client Sample ID: BLDG-C MIDGAC
Lab Sample ID: 140-10921-5
Date Collected: 03/08/18 14:46
Matrix: Air
Date Received: 03/10/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	18783	03/15/18 23:29	AFB	TAL KNX
	Instrument ID: MR									

Client Sample ID: BLDG-C INFLUENT
Lab Sample ID: 140-10921-6
Date Collected: 03/08/18 14:52
Matrix: Air
Date Received: 03/10/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	18783	03/16/18 00:17	AFB	TAL KNX
	Instrument ID: MR									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-18783/5

Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	18783	03/15/18 17:14	AFB	TAL KNX
	Instrument ID: MR									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-18835/5

Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	18835	03/16/18 15:10	AFB	TAL KNX
	Instrument ID: MR									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-18783/1002

Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	18783	03/15/18 13:44	AFB	TAL KNX
	Instrument ID: MR									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-18835/1002

Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	18835	03/16/18 12:42	AFB	TAL KNX
	Instrument ID: MR									

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/BLDG-A 6-C

TestAmerica Job ID: 140-10921-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/BLDG-A 6-C

TestAmerica Job ID: 140-10921-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-10921-1	BLDG-A INFLUENT	Air	03/08/18 13:33	03/10/18 09:10
140-10921-2	BLDG-A MIDGAC	Air	03/08/18 13:37	03/10/18 09:10
140-10921-3	BLDG-A EFFLUENT	Air	03/08/18 13:43	03/10/18 09:10
140-10921-4	BLDG-C EFFLUENT	Air	03/08/18 14:42	03/10/18 09:10
140-10921-5	BLDG-C MIDGAC	Air	03/08/18 14:46	03/10/18 09:10
140-10921-6	BLDG-C INFLUENT	Air	03/08/18 14:52	03/10/18 09:10

Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
BLDG-A INFLUENT	140-10921-1	97
BLDG-A MIDGAC	140-10921-2	103
BLDG-A EFFLUENT	140-10921-3	102
BLDG-C EFFLUENT	140-10921-4	102
BLDG-C MIDGAC	140-10921-5	101
BLDG-C INFLUENT	140-10921-6	102
	MB 140-18783/5	99
	MB 140-18835/5	100
	LCS 140-18783/1002	96
	LCS 140-18835/1002	95

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Matrix: Air Level: Low Lab File ID: RCCVC15-LCS.d

Lab ID: LCS 140-18783/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.96	98	70-130	
Carbon tetrachloride	2.00	2.19	110	70-130	
Chlorodifluoromethane	2.00	1.95	98	60-140	
Chloroform	2.00	1.89	94	70-130	
cis-1,2-Dichloroethene	2.00	1.95	98	70-130	
Dichlorodifluoromethane	2.00	2.13	106	60-140	
1,1-Dichloroethane	2.00	1.75	87	70-130	
1,2-Dichloroethane	2.00	1.91	96	70-130	
1,1-Dichloroethene	2.00	1.95	97	70-130	
Ethylbenzene	2.00	2.05	103	70-130	
Methylene Chloride	2.00	1.77	89	70-130	
Methyl tert-butyl ether	2.00	1.90	95	60-140	
Naphthalene	2.00	2.77	139	60-140	
Tetrachloroethene	2.00	2.24	112	70-130	
Toluene	2.00	2.04	102	70-130	
trans-1,2-Dichloroethene	2.00	1.97	99	70-130	
1,2,4-Trichlorobenzene	2.00	2.90	145	60-140	*
1,1,1-Trichloroethane	2.00	1.95	98	70-130	
1,1,2-Trichloroethane	2.00	1.98	99	70-130	
Trichloroethene	2.00	2.14	107	70-130	
1,2,3-Trimethylbenzene	2.00	1.72	86	70-130	
1,2,4-Trimethylbenzene	2.00	2.41	121	70-130	
1,3,5-Trimethylbenzene	2.00	2.72	136	70-130	*
Vinyl chloride	2.00	1.88	94	70-130	
Xylenes, Total	6.00	6.25	104	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Matrix: Air Level: Low Lab File ID: RCCVC16-LCS.d

Lab ID: LCS 140-18835/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.98	99	70-130	
Carbon tetrachloride	2.00	2.12	106	70-130	
Chlorodifluoromethane	2.00	1.96	98	60-140	
Chloroform	2.00	1.95	97	70-130	
cis-1,2-Dichloroethene	2.00	2.00	100	70-130	
Dichlorodifluoromethane	2.00	1.69	84	60-140	
1,1-Dichloroethane	2.00	1.81	90	70-130	
1,2-Dichloroethane	2.00	1.94	97	70-130	
1,1-Dichloroethene	2.00	2.01	101	70-130	
Ethylbenzene	2.00	2.07	103	70-130	
Methylene Chloride	2.00	1.84	92	70-130	
Methyl tert-butyl ether	2.00	1.96	98	60-140	
Naphthalene	2.00	2.78	139	60-140	
Tetrachloroethene	2.00	2.24	112	70-130	
Toluene	2.00	2.07	104	70-130	
trans-1,2-Dichloroethene	2.00	2.07	104	70-130	
1,2,4-Trichlorobenzene	2.00	2.88	144	60-140	*
1,1,1-Trichloroethane	2.00	2.01	100	70-130	
1,1,2-Trichloroethane	2.00	2.08	104	70-130	
Trichloroethene	2.00	2.17	109	70-130	
1,2,3-Trimethylbenzene	2.00	2.21	111	70-130	
1,2,4-Trimethylbenzene	2.00	2.34	117	70-130	
1,3,5-Trimethylbenzene	2.00	2.34	117	70-130	
Vinyl chloride	2.00	1.82	91	70-130	
Xylenes, Total	6.00	6.25	104	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Lab File ID: Rmb500C15.D Lab Sample ID: MB 140-18783/5

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MR Date Analyzed: 03/15/2018 17:14

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
BLDG-A INFLUENT	140-10921-1	RC15p104.D	03/15/2018 20:21
BLDG-A MIDGAC	140-10921-2	RC15p105.D	03/15/2018 21:08
BLDG-A EFFLUENT	140-10921-3	RC15p106.D	03/15/2018 21:55
BLDG-C MIDGAC	140-10921-5	RC15p108.D	03/15/2018 23:29
BLDG-C INFLUENT	140-10921-6	RC15p109.D	03/16/2018 00:17

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Lab File ID: RC16MB500.D Lab Sample ID: MB 140-18835/5

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MR Date Analyzed: 03/16/2018 15:10

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-18835/1002	RCCVC16-LCS.d	03/16/2018 12:42
BLDG-C EFFLUENT	140-10921-4	RC16p202.D	03/17/2018 05:58

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Lab File ID: RBFBA30.D BFB Injection Date: 01/30/2018

Instrument ID: MR BFB Injection Time: 11:12

Analysis Batch No.: 17762

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.1	
75	30.0 - 60.0 % of mass 95	54.8	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	78.1	
175	5.0 - 9.0 % of mass 174	5.7	(7.3) 1
176	95.0 - 101.0 % of mass 174	76.6	(98.2) 1
177	5.0 - 9.0 % of mass 176	5.0	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-17762/3	RA30IC01.D	01/30/2018	12:29
	IC 140-17762/4	RA30IC02.D	01/30/2018	13:16
	IC 140-17762/5	RA30IC03.D	01/30/2018	14:04
	IC 140-17762/6	RA30IC04.D	01/30/2018	14:50
	IC 140-17762/7	RA30IC05.D	01/30/2018	15:39
	IC 140-17762/8	RA30IC06.D	01/30/2018	16:27
	ICIS 140-17762/9	RA30IC07.D	01/30/2018	17:15
	IC 140-17762/10	RA30IC08.D	01/30/2018	18:03
	IC 140-17762/11	RA30IC09.D	01/30/2018	18:50
	IC 140-17762/12	RA30IC10.D	01/30/2018	19:38
	ICV 140-17762/14	RA30ICV.D	01/30/2018	21:11

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Lab File ID: RBFBC15.D BFB Injection Date: 03/15/2018

Instrument ID: MR BFB Injection Time: 13:12

Analysis Batch No.: 18783

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	54.0	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	79.7	
175	5.0 - 9.0 % of mass 174	5.8	(7.3) 1
176	95.0 - 101.0 % of mass 174	77.8	(97.7) 1
177	5.0 - 9.0 % of mass 176	5.2	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-18783/2	RCCVC15.D	03/15/2018	13:44
	LCS 140-18783/1002	RCCVC15-LCS.d	03/15/2018	13:44
	MB 140-18783/5	Rmb500C15.D	03/15/2018	17:14
BLDG-A INFLUENT	140-10921-1	RC15p104.D	03/15/2018	20:21
BLDG-A MIDGAC	140-10921-2	RC15p105.D	03/15/2018	21:08
BLDG-A EFFLUENT	140-10921-3	RC15p106.D	03/15/2018	21:55
BLDG-C MIDGAC	140-10921-5	RC15p108.D	03/15/2018	23:29
BLDG-C INFLUENT	140-10921-6	RC15p109.D	03/16/2018	00:17

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Lab File ID: RBFBC16.D BFB Injection Date: 03/16/2018

Instrument ID: MR BFB Injection Time: 12:10

Analysis Batch No.: 18835

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.6	
75	30.0 - 60.0 % of mass 95	53.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	79.8	
175	5.0 - 9.0 % of mass 174	5.8	(7.2) 1
176	95.0 - 101.0 % of mass 174	77.7	(97.4) 1
177	5.0 - 9.0 % of mass 176	5.1	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-18835/2	RCCVC16.D	03/16/2018	12:42
	LCS 140-18835/1002	RCCVC16-LCS.d	03/16/2018	12:42
	MB 140-18835/5	RC16MB500.D	03/16/2018	15:10
BLDG-C EFFLUENT	140-10921-4	RC16p202.D	03/17/2018	05:58

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Sample No.: ICIS 140-17762/9 Date Analyzed: 01/30/2018 17:15

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RA30IC07.D Heated Purge: (Y/N) N

Calibration ID: 1371

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		397524	7.71	2418900	9.85	2104378	14.86
UPPER LIMIT		556534	8.04	3386460	10.18	2946129	15.19
LOWER LIMIT		238514	7.38	1451340	9.52	1262627	14.53
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-17762/14		374886	7.72	2292324	9.85	1999070	14.86

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Sample No.: CCVIS 140-18783/2 Date Analyzed: 03/15/2018 13:44

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RCCVC15.D Heated Purge: (Y/N) N

Calibration ID: 1371

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		294315	7.67	1740930	9.82	1483213	14.84
UPPER LIMIT		412041	8.00	2437302	10.15	2076498	15.17
LOWER LIMIT		176589	7.34	1044558	9.49	889928	14.51
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-18783/1002		294315	7.67	1740930	9.82	1483213	14.84
MB 140-18783/5		295572	7.67	1758043	9.81	1486297	14.84
140-10921-1	BLDG-A INFLUENT	278908	7.67	1679287	9.82	1451276	14.84
140-10921-2	BLDG-A MIDGAC	286689	7.67	1702775	9.81	1429138	14.84
140-10921-3	BLDG-A EFFLUENT	286322	7.67	1715824	9.81	1442852	14.84
140-10921-5	BLDG-C MIDGAC	289802	7.68	1730603	9.82	1469067	14.84
140-10921-6	BLDG-C INFLUENT	296614	7.68	1758319	9.81	1471095	14.84

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Sample No.: CCVIS 140-18835/2 Date Analyzed: 03/16/2018 12:42

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RCCVC16.D Heated Purge: (Y/N) N

Calibration ID: 1371

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		294853	7.67	1749788	9.81	1489530	14.84
UPPER LIMIT		412794	8.00	2449703	10.14	2085342	15.17
LOWER LIMIT		176912	7.34	1049873	9.48	893718	14.51
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-18835/1002		294853	7.67	1749788	9.81	1489530	14.84
MB 140-18835/5		300403	7.67	1779258	9.81	1485377	14.84
140-10921-4	BLDG-C EFFLUENT	274320	7.68	1628869	9.82	1380857	14.84

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10921-1

SDG No.:

Client Sample ID: BLDG-A INFLUENT | Lab Sample ID: 140-10921-1

Matrix: Air | Lab File ID: RC15p104.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2018 13:33

Sample wt/vol: 20(mL) | Date Analyzed: 03/15/2018 20:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18783 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	6.8		2.0	0.58
56-23-5	Carbon tetrachloride	153.81	ND		2.0	0.38
75-45-6	Chlorodifluoromethane	86.47	0.60	J	2.0	0.38
67-66-3	Chloroform	119.38	ND		2.0	0.38
156-59-2	cis-1,2-Dichloroethene	96.94	20		2.0	0.60
75-71-8	Dichlorodifluoromethane	120.91	0.72	J	2.0	0.68
75-34-3	1,1-Dichloroethane	98.96	3.4		2.0	0.25
107-06-2	1,2-Dichloroethane	98.96	ND		2.0	0.48
75-35-4	1,1-Dichloroethene	96.94	27		2.0	0.35
100-41-4	Ethylbenzene	106.17	ND		2.0	0.68
75-09-2	Methylene Chloride	84.93	ND		5.0	3.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		10	1.7
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.0	0.40
108-88-3	Toluene	92.14	ND		3.0	3.0
156-60-5	trans-1,2-Dichloroethene	96.94	ND		2.0	0.50
120-82-1	1,2,4-Trichlorobenzene	181.45	ND	*	2.0	0.98
71-55-6	1,1,1-Trichloroethane	133.41	87		2.0	0.30
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.0	0.53
79-01-6	Trichloroethene	131.39	230		1.0	0.35
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.85
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.63
108-67-8	1,3,5-Trimethylbenzene	120.20	ND	*	2.0	0.65
75-01-4	Vinyl chloride	62.50	ND		1.0	0.73
1330-20-7	Xylenes, Total	106.17	ND		4.0	0.60

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Client Sample ID: BLDG-A INFLUENT Lab Sample ID: 140-10921-1

Matrix: Air Lab File ID: RC15p104.D

Analysis Method: TO 15 LL Date Collected: 03/08/2018 13:33

Sample wt/vol: 20(mL) Date Analyzed: 03/15/2018 20:21

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18783 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	22		6.4	1.8
56-23-5	Carbon tetrachloride	153.81	ND		13	2.4
75-45-6	Chlorodifluoromethane	86.47	2.1	J	7.1	1.3
67-66-3	Chloroform	119.38	ND		9.8	1.8
156-59-2	cis-1,2-Dichloroethene	96.94	80		7.9	2.4
75-71-8	Dichlorodifluoromethane	120.91	3.6	J	9.9	3.3
75-34-3	1,1-Dichloroethane	98.96	14		8.1	1.0
107-06-2	1,2-Dichloroethane	98.96	ND		8.1	1.9
75-35-4	1,1-Dichloroethene	96.94	110		7.9	1.4
100-41-4	Ethylbenzene	106.17	ND		8.7	2.9
75-09-2	Methylene Chloride	84.93	ND		17	11
1634-04-4	Methyl tert-butyl ether	88.15	ND		36	6.1
91-20-3	Naphthalene	128.17	ND		5.2	5.2
127-18-4	Tetrachloroethene	165.83	ND		14	2.7
108-88-3	Toluene	92.14	ND		11	11
156-60-5	trans-1,2-Dichloroethene	96.94	ND		7.9	2.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND	*	15	7.2
71-55-6	1,1,1-Trichloroethane	133.41	470		11	1.6
79-00-5	1,1,2-Trichloroethane	133.41	ND		11	2.9
79-01-6	Trichloroethene	131.39	1200		5.4	1.9
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		9.8	4.2
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		9.8	3.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND	*	9.8	3.2
75-01-4	Vinyl chloride	62.50	ND		2.6	1.9
1330-20-7	Xylenes, Total	106.17	ND		17	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p104.D
Lims ID: 140-10921-A-1
Client ID: BLDG-A INFLUENT
Sample Type: Client
Inject. Date: 15-Mar-2018 20:21:30 ALS Bottle#: 4 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007635-009
Misc. Info.: 140-10921-A-1
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 16-Mar-2018 10:27:34 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa Date: 16-Mar-2018 10:41:07

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.670	7.670	0.000	75	278908	4.00	
* 2 1,4-Difluorobenzene	114	9.816	9.816	0.000	94	1679287	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.837	14.837	0.000	87	1451276	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.546	16.546	0.000	91	1064256	3.87	
6 Chlorodifluoromethane	67	3.464	3.440	0.027	62	811	0.0238	
8 Dichlorodifluoromethane	85	3.507	3.494	0.016	99	7557	0.0289	
27 1,1-Dichloroethene	96	5.190	5.188	0.006	98	114578	1.09	
37 1,1-Dichloroethane	63	6.511	6.510	0.006	99	28157	0.1380	
41 cis-1,2-Dichloroethene	96	7.390	7.400	0.006	92	93039	0.8100	
45 1,1,1-Trichloroethane	97	8.662	8.669	0.000	94	938410	3.46	
47 Benzene	78	9.239	9.229	0.005	95	87476	0.2727	
56 Trichloroethene	130	10.571	10.566	0.000	99	1388973	9.16	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

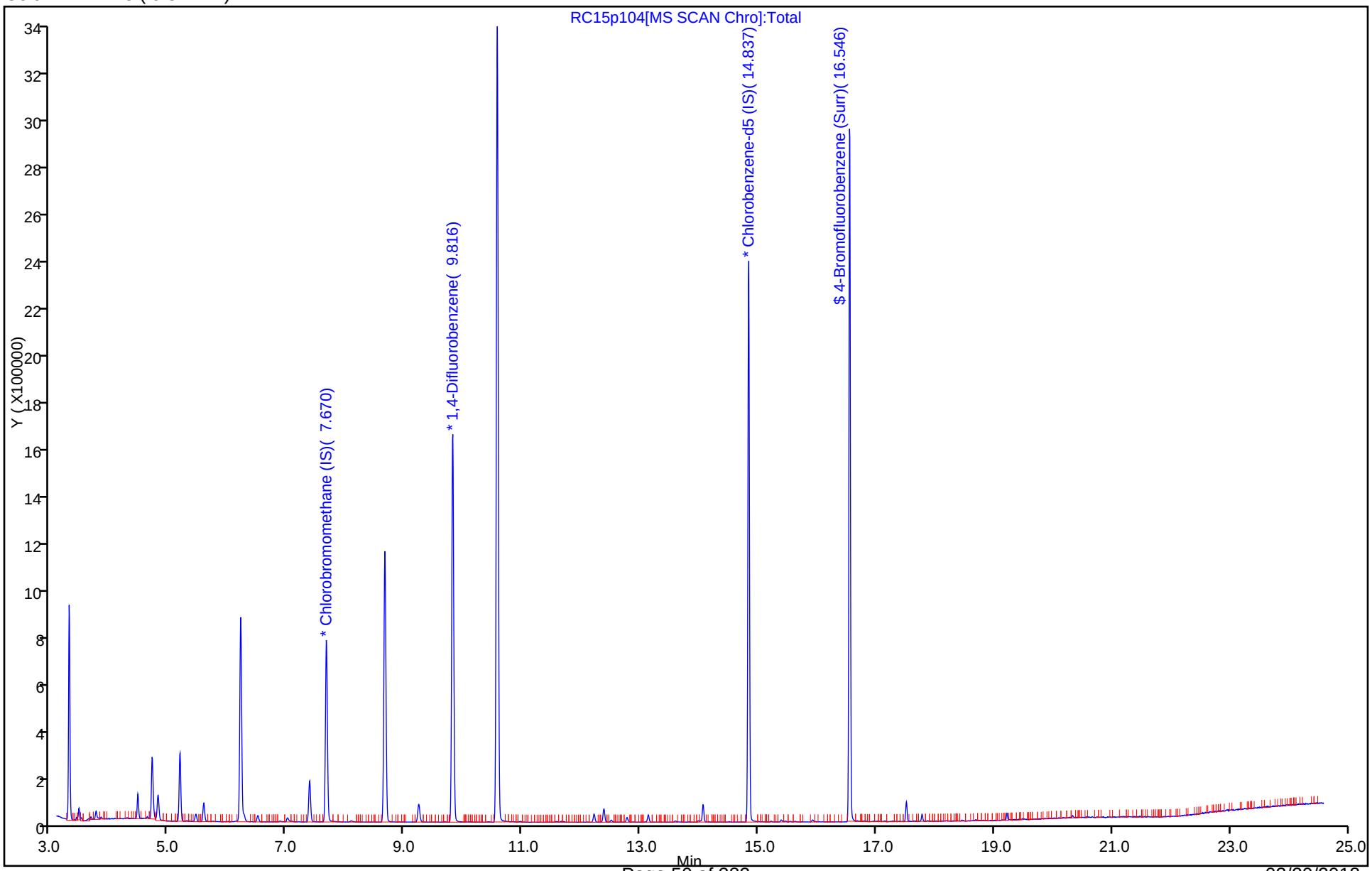
Report Date: 16-Mar-2018 10:41:08 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p104.D

Injection Date:	15-Mar-2018 20:21:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10921-A-1	Lab Sample ID:	140-10921-1	Worklist Smp#:	9
Client ID:	BLDG-A INFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p104.D				
Lims ID:	140-10921-A-1				
Client ID:	BLDG-A INFLUENT				
Sample Type:	Client				
Inject. Date:	15-Mar-2018 20:21:30	ALS Bottle#:	4	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007635-009				
Misc. Info.:	140-10921-A-1				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	16-Mar-2018 10:27:34	Calib Date:	30-Jan-2018 19:38:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK031				

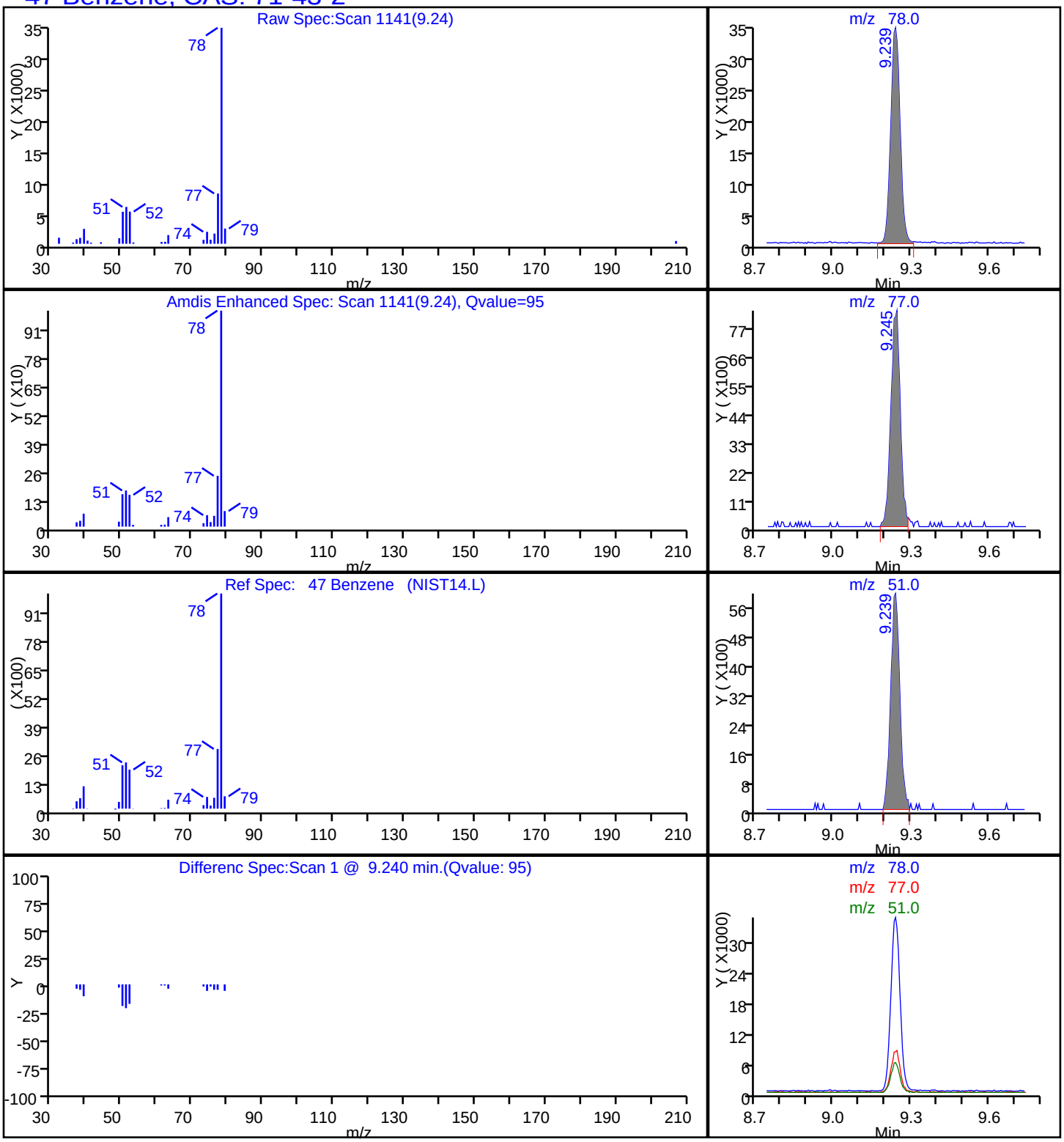
First Level Reviewer: barlozhetskayaa Date: 16-Mar-2018 10:41:07

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.87	96.70

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p104.D		
Injection Date:	15-Mar-2018 20:21:30	Instrument ID:	MR
Lims ID:	140-10921-A-1	Lab Sample ID:	140-10921-1
Client ID:	BLDG-A INFLUENT		
Operator ID:		ALS Bottle#:	4 Worklist Smp#: 9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

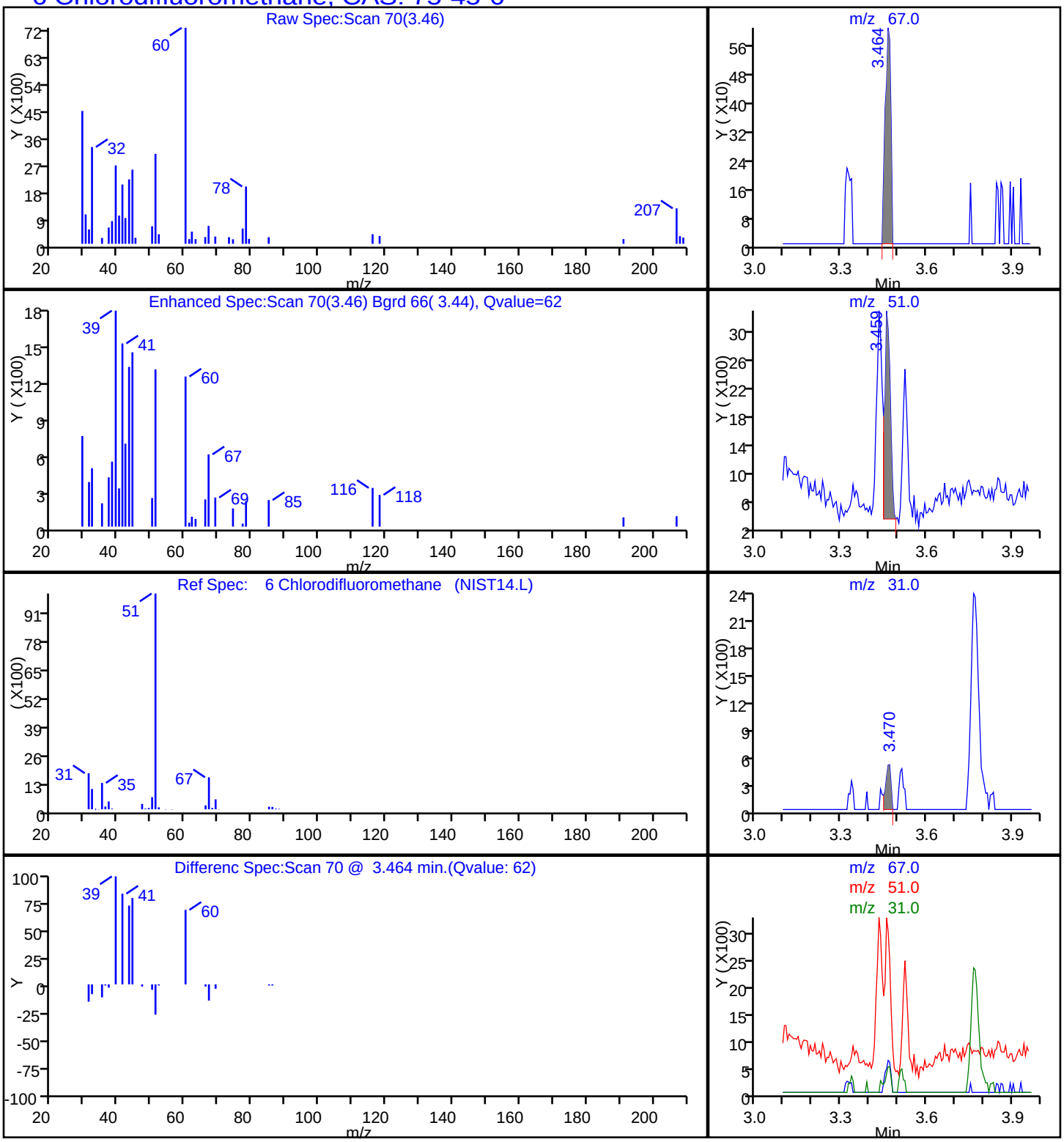
47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

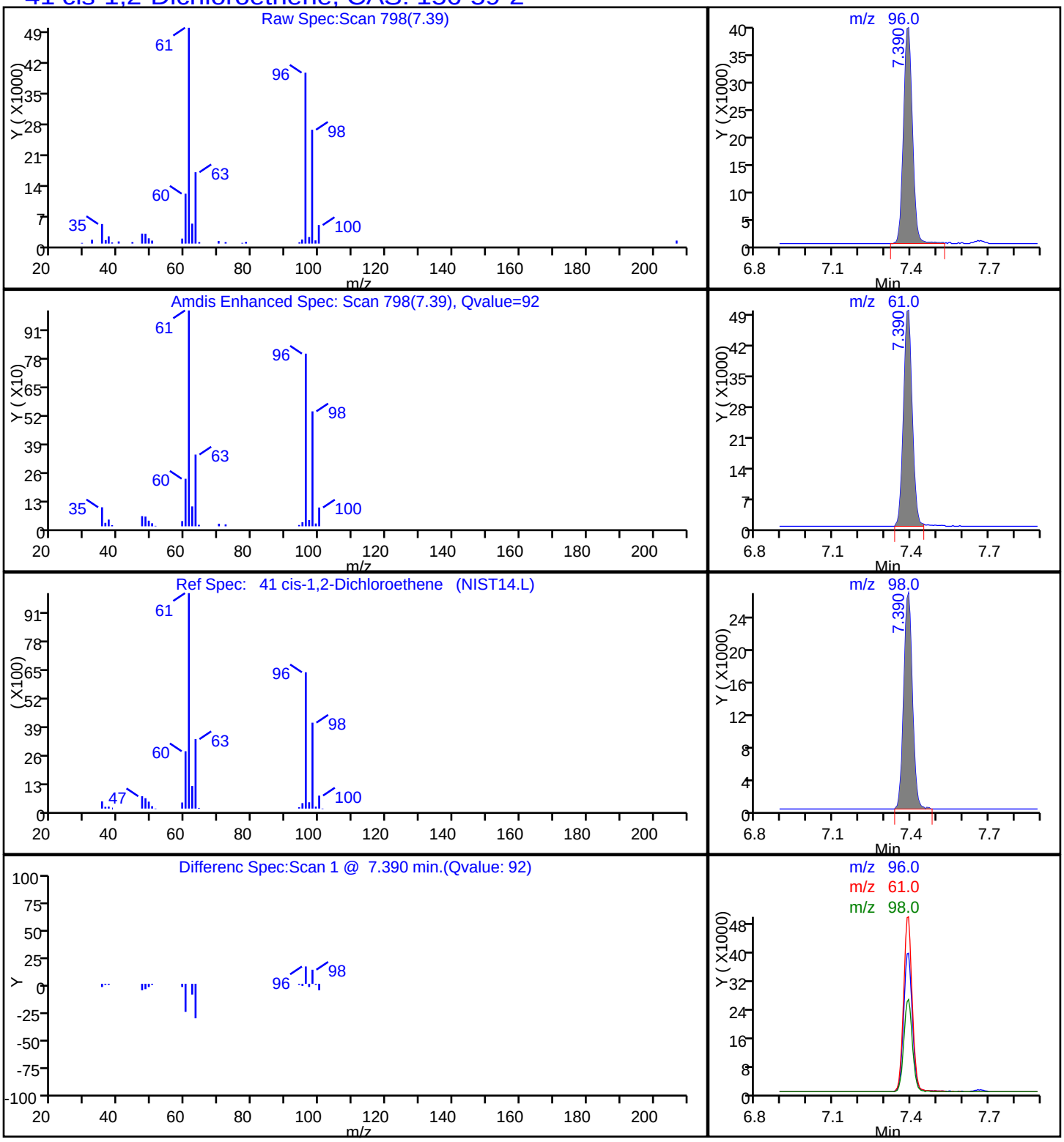
Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p104.D		
Injection Date:	15-Mar-2018 20:21:30	Instrument ID:	MR
Lims ID:	140-10921-A-1	Lab Sample ID:	140-10921-1
Client ID:	BLDG-A INFLUENT		
Operator ID:		ALS Bottle#:	4 Worklist Smp#: 9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



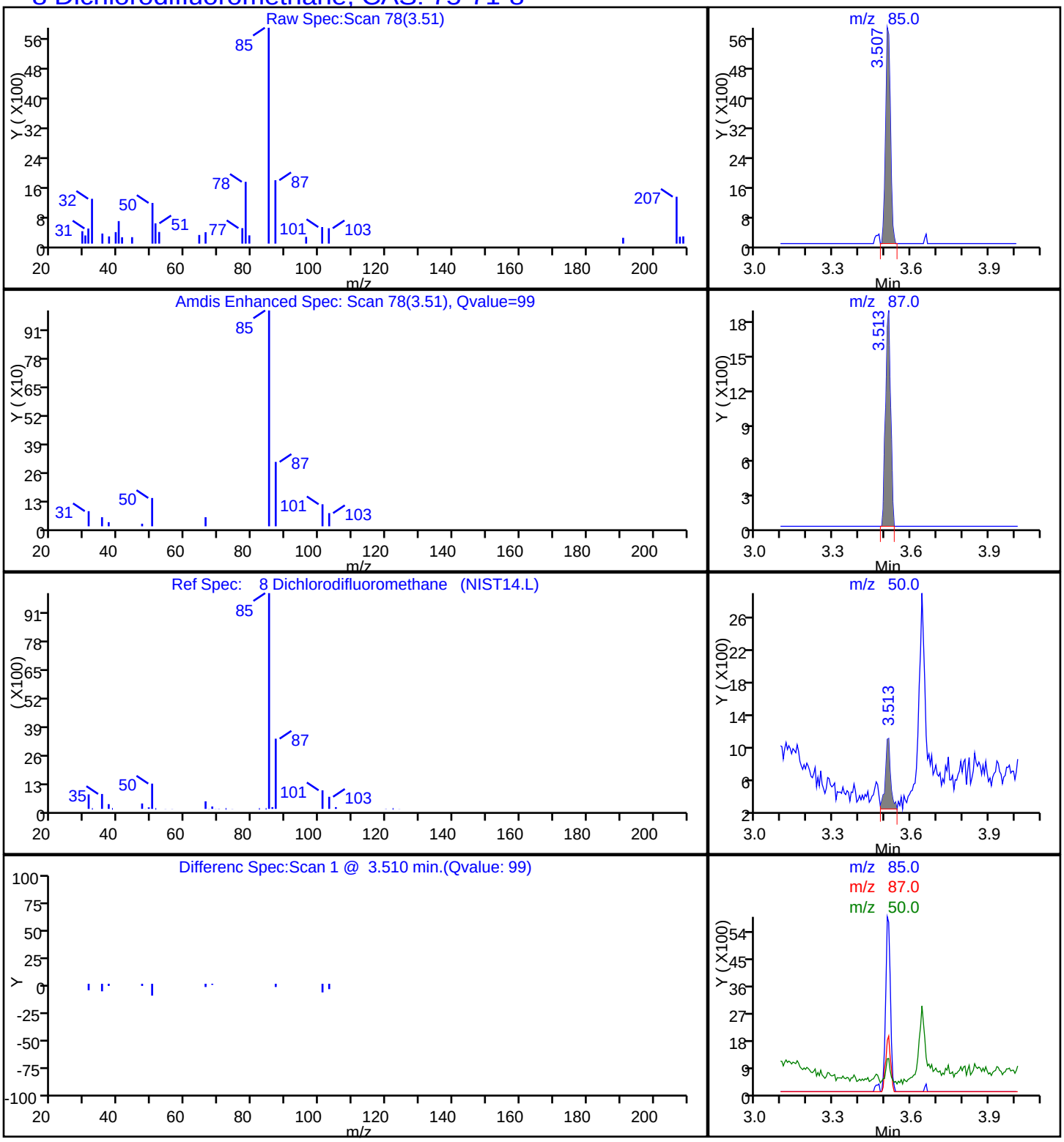
Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p104.D
Injection Date: 15-Mar-2018 20:21:30 Instrument ID: MR
Lims ID: 140-10921-A-1 Lab Sample ID: 140-10921-1
Client ID: BLDG-A INFLUENT
Operator ID: ALS Bottle#: 4 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p104.D
Injection Date: 15-Mar-2018 20:21:30 Instrument ID: MR
Lims ID: 140-10921-A-1 Lab Sample ID: 140-10921-1
Client ID: BLDG-A INFLUENT
Operator ID: ALS Bottle#: 4 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

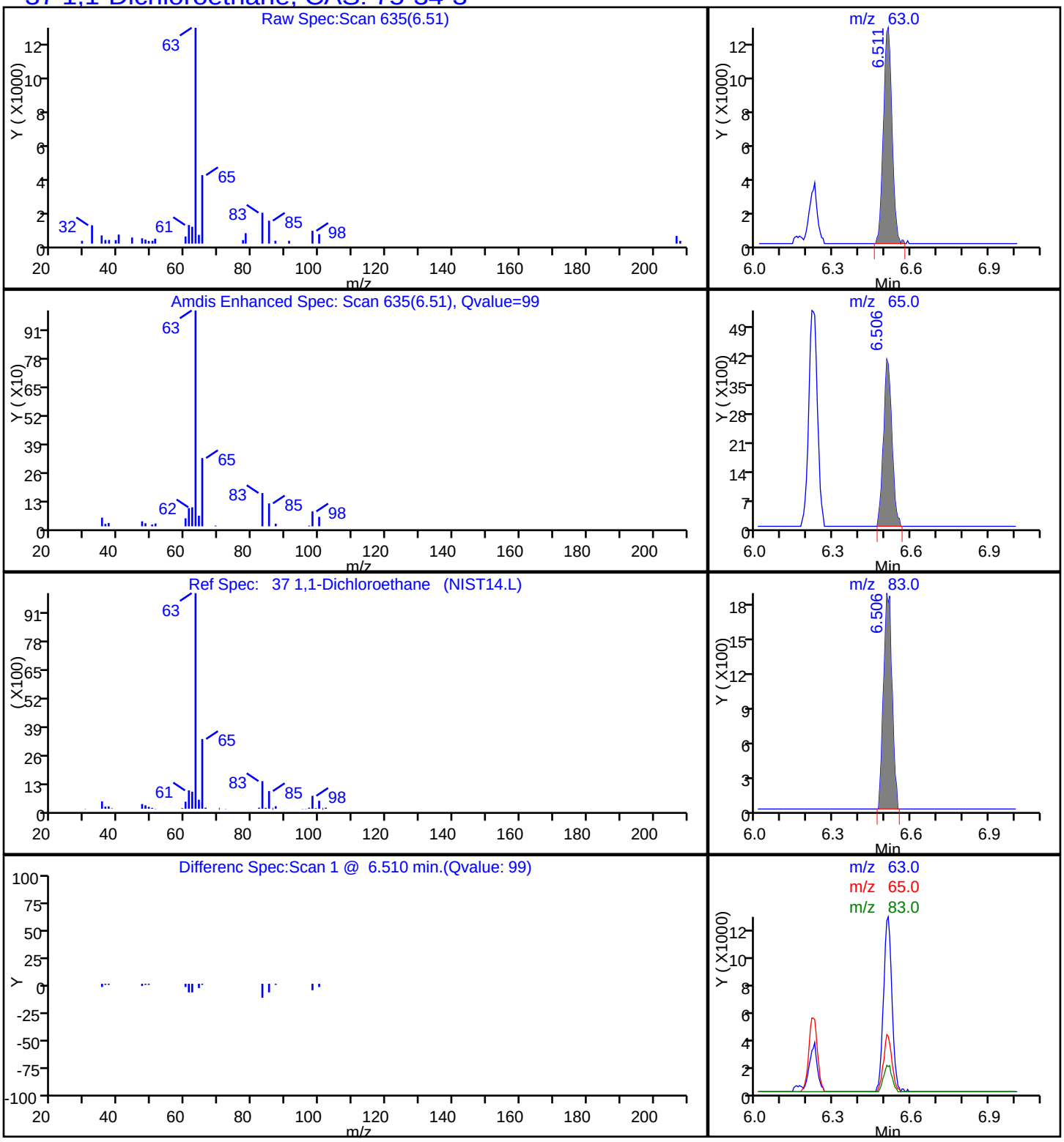
8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p104.D		
Injection Date:	15-Mar-2018 20:21:30	Instrument ID:	MR
Lims ID:	140-10921-A-1	Lab Sample ID:	140-10921-1
Client ID:	BLDG-A INFLUENT		
Operator ID:		ALS Bottle#:	4 Worklist Smp#: 9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



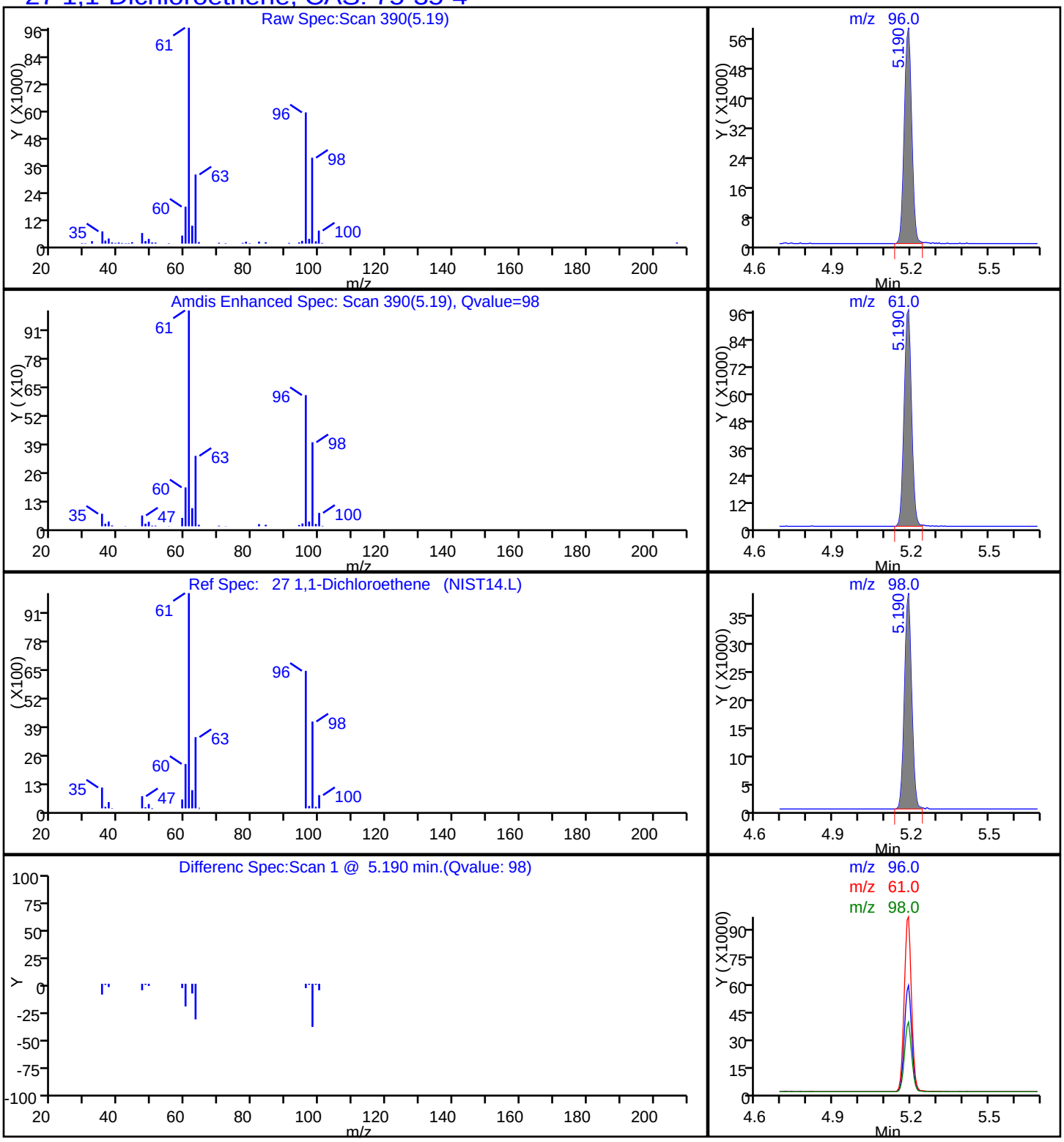
Report Date: 16-Mar-2018 10:41:08 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p104.D

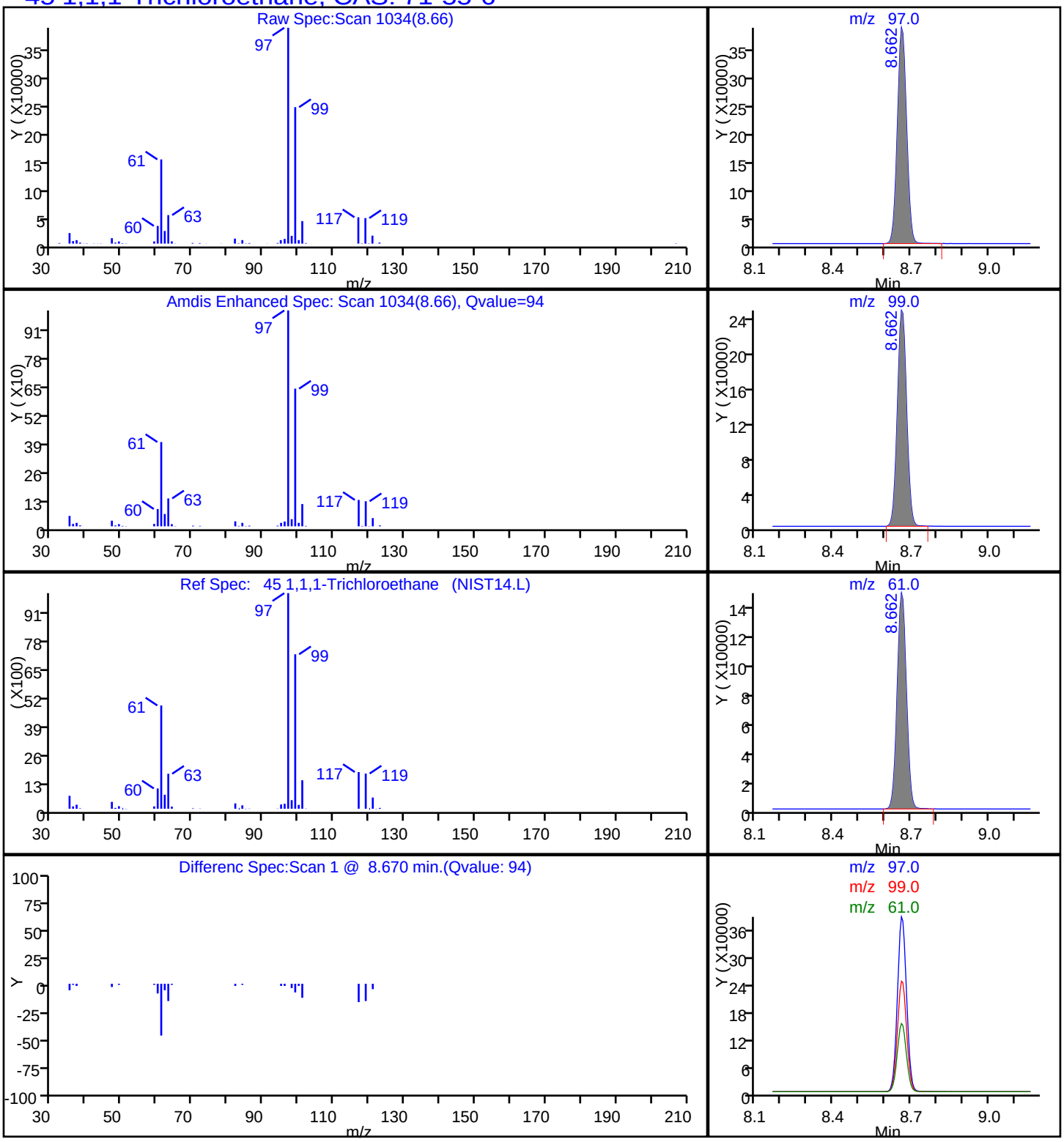
Injection Date:	15-Mar-2018 20:21:30	Instrument ID:	MR		
Lims ID:	140-10921-A-1	Lab Sample ID:	140-10921-1		
Client ID:	BLDG-A INFLUENT				
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

27 1,1-Dichloroethene, CAS: 75-35-4



Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p104.D
Injection Date: 15-Mar-2018 20:21:30 Instrument ID: MR
Lims ID: 140-10921-A-1 Lab Sample ID: 140-10921-1
Client ID: BLDG-A INFLUENT
Operator ID: ALS Bottle#: 4 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



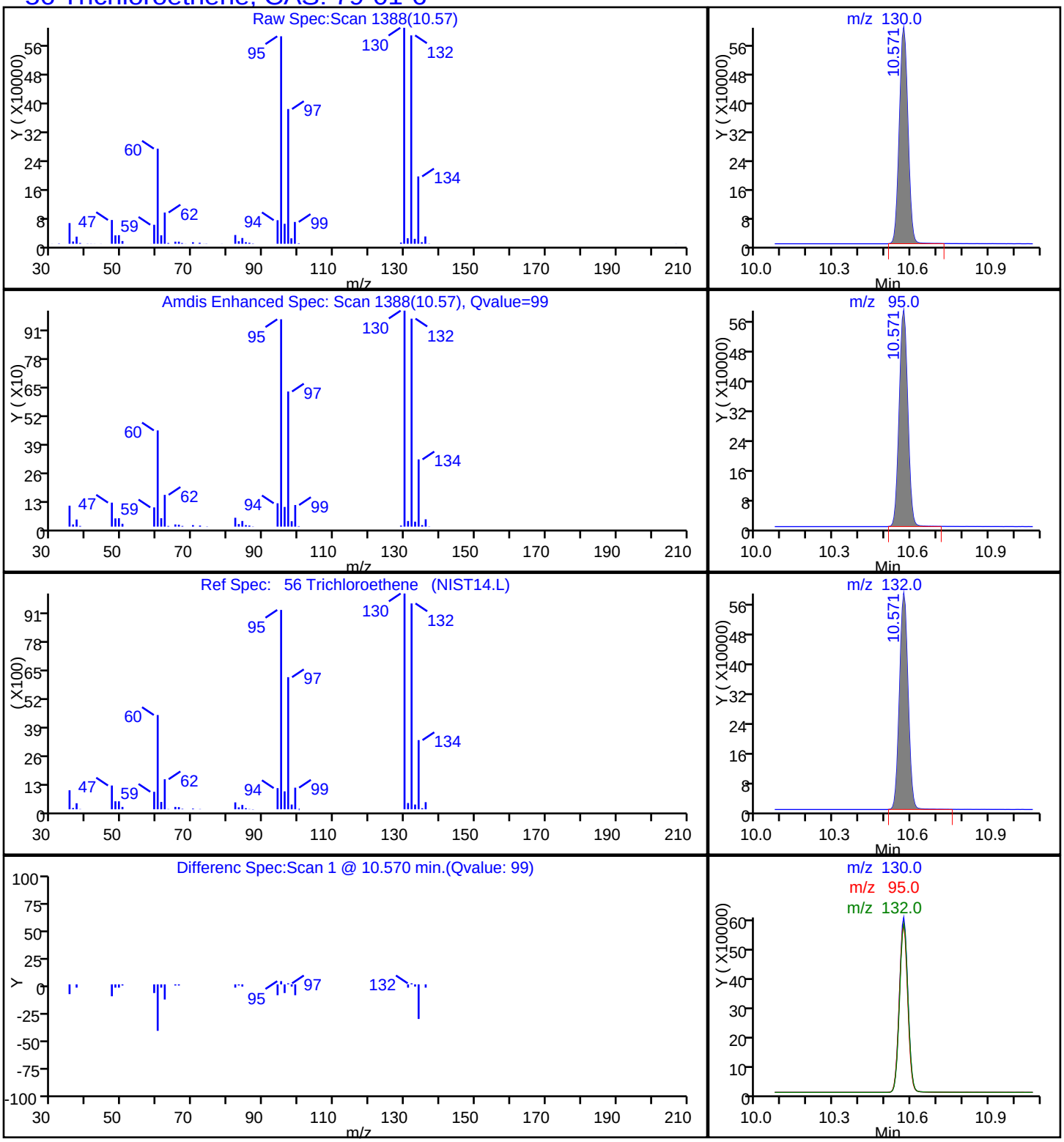
Report Date: 16-Mar-2018 10:41:08 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p104.D

Injection Date:	15-Mar-2018 20:21:30	Instrument ID:	MR
Lims ID:	140-10921-A-1	Lab Sample ID:	140-10921-1
Client ID:	BLDG-A INFLUENT		
Operator ID:		ALS Bottle#:	4 Worklist Smp#: 9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

56 Trichloroethene, CAS: 79-01-6



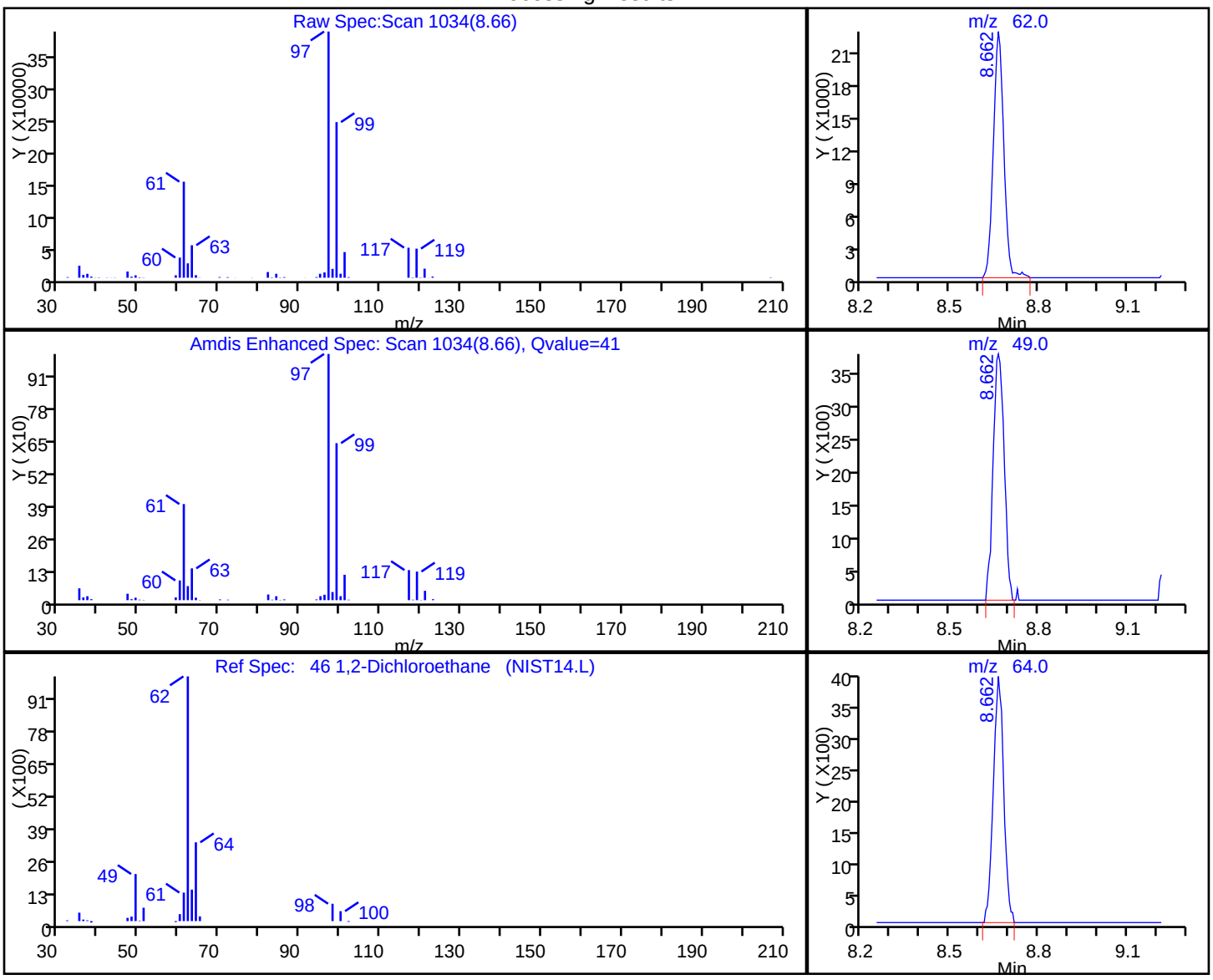
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p104.D				
Injection Date:	15-Mar-2018 20:21:30	Instrument ID:	MR		
Lims ID:	140-10921-A-1	Lab Sample ID:	140-10921-1		
Client ID:	BLDG-A INFLUENT				
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

46 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
8.66	62.00	55065	0.310012
8.66	49.00	9722	
8.66	64.00	9700	

Reviewer: barlozhetskayaa, 16-Mar-2018 10:15:02

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Client Sample ID: BLDG-A MIDGAC Lab Sample ID: 140-10921-2

Matrix: Air Lab File ID: RC15p105.D

Analysis Method: TO 15 LL Date Collected: 03/08/2018 13:37

Sample wt/vol: 100(mL) Date Analyzed: 03/15/2018 21:08

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18783 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.33	J	0.40	0.075
67-66-3	Chloroform	119.38	0.27	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	19		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.51		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	3.0		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	25		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.88	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	4.7		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.38	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND	*	0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	43		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND	*	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10921-1

SDG No.:

Client Sample ID: BLDG-A MIDGAC | Lab Sample ID: 140-10921-2

Matrix: Air | Lab File ID: RC15p105.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2018 13:37

Sample wt/vol: 100(mL) | Date Analyzed: 03/15/2018 21:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18783 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.48	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	1.3	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	77		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	12		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	98		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.1	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	32		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	1.5	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND	*	3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	230		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND	*	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p105.D
Lims ID: 140-10921-A-2
Client ID: BLDG-A MIDGAC
Sample Type: Client
Inject. Date: 15-Mar-2018 21:08:30 ALS Bottle#: 5 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007635-010
Misc. Info.: 140-10921-A-2
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 16-Mar-2018 12:51:49 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK029

First Level Reviewer: liul Date: 16-Mar-2018 12:51:49

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.670	7.670	0.000	75	286689	4.00	
* 2 1,4-Difluorobenzene	114	9.811	9.816	-0.005	94	1702775	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.837	14.837	0.000	87	1429138	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.546	16.540	0.000	90	1118917	4.13	
6 Chlorodifluoromethane	67	3.448	3.435	0.011	93	2303	0.0659	
8 Dichlorodifluoromethane	85	3.491	3.489	0.000	99	27650	0.1027	
27 1,1-Dichloroethene	96	5.179	5.181	-0.005	98	538738	4.96	
31 Methylene Chloride	84	5.449	5.456	-0.010	85	19764	0.1763	
34 trans-1,2-Dichloroethene	96	6.155	6.151	0.000	97	8374	0.0760	
37 1,1-Dichloroethane	63	6.506	6.501	0.001	100	124075	0.5914	
41 cis-1,2-Dichloroethene	96	7.385	7.379	0.000	92	458903	3.89	
43 Chloroform	83	7.703	7.703	-0.005	92	14564	0.0549	
45 1,1,1-Trichloroethane	97	8.662	8.657	0.000	95	2368997	8.50	
47 Benzene	78	9.239	9.224	0.005	97	9859	0.0303	
65 Toluene	91	12.766	12.762	0.000	93	19794	0.0503	
73 Tetrachloroethene	129	13.979	13.974	0.000	97	136943	0.9334	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

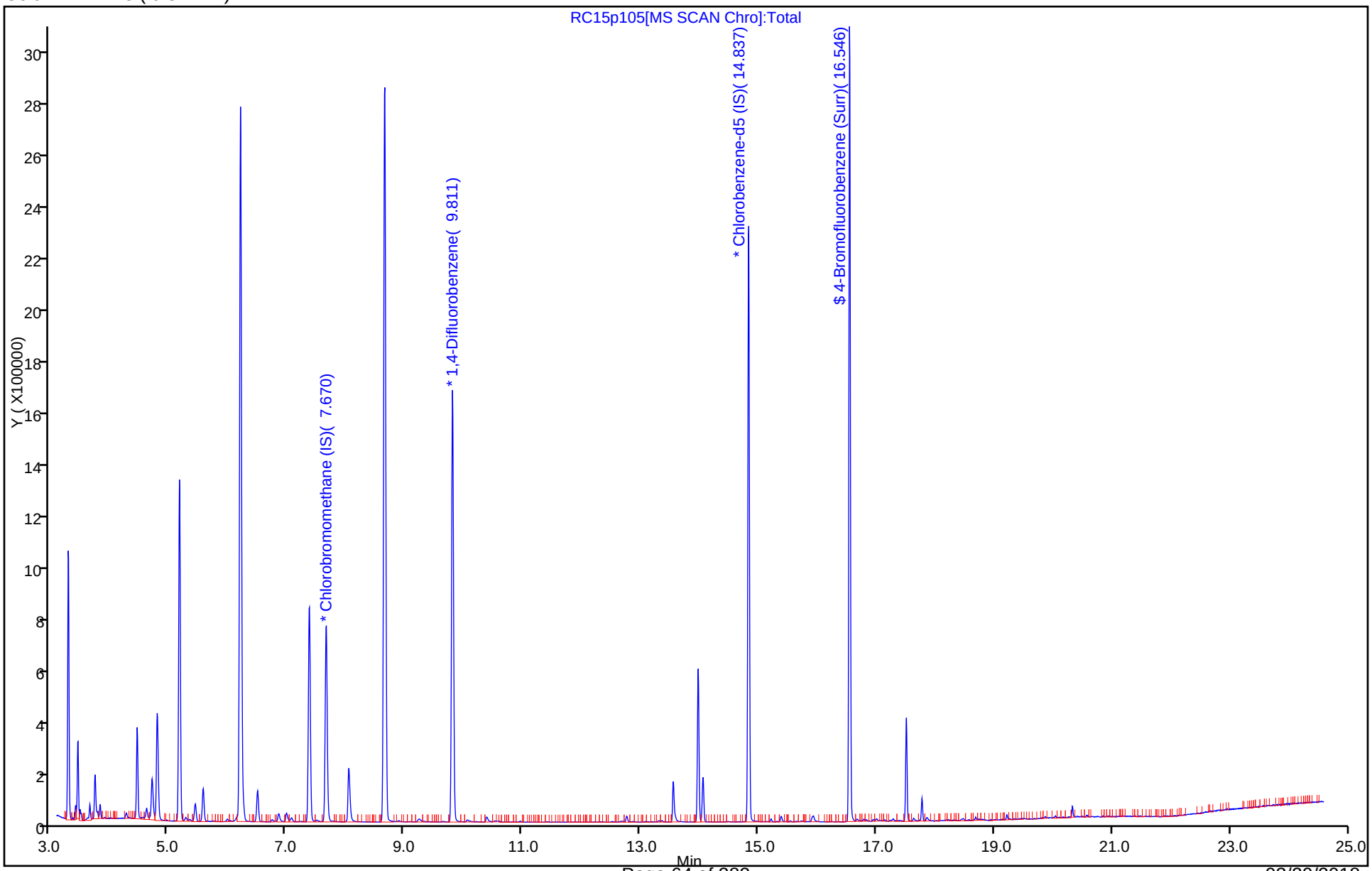
Report Date: 16-Mar-2018 12:51:50 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p105.D

Injection Date:	15-Mar-2018 21:08:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10921-A-2	Lab Sample ID:	140-10921-2	Worklist Smp#:	10
Client ID:	BLDG-A MIDGAC				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

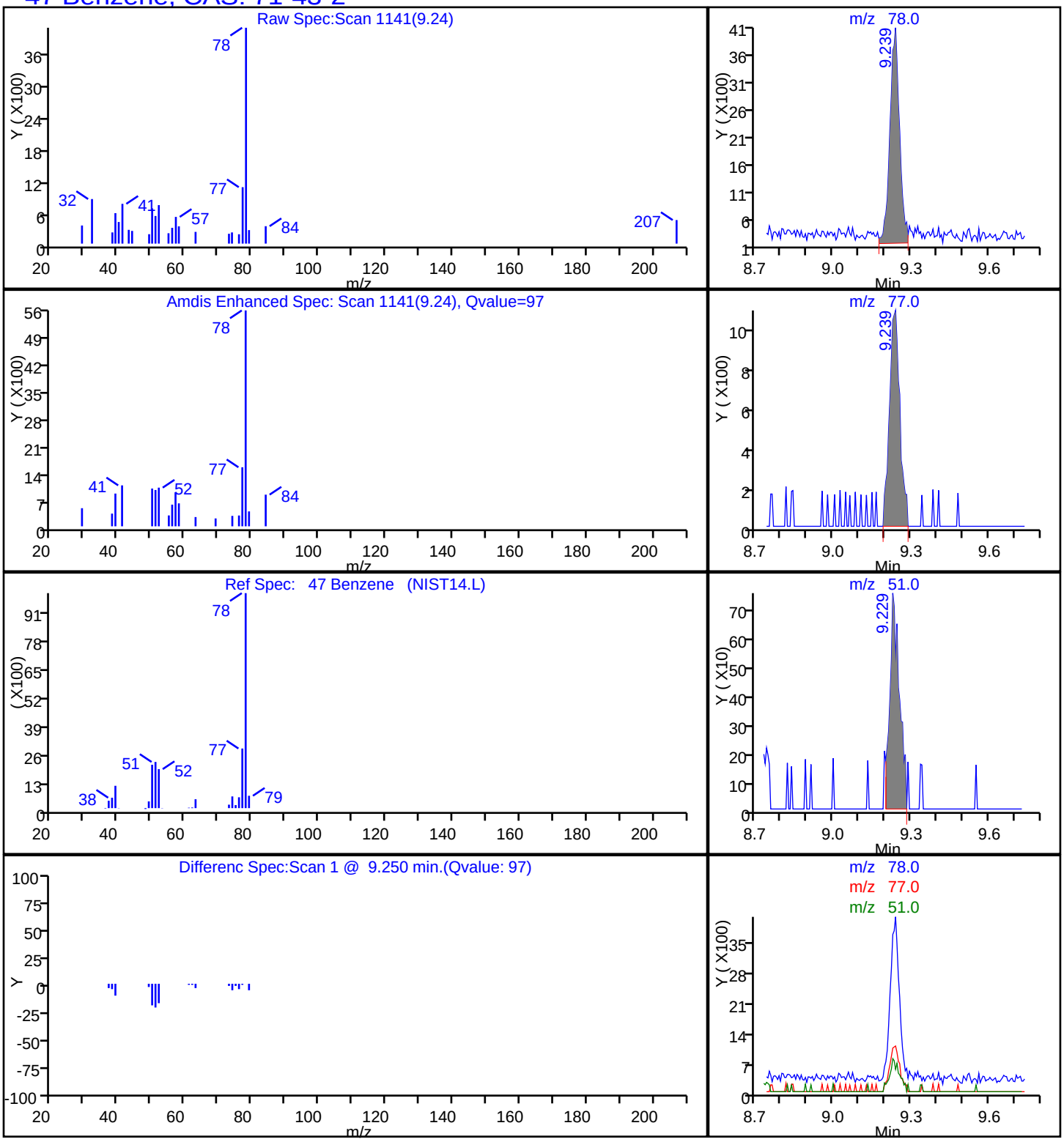
Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p105.D				
Lims ID:	140-10921-A-2				
Client ID:	BLDG-A MIDGAC				
Sample Type:	Client				
Inject. Date:	15-Mar-2018 21:08:30	ALS Bottle#:	5	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007635-010				
Misc. Info.:	140-10921-A-2				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	16-Mar-2018 12:51:49	Calib Date:	30-Jan-2018 19:38:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK029				
First Level Reviewer: liul		Date:	16-Mar-2018 12:51:49		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.13	103.24

TestAmerica Knoxville

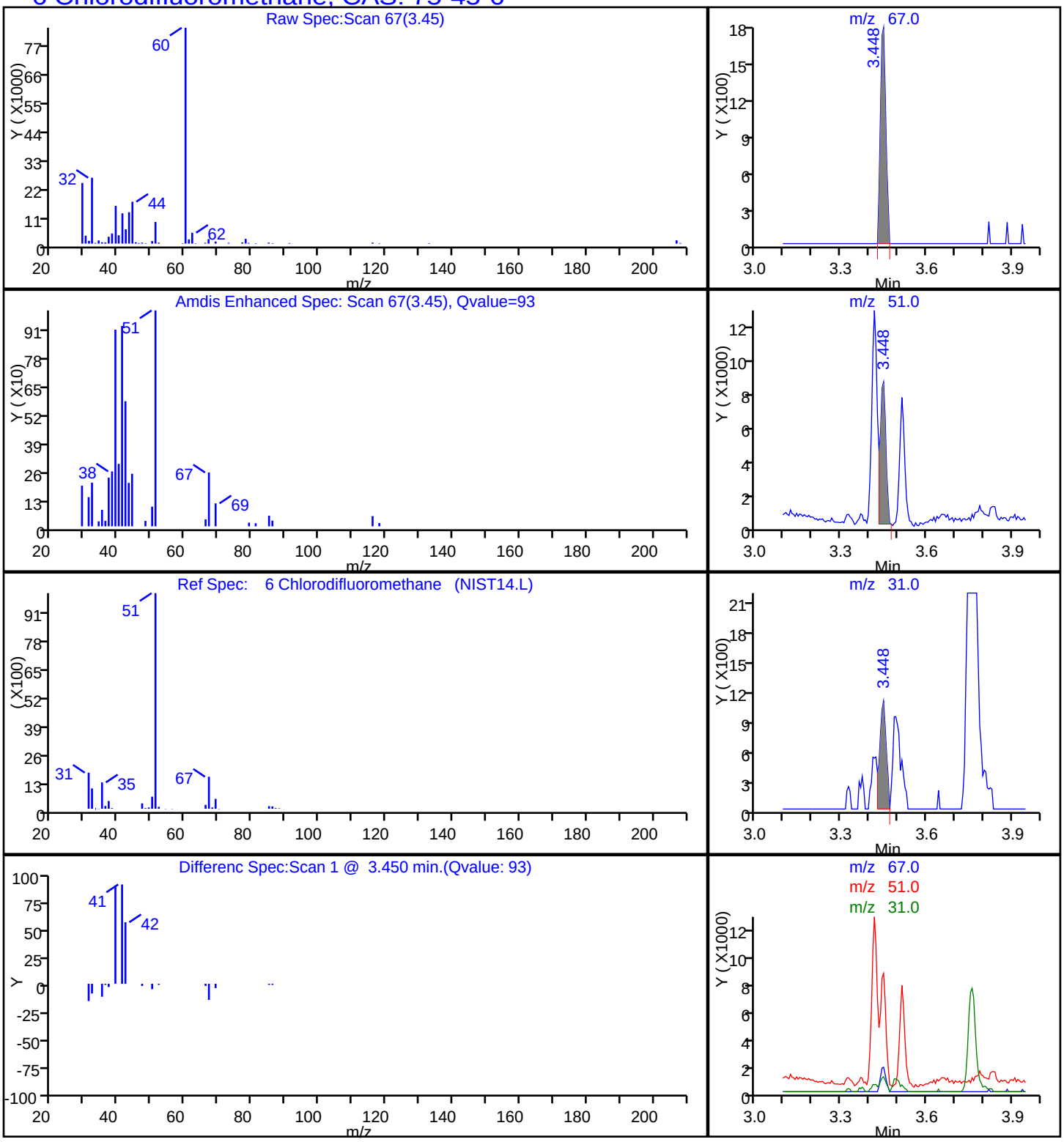
Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p105.D		
Injection Date:	15-Mar-2018 21:08:30	Instrument ID:	MR
Lims ID:	140-10921-A-2	Lab Sample ID:	140-10921-2
Client ID:	BLDG-A MIDGAC		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

47 Benzene, CAS: 71-43-2



Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p105.D
Injection Date: 15-Mar-2018 21:08:30 Instrument ID: MR
Lims ID: 140-10921-A-2 Lab Sample ID: 140-10921-2
Client ID: BLDG-A MIDGAC
Operator ID: ALS Bottle#: 5 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

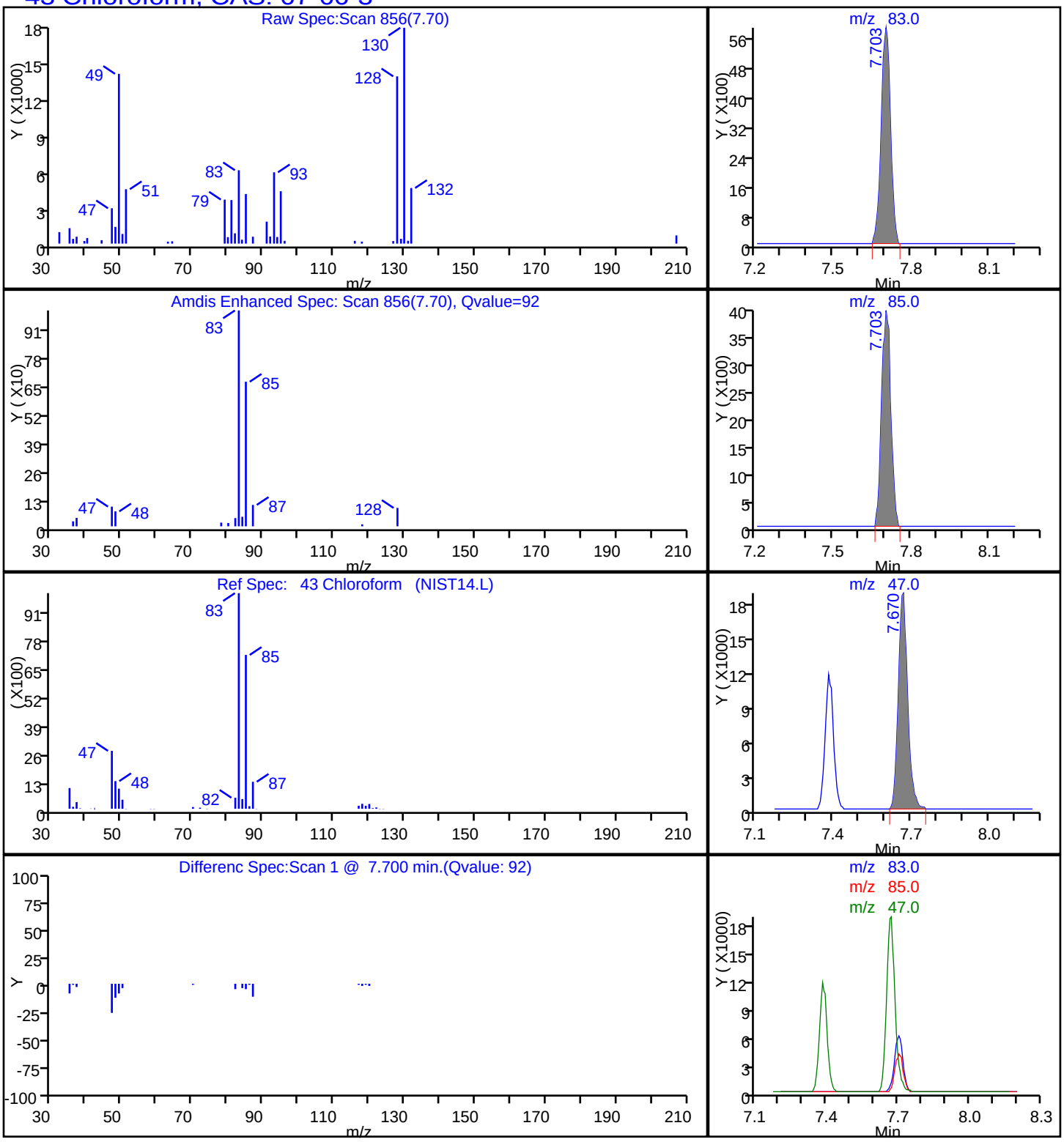
6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

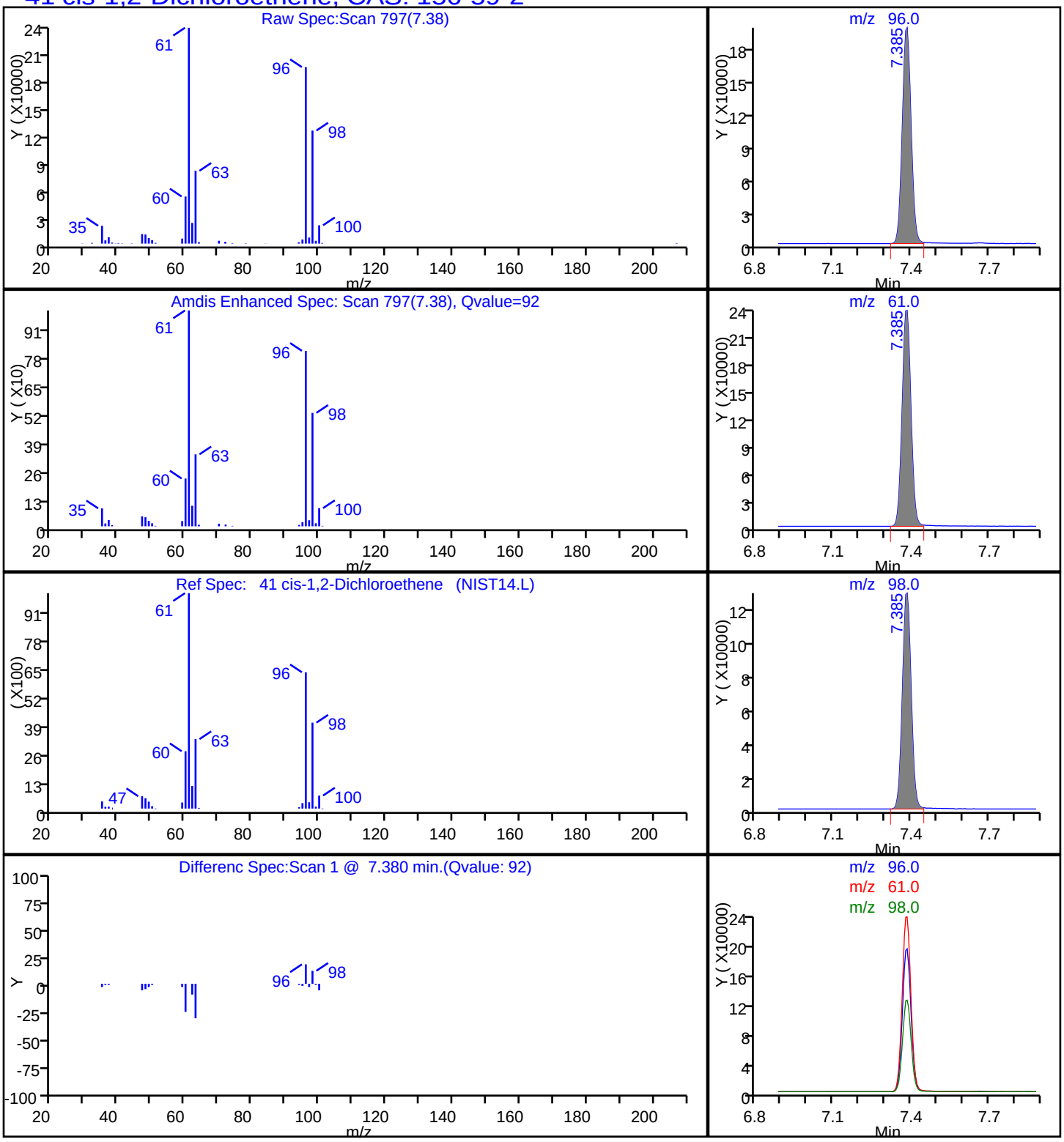
Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p105.D		
Injection Date:	15-Mar-2018 21:08:30	Instrument ID:	MR
Lims ID:	140-10921-A-2	Lab Sample ID:	140-10921-2
Client ID:	BLDG-A MIDGAC		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

43 Chloroform, CAS: 67-66-3



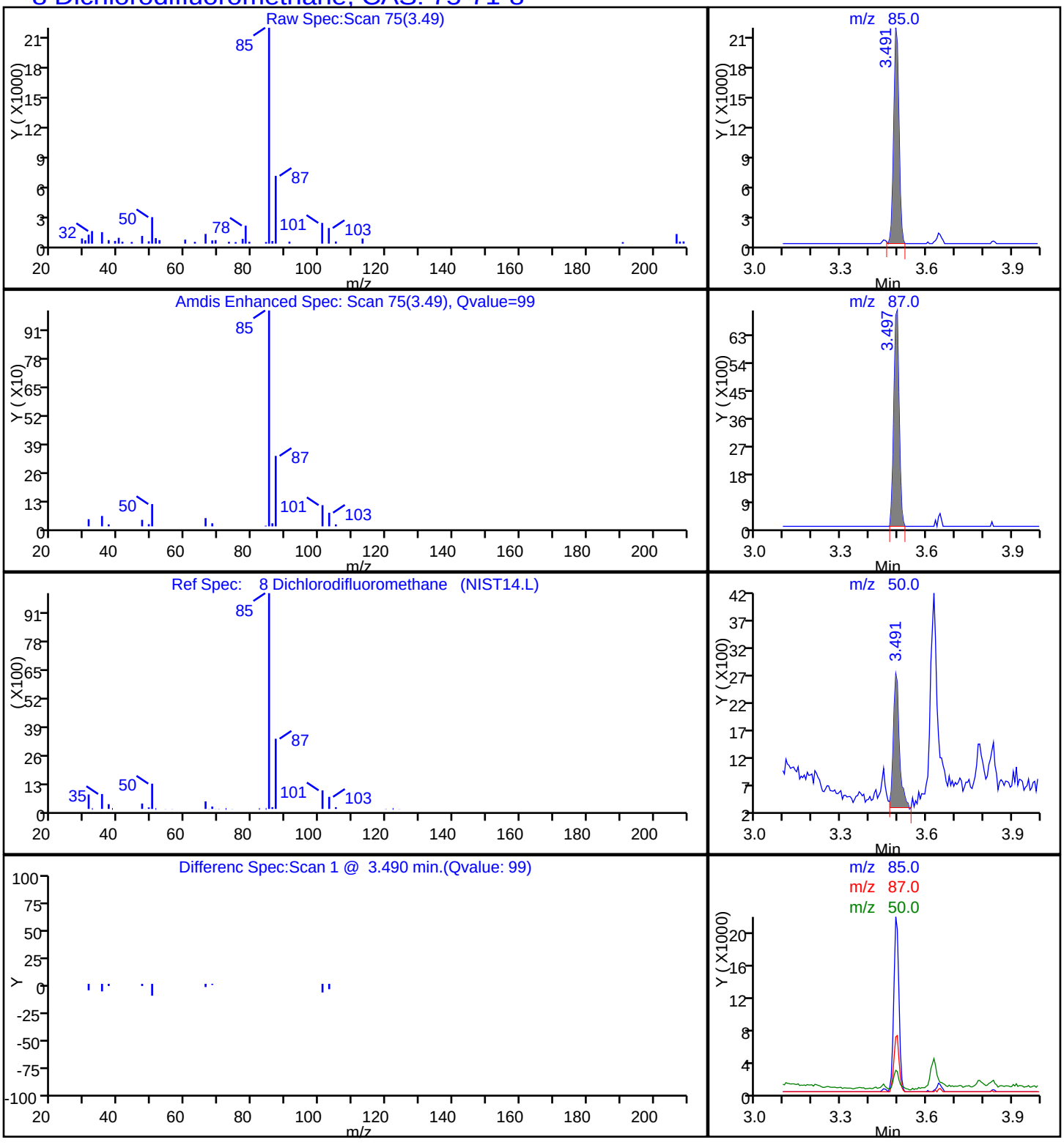
Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p105.D
Injection Date: 15-Mar-2018 21:08:30 Instrument ID: MR
Lims ID: 140-10921-A-2 Lab Sample ID: 140-10921-2
Client ID: BLDG-A MIDGAC
Operator ID: ALS Bottle#: 5 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p105.D
Injection Date: 15-Mar-2018 21:08:30 Instrument ID: MR
Lims ID: 140-10921-A-2 Lab Sample ID: 140-10921-2
Client ID: BLDG-A MIDGAC
Operator ID: ALS Bottle#: 5 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

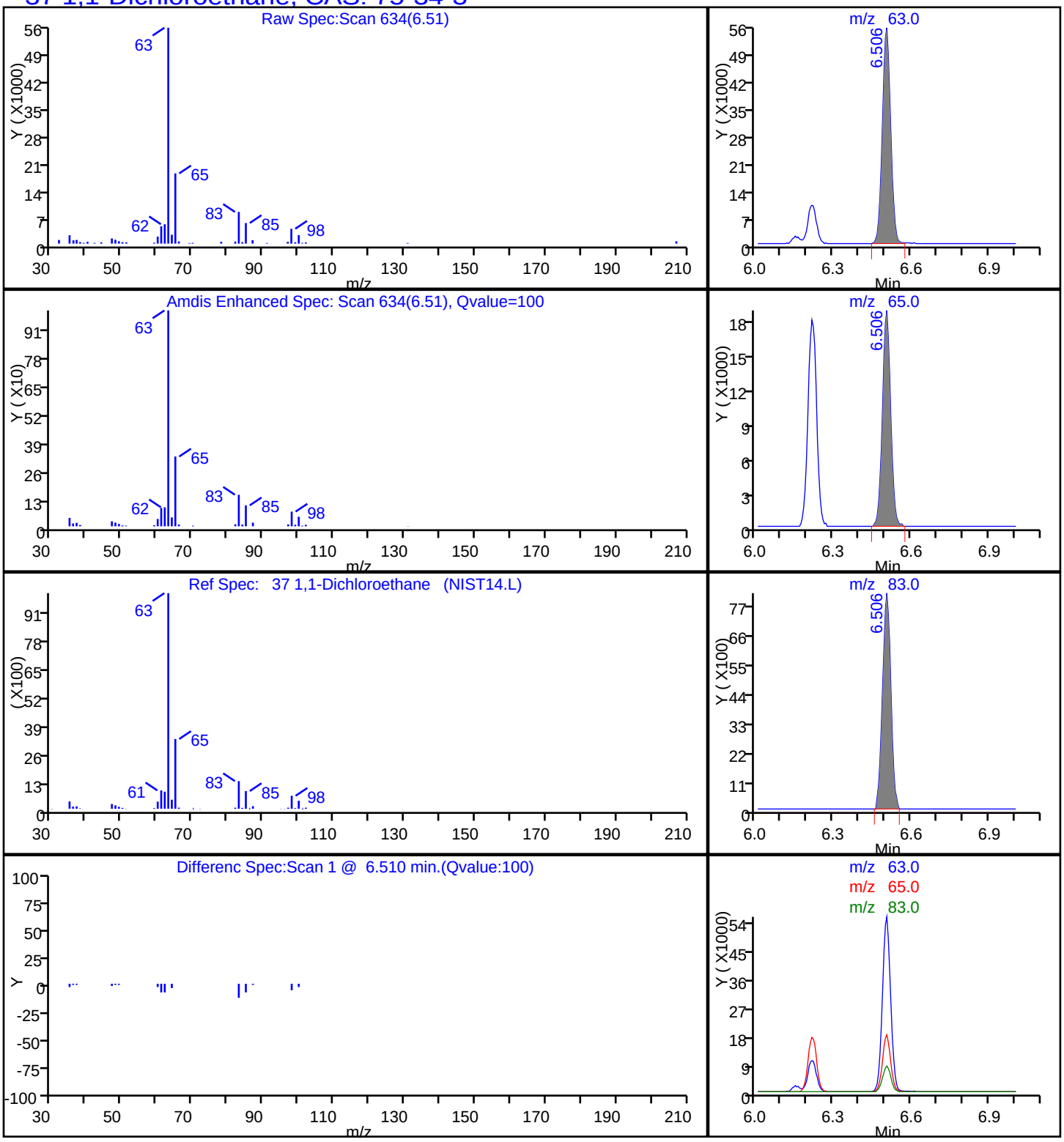
8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p105.D		
Injection Date:	15-Mar-2018 21:08:30	Instrument ID:	MR
Lims ID:	140-10921-A-2	Lab Sample ID:	140-10921-2
Client ID:	BLDG-A MIDGAC		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

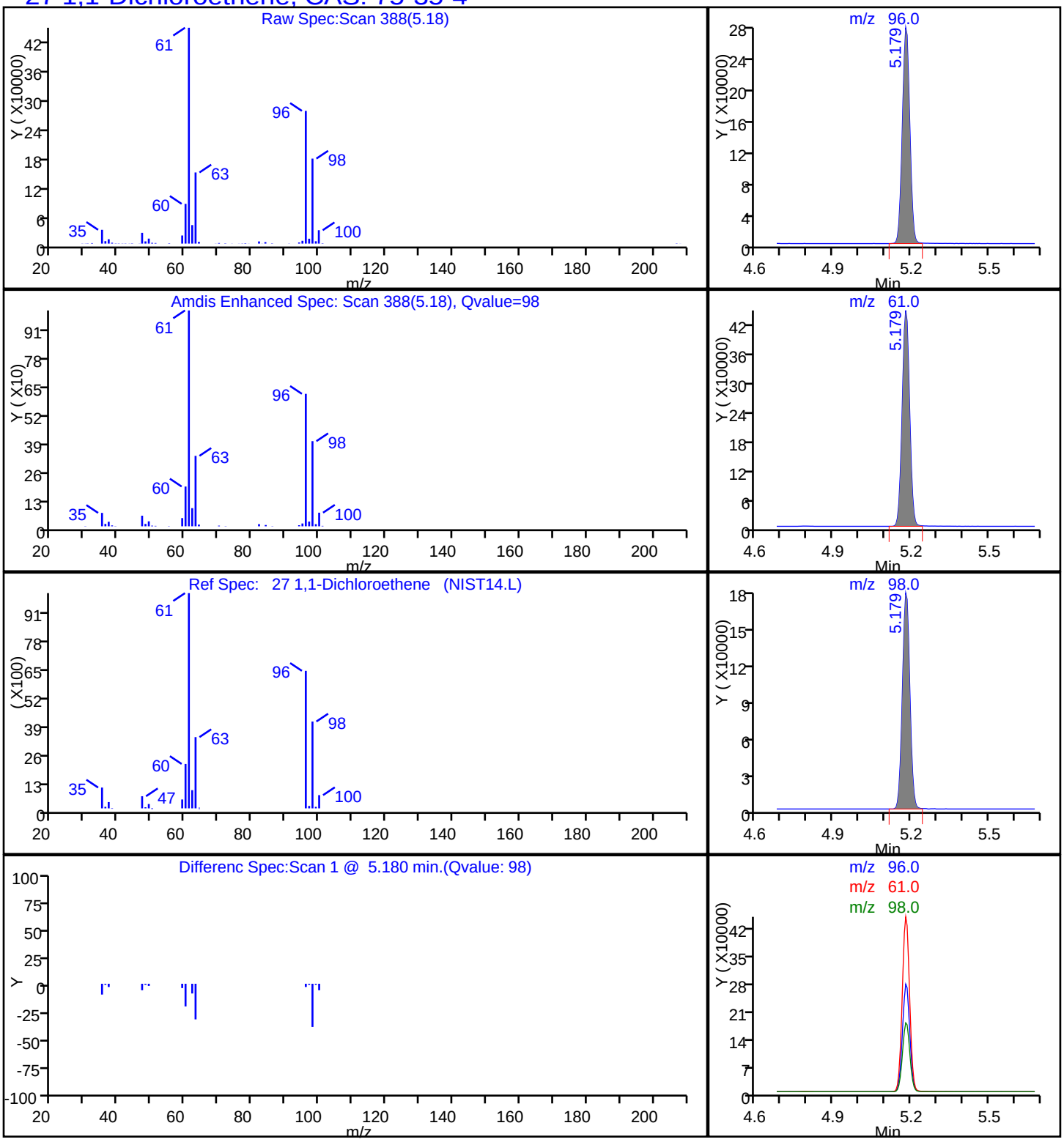
37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p105.D		
Injection Date:	15-Mar-2018 21:08:30	Instrument ID:	MR
Lims ID:	140-10921-A-2	Lab Sample ID:	140-10921-2
Client ID:	BLDG-A MIDGAC		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4

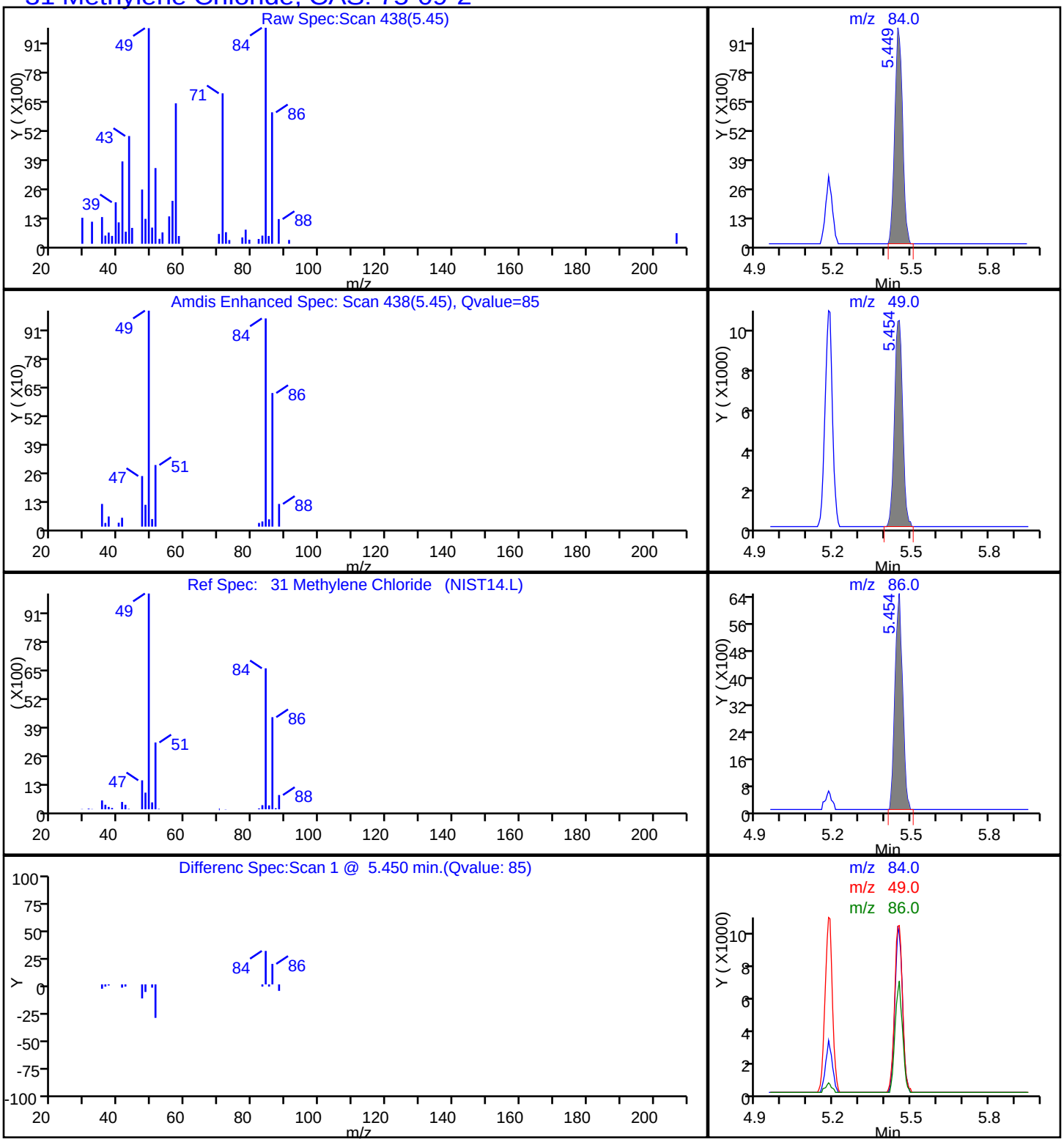


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p105.D

Injection Date:	15-Mar-2018 21:08:30	Instrument ID:	MR		
Lims ID:	140-10921-A-2	Lab Sample ID:	140-10921-2		
Client ID:	BLDG-A MIDGAC				
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

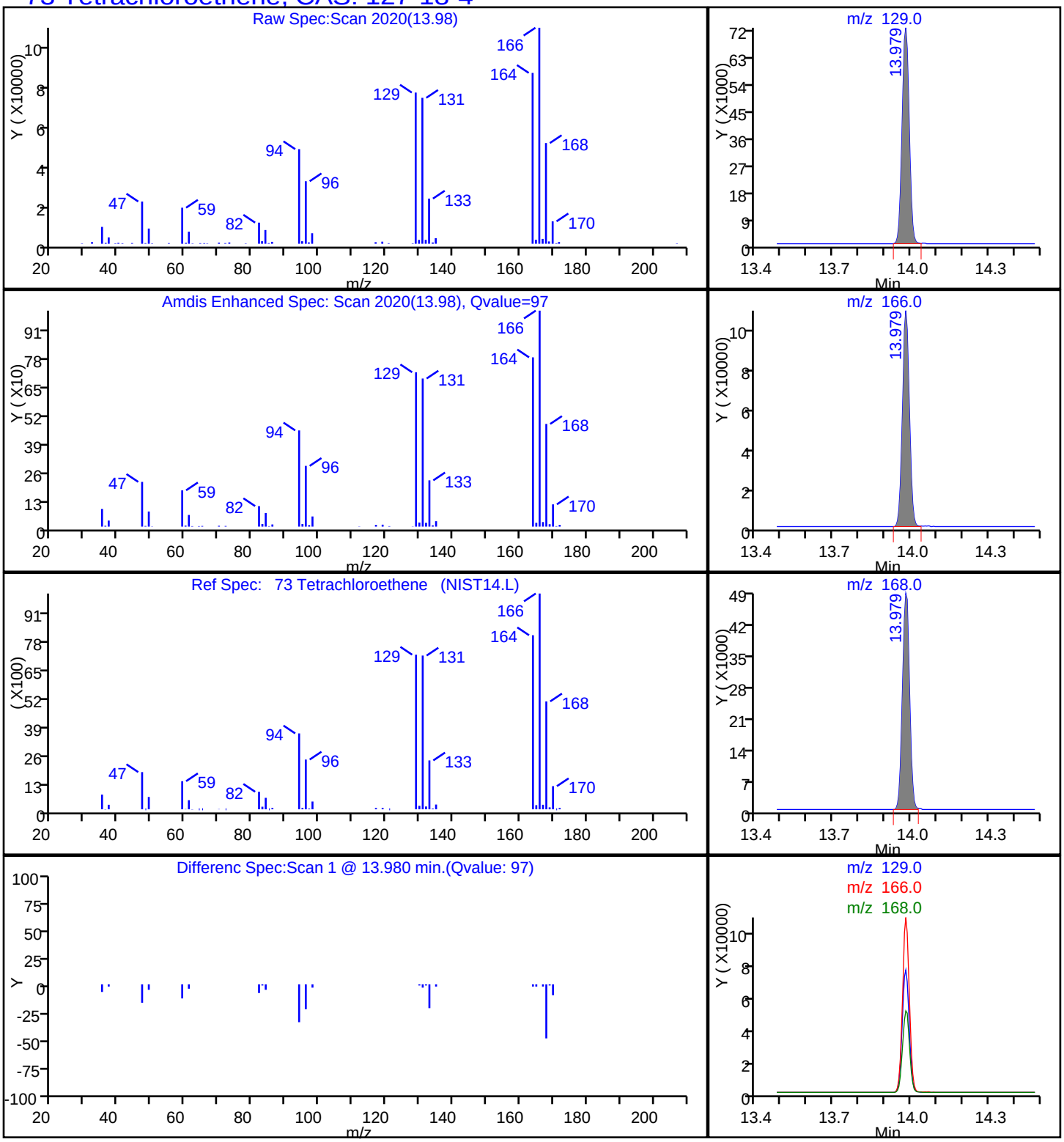
31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

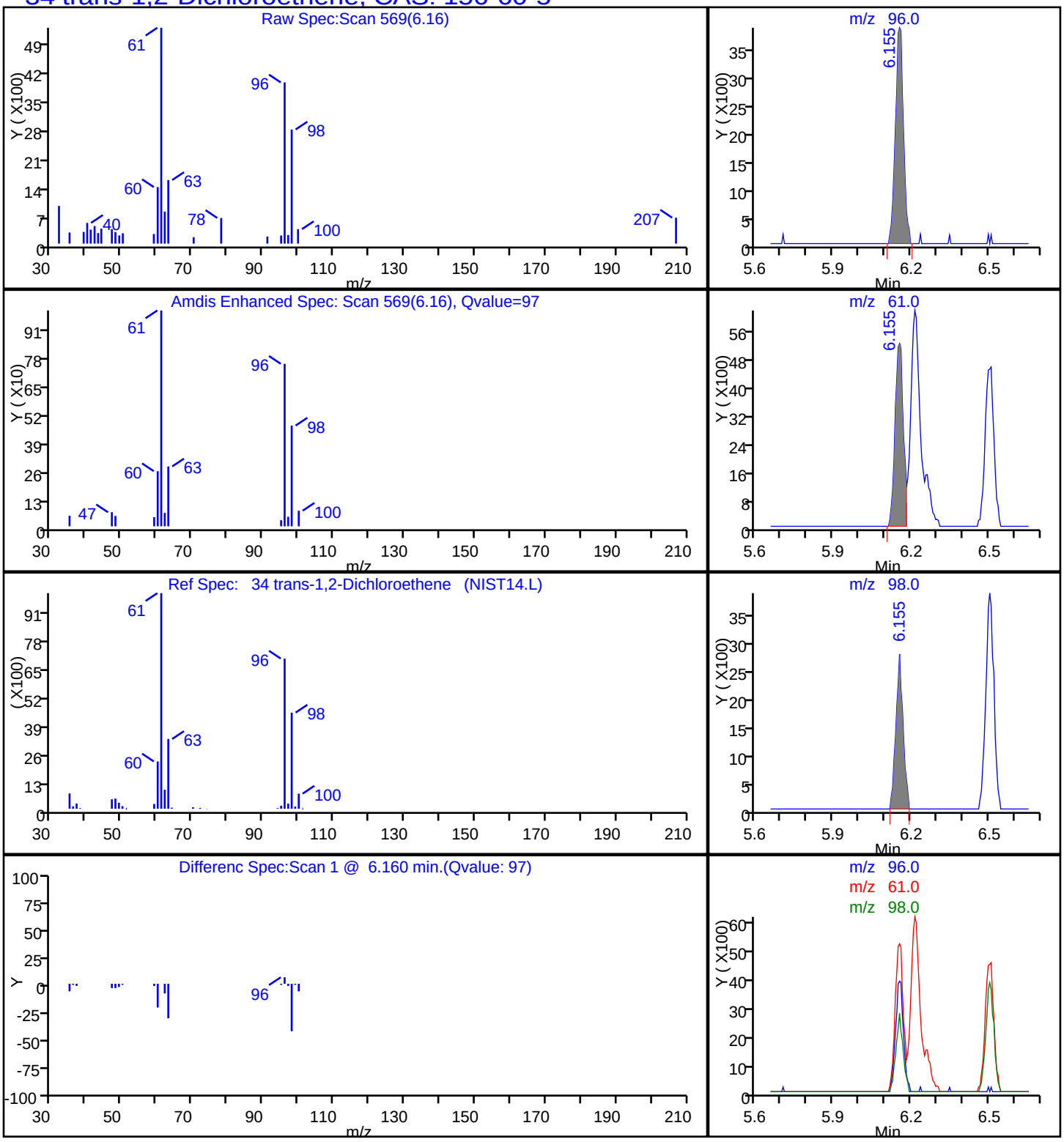
Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p105.D		
Injection Date:	15-Mar-2018 21:08:30	Instrument ID:	MR
Lims ID:	140-10921-A-2	Lab Sample ID:	140-10921-2
Client ID:	BLDG-A MIDGAC		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

73 Tetrachloroethene, CAS: 127-18-4



Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p105.D
Injection Date: 15-Mar-2018 21:08:30 Instrument ID: MR
Lims ID: 140-10921-A-2 Lab Sample ID: 140-10921-2
Client ID: BLDG-A MIDGAC
Operator ID: ALS Bottle#: 5 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

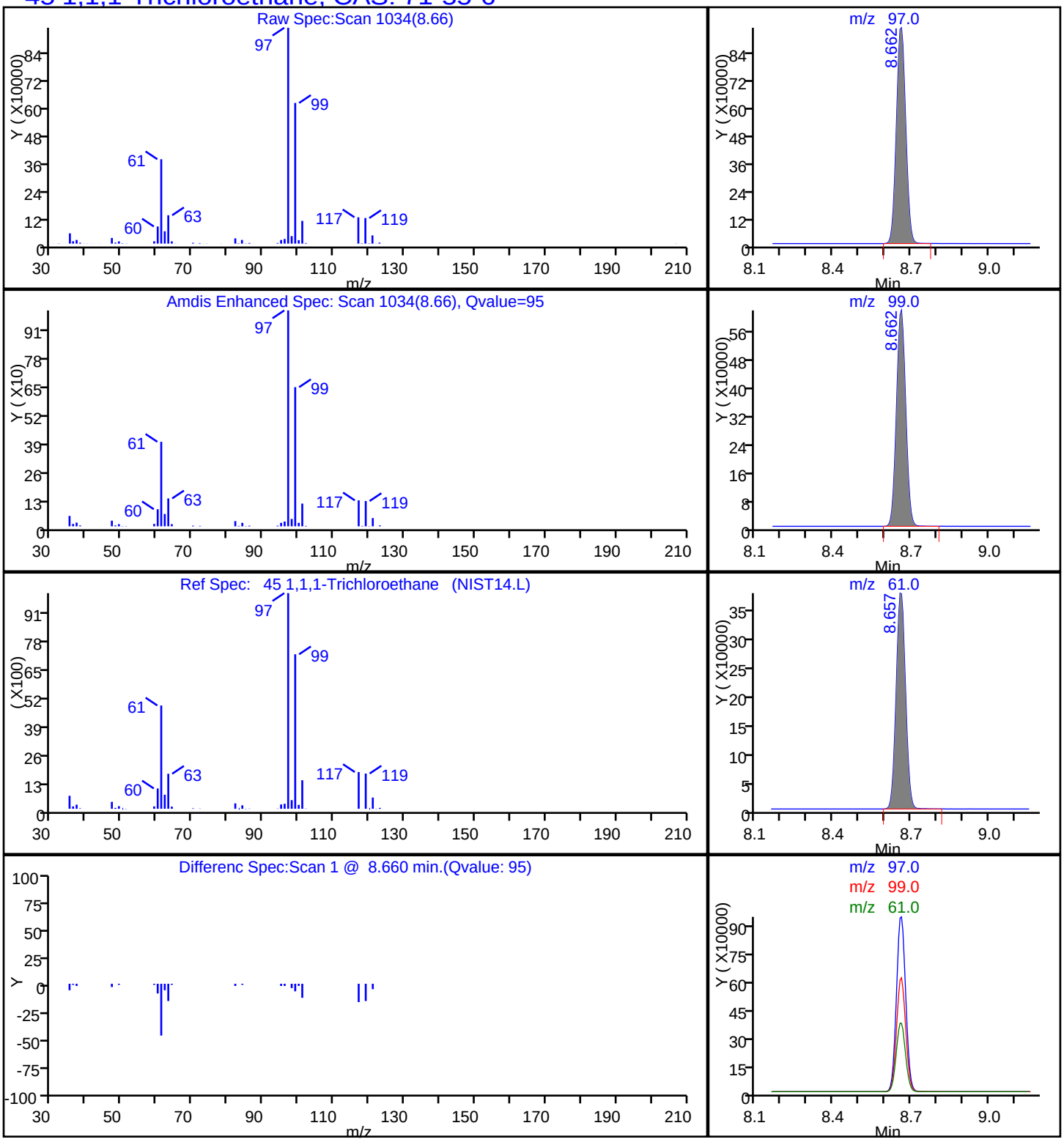
34 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p105.D		
Injection Date:	15-Mar-2018 21:08:30	Instrument ID:	MR
Lims ID:	140-10921-A-2	Lab Sample ID:	140-10921-2
Client ID:	BLDG-A MIDGAC		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



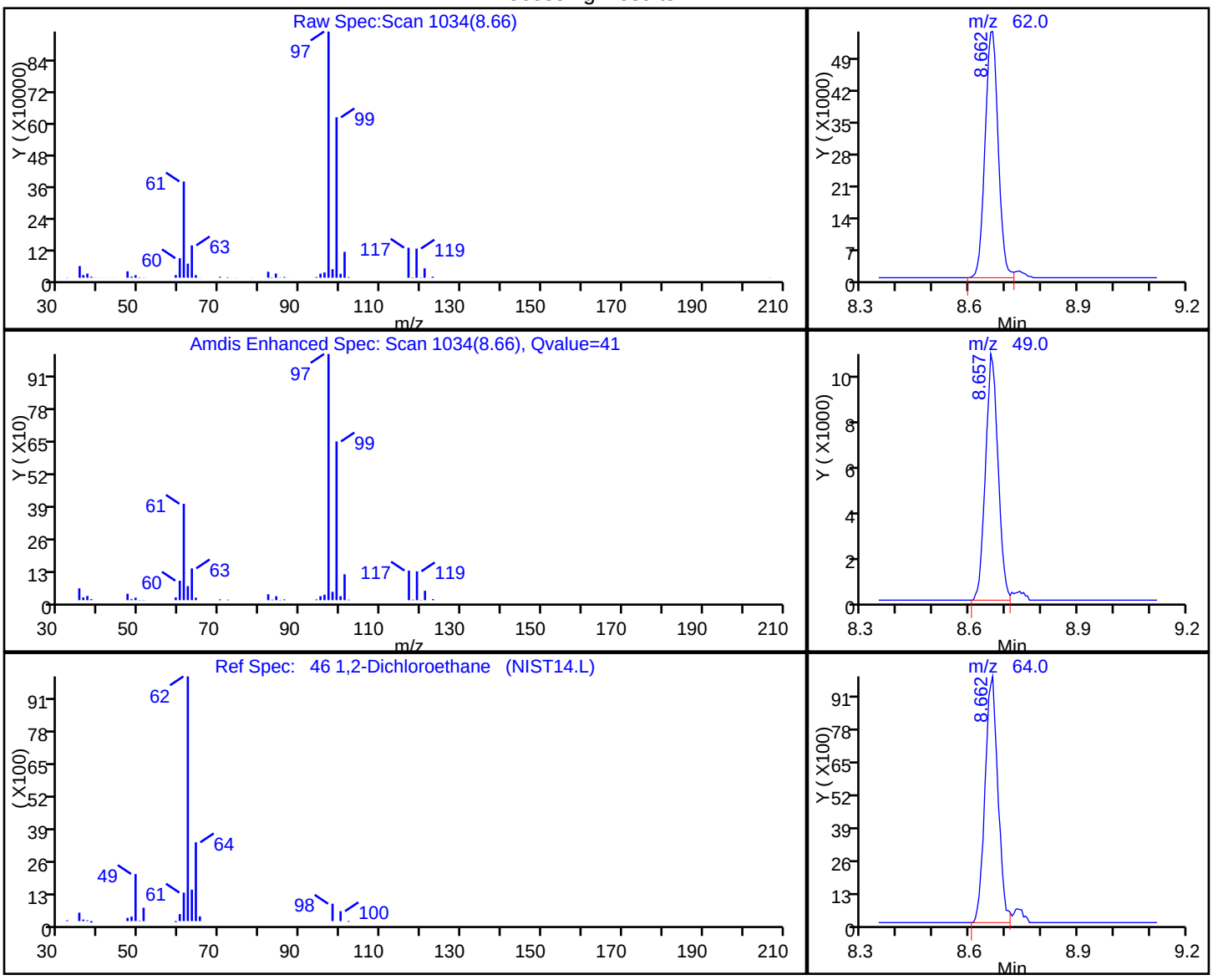
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p105.D				
Injection Date:	15-Mar-2018 21:08:30	Instrument ID:	MR		
Lims ID:	140-10921-A-2	Lab Sample ID:	140-10921-2		
Client ID:	BLDG-A MIDGAC				
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

46 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
8.66	62.00	137792	0.765057
8.66	49.00	24469	
8.66	64.00	24506	

Reviewer: barlozhetskayaa, 16-Mar-2018 10:15:48

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

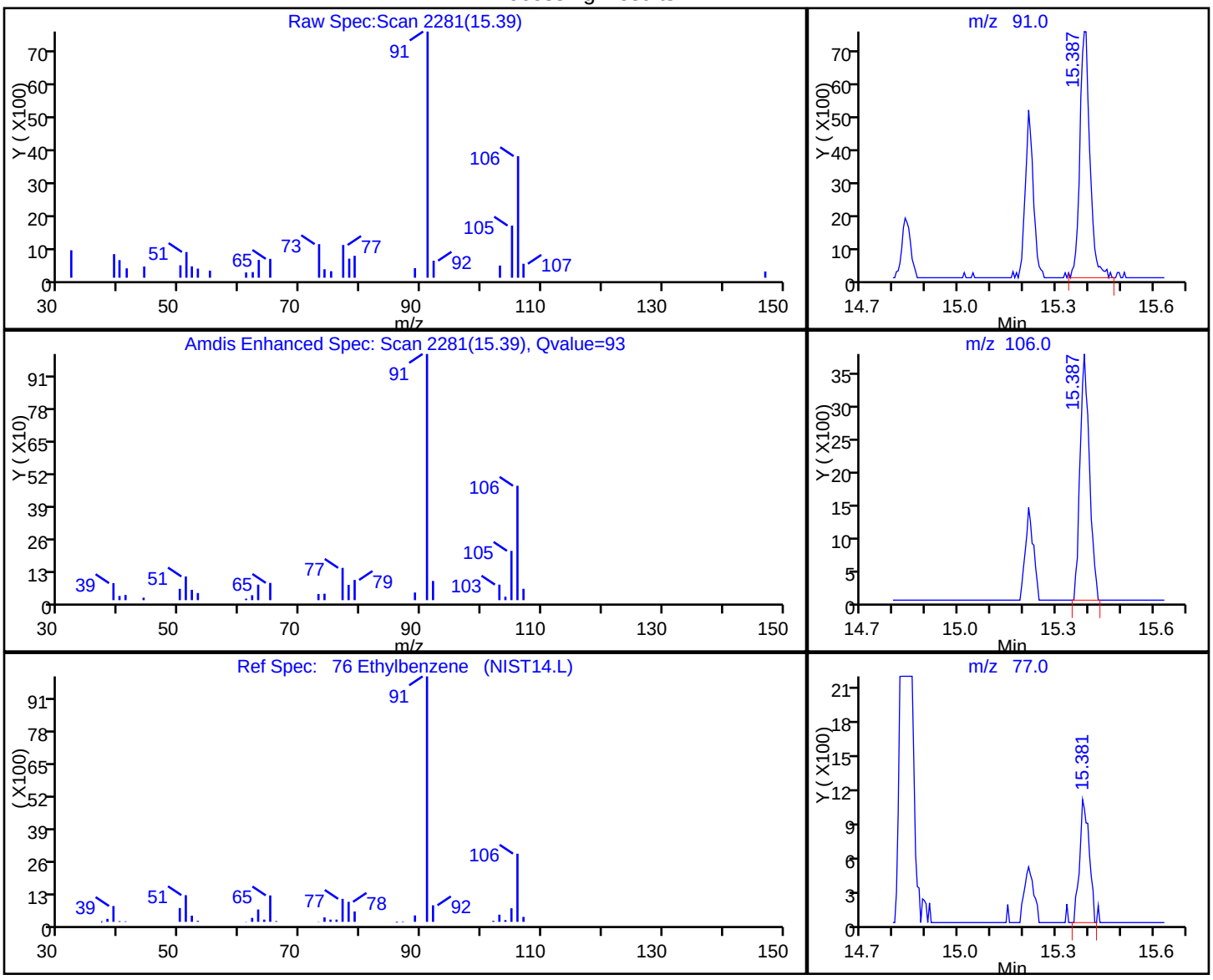
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p105.D				
Injection Date:	15-Mar-2018 21:08:30	Instrument ID:	MR		
Lims ID:	140-10921-A-2	Lab Sample ID:	140-10921-2		
Client ID:	BLDG-A MIDGAC				
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

76 Ethylbenzene, CAS: 100-41-4

Processing Results



RT	Mass	Response	Amount
15.39	91.00	16442	0.031917
15.39	106.00	7492	
15.38	77.00	2210	

Reviewer: liul, 16-Mar-2018 12:51:49

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

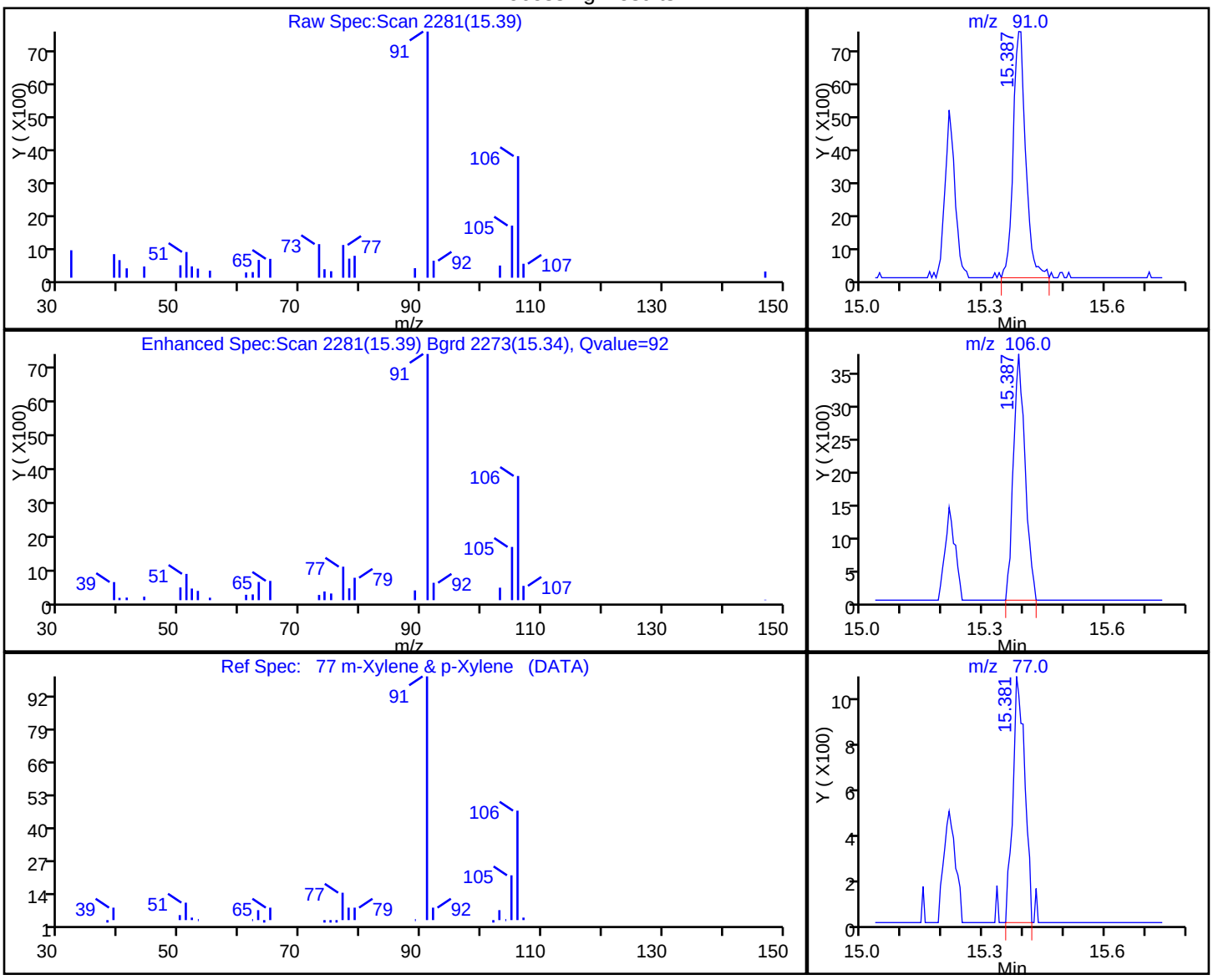
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p105.D				
Injection Date:	15-Mar-2018 21:08:30	Instrument ID:	MR		
Lims ID:	140-10921-A-2	Lab Sample ID:	140-10921-2		
Client ID:	BLDG-A MIDGAC				
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

77 m-Xylene & p-Xylene, CAS: 179601-23-1

Processing Results



RT	Mass	Response	Amount
15.39	91.00	16338	0.040900
15.39	106.00	7494	
15.38	77.00	2210	

Reviewer: barlozhetskayaa, 16-Mar-2018 10:15:48

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10921-1

SDG No.:

Client Sample ID: BLDG-A EFFLUENT | Lab Sample ID: 140-10921-3

Matrix: Air | Lab File ID: RC15p106.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2018 13:43

Sample wt/vol: 100(mL) | Date Analyzed: 03/15/2018 21:55

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18783 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.6		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.078	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	0.27	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	8.4		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.44		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	2.6		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	20		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.73	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.49		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.20	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND	*	0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	22		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.6		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND	*	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10921-1

SDG No.:

Client Sample ID: BLDG-A EFFLUENT | Lab Sample ID: 140-10921-3

Matrix: Air | Lab File ID: RC15p106.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2018 13:43

Sample wt/vol: 100(mL) | Date Analyzed: 03/15/2018 21:55

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18783 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	5.0		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.49	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	1.3	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	33		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	10		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	81		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.5	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	3.3		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	0.78	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND	*	3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	120		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	8.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND	*	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p106.D
Lims ID: 140-10921-A-3
Client ID: BLDG-A EFFLUENT
Sample Type: Client
Inject. Date: 15-Mar-2018 21:55:30 ALS Bottle#: 6 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007635-011
Misc. Info.: 140-10921-A-3
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 16-Mar-2018 10:41:49 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa Date: 16-Mar-2018 10:41:49

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.665	7.670	-0.005	75	286322	4.00	
* 2 1,4-Difluorobenzene	114	9.811	9.816	-0.005	94	1715824	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.837	14.837	0.000	87	1442852	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.546	16.546	0.000	90	1116573	4.08	
6 Chlorodifluoromethane	67	3.448	3.440	0.011	92	2341	0.0670	
8 Dichlorodifluoromethane	85	3.497	3.494	0.006	99	23662	0.0880	
27 1,1-Dichloroethene	96	5.179	5.188	-0.005	98	441296	4.07	
31 Methylene Chloride	84	5.449	5.459	-0.010	83	16397	0.1464	
34 trans-1,2-Dichloroethene	96	6.155	6.155	0.000	96	4320	0.0393	
37 1,1-Dichloroethane	63	6.506	6.510	0.001	100	107332	0.5123	
41 cis-1,2-Dichloroethene	96	7.385	7.400	0.001	91	198021	1.68	
43 Chloroform	83	7.697	7.708	-0.011	94	14161	0.0535	
45 1,1,1-Trichloroethane	97	8.657	8.669	-0.005	95	1239599	4.45	
47 Benzene	78	9.234	9.229	0.000	95	101632	0.3100	
50 Carbon tetrachloride	117	9.272	9.277	-0.005	94	4125	0.0156	
56 Trichloroethene	130	10.566	10.566	-0.005	99	48873	0.3156	
65 Toluene	91	12.766	12.766	0.000	94	33898	0.0853	
73 Tetrachloroethene	129	13.974	13.979	-0.005	96	14528	0.0981	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

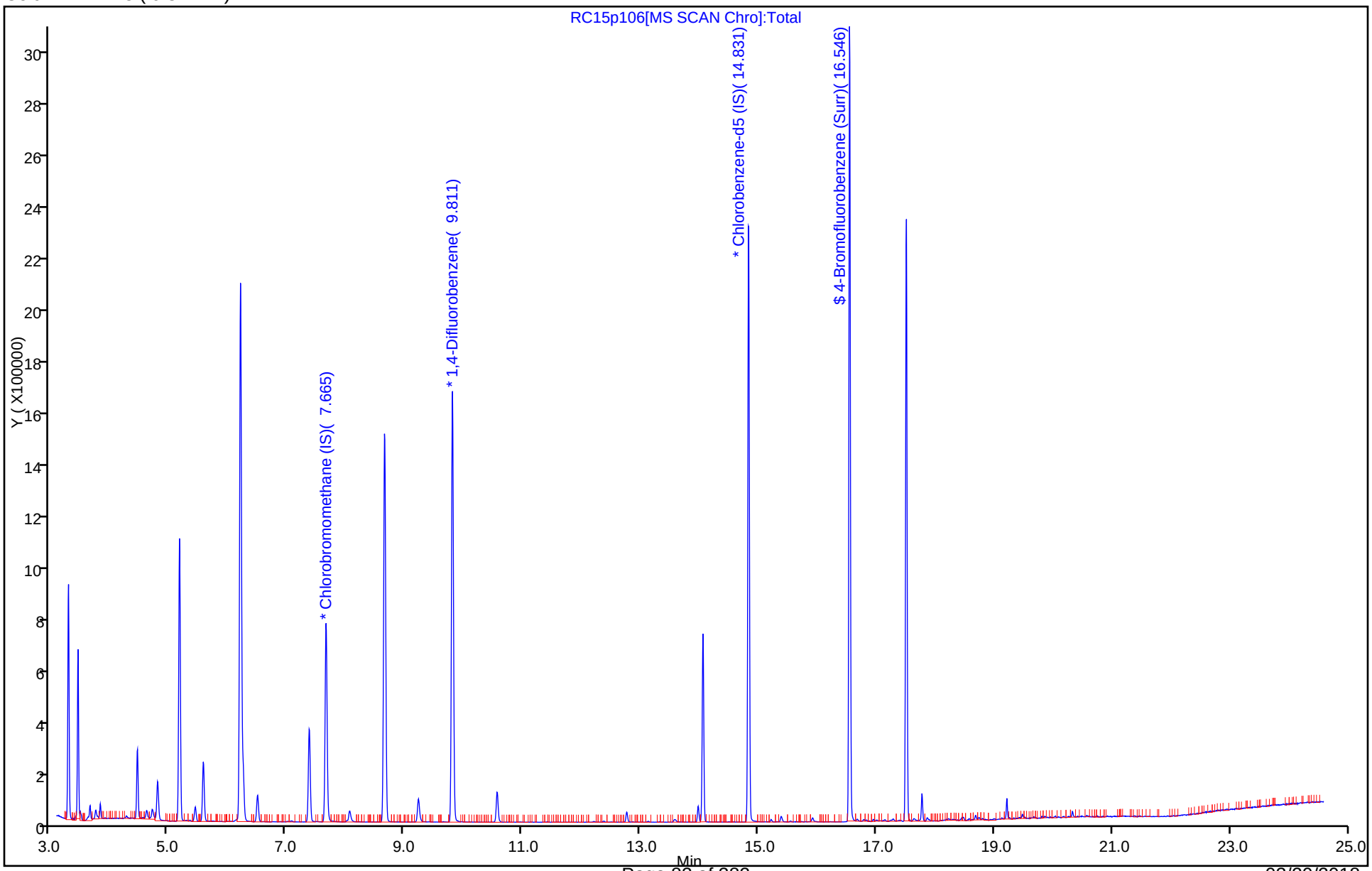
Report Date: 16-Mar-2018 10:41:50 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p106.D

Injection Date:	15-Mar-2018 21:55:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10921-A-3	Lab Sample ID:	140-10921-3	Worklist Smp#:	11
Client ID:	BLDG-A EFFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p106.D				
Lims ID:	140-10921-A-3				
Client ID:	BLDG-A EFFLUENT				
Sample Type:	Client				
Inject. Date:	15-Mar-2018 21:55:30	ALS Bottle#:	6	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007635-011				
Misc. Info.:	140-10921-A-3				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	16-Mar-2018 10:41:49	Calib Date:	30-Jan-2018 19:38:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK031				

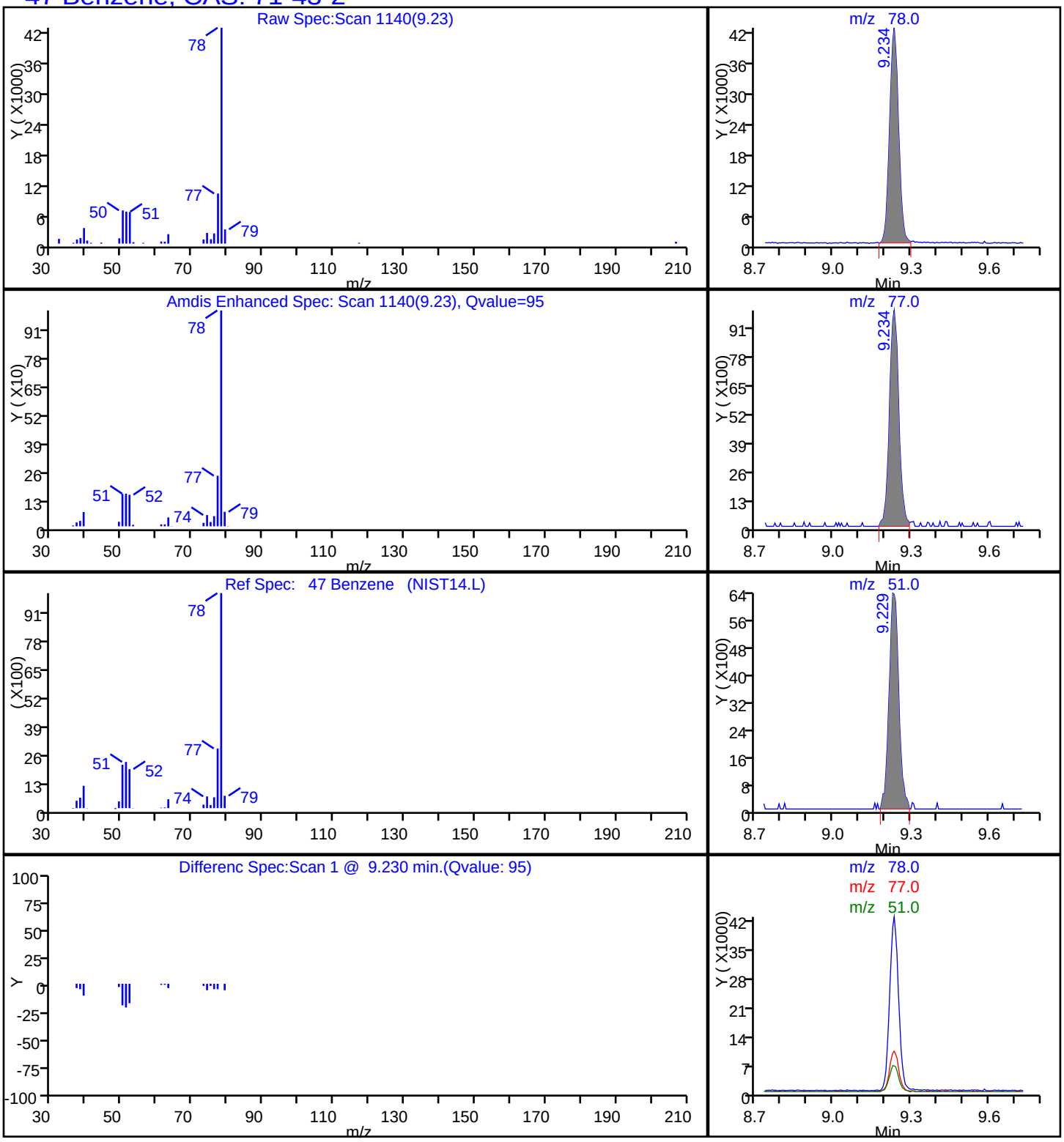
First Level Reviewer: barlozhetskayaa Date: 16-Mar-2018 10:41:49

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.08	102.04

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p106.D		
Injection Date:	15-Mar-2018 21:55:30	Instrument ID:	MR
Lims ID:	140-10921-A-3	Lab Sample ID:	140-10921-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:		ALS Bottle#:	6 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

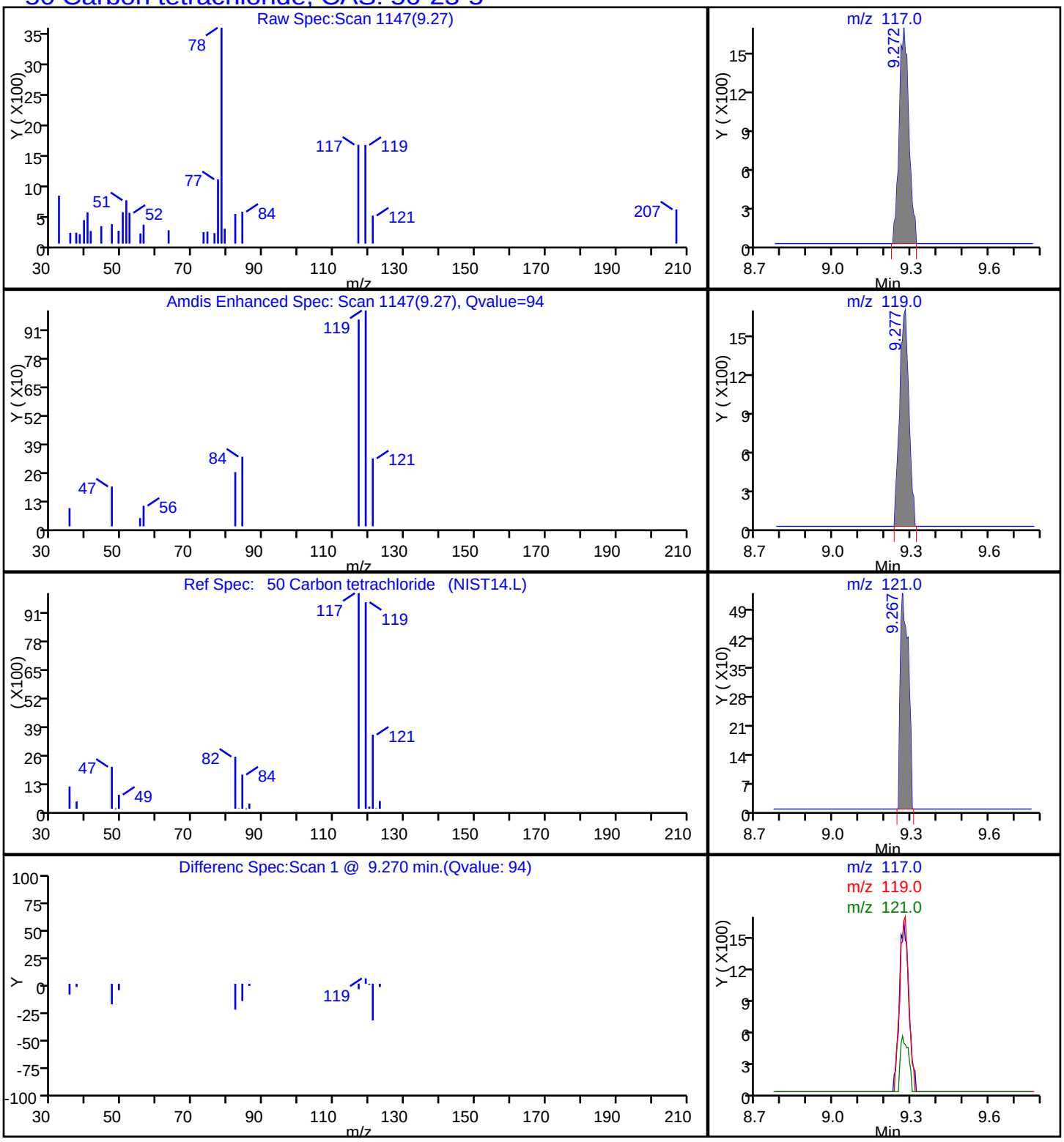
47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p106.D		
Injection Date:	15-Mar-2018 21:55:30	Instrument ID:	MR
Lims ID:	140-10921-A-3	Lab Sample ID:	140-10921-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:		ALS Bottle#:	6 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

50 Carbon tetrachloride, CAS: 56-23-5



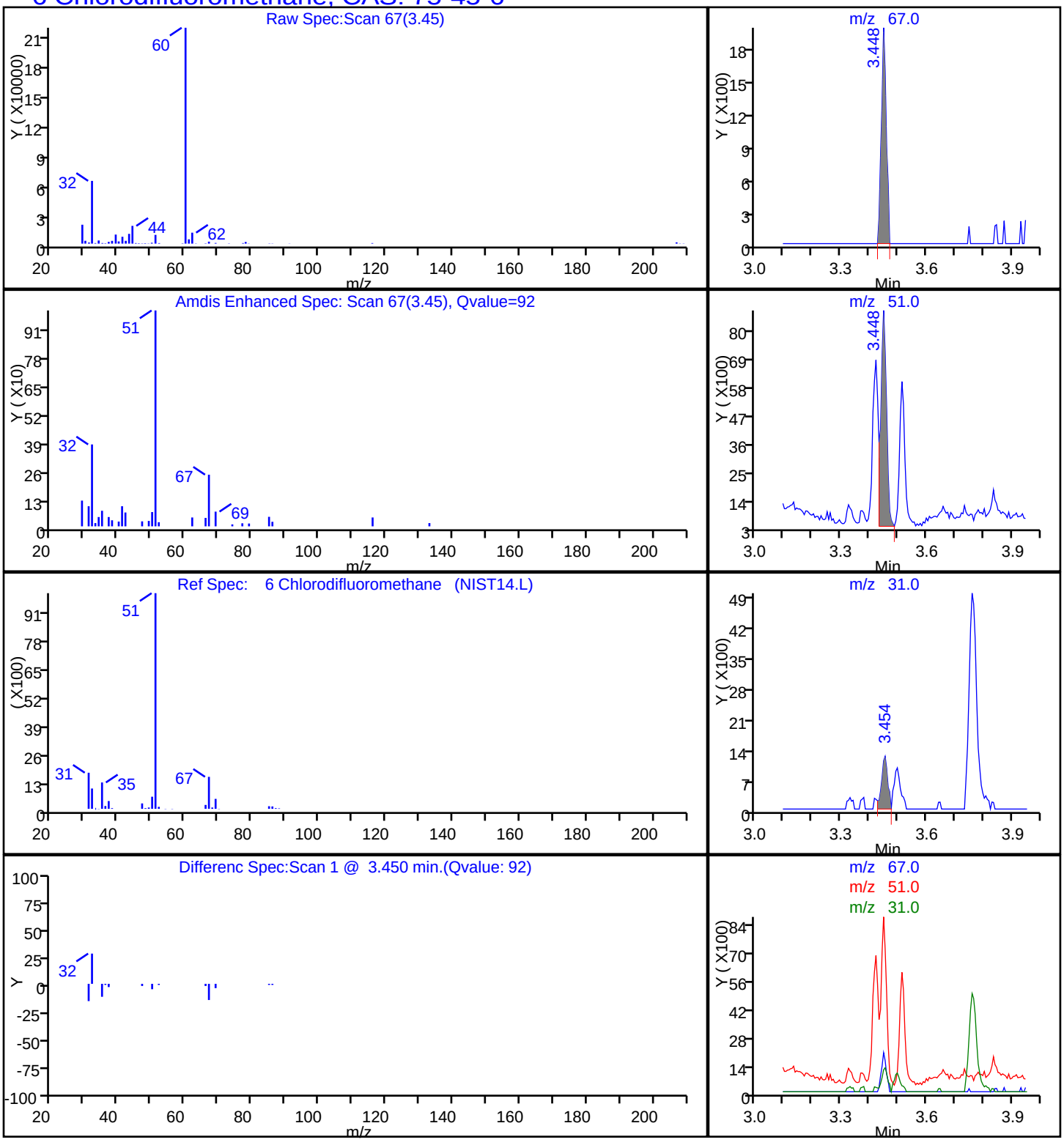
Report Date: 16-Mar-2018 10:41:50 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p106.D

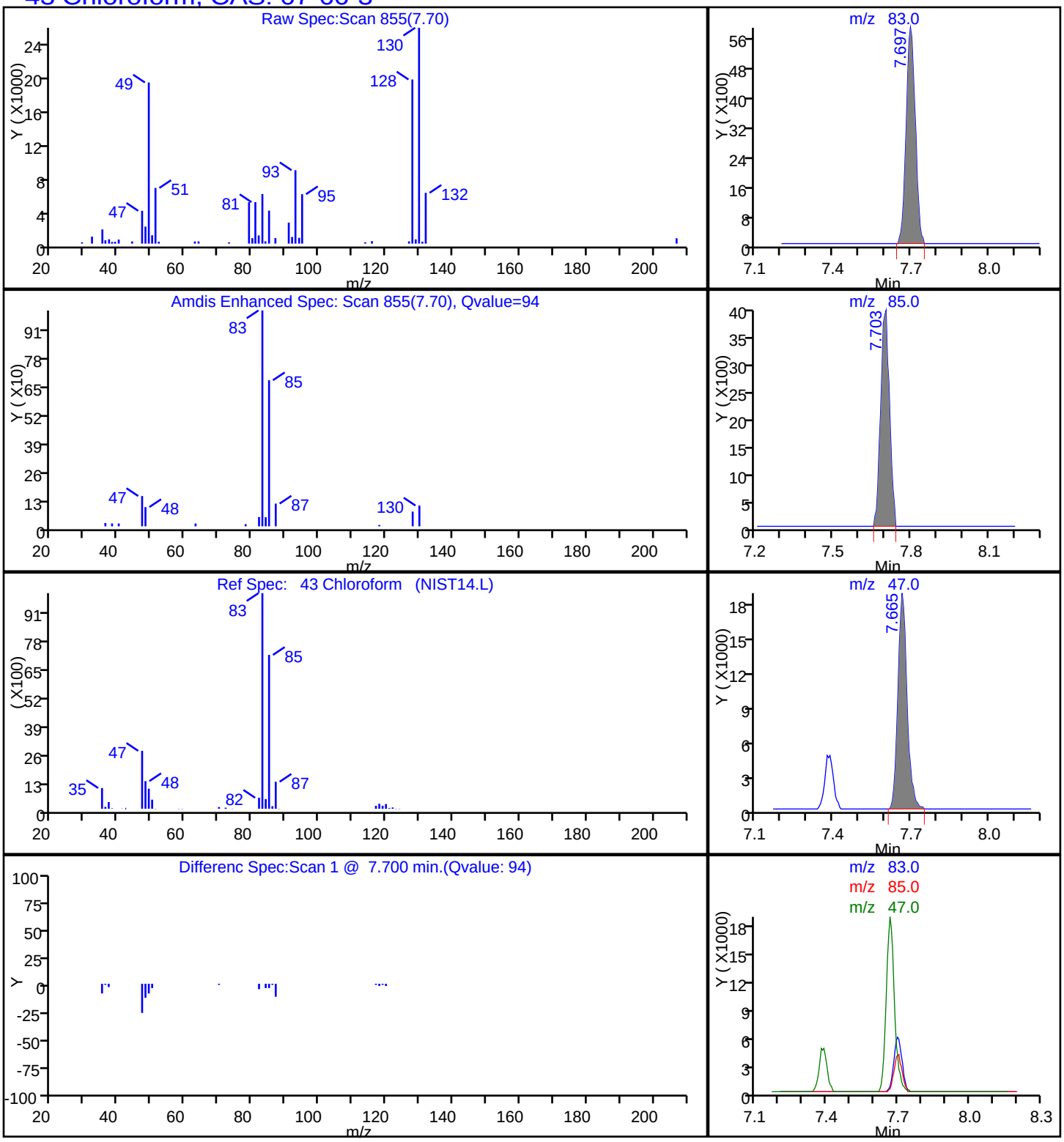
Injection Date:	15-Mar-2018 21:55:30	Instrument ID:	MR		
Lims ID:	140-10921-A-3	Lab Sample ID:	140-10921-3		
Client ID:	BLDG-A EFFLUENT				
Operator ID:		ALS Bottle#:	6	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

6 Chlorodifluoromethane, CAS: 75-45-6



Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p106.D
Injection Date: 15-Mar-2018 21:55:30 Instrument ID: MR
Lims ID: 140-10921-A-3 Lab Sample ID: 140-10921-3
Client ID: BLDG-A EFFLUENT
Operator ID: ALS Bottle#: 6 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

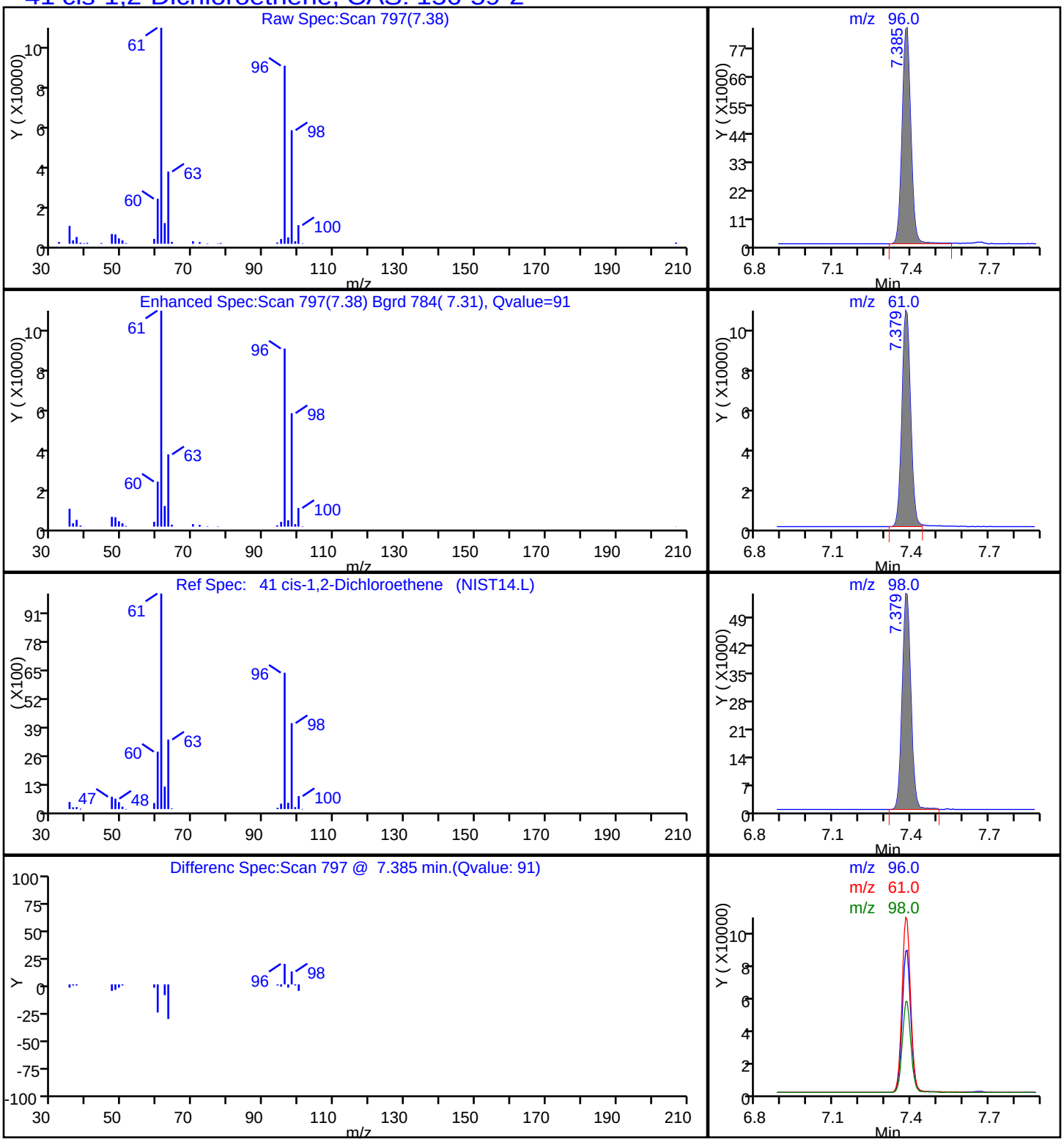
43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p106.D		
Injection Date:	15-Mar-2018 21:55:30	Instrument ID:	MR
Lims ID:	140-10921-A-3	Lab Sample ID:	140-10921-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:		ALS Bottle#:	6 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

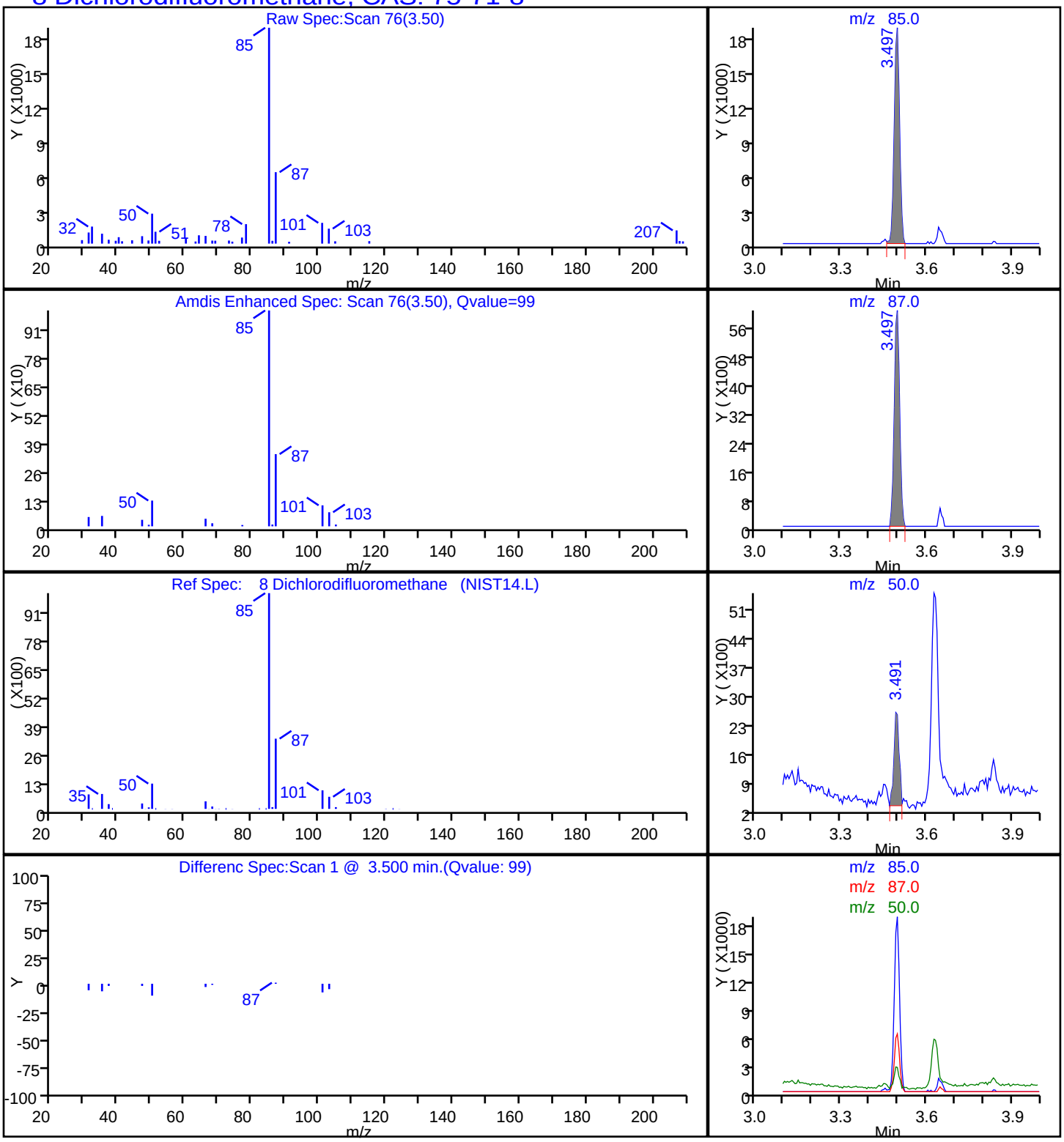
41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p106.D		
Injection Date:	15-Mar-2018 21:55:30	Instrument ID:	MR
Lims ID:	140-10921-A-3	Lab Sample ID:	140-10921-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:		ALS Bottle#:	6 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

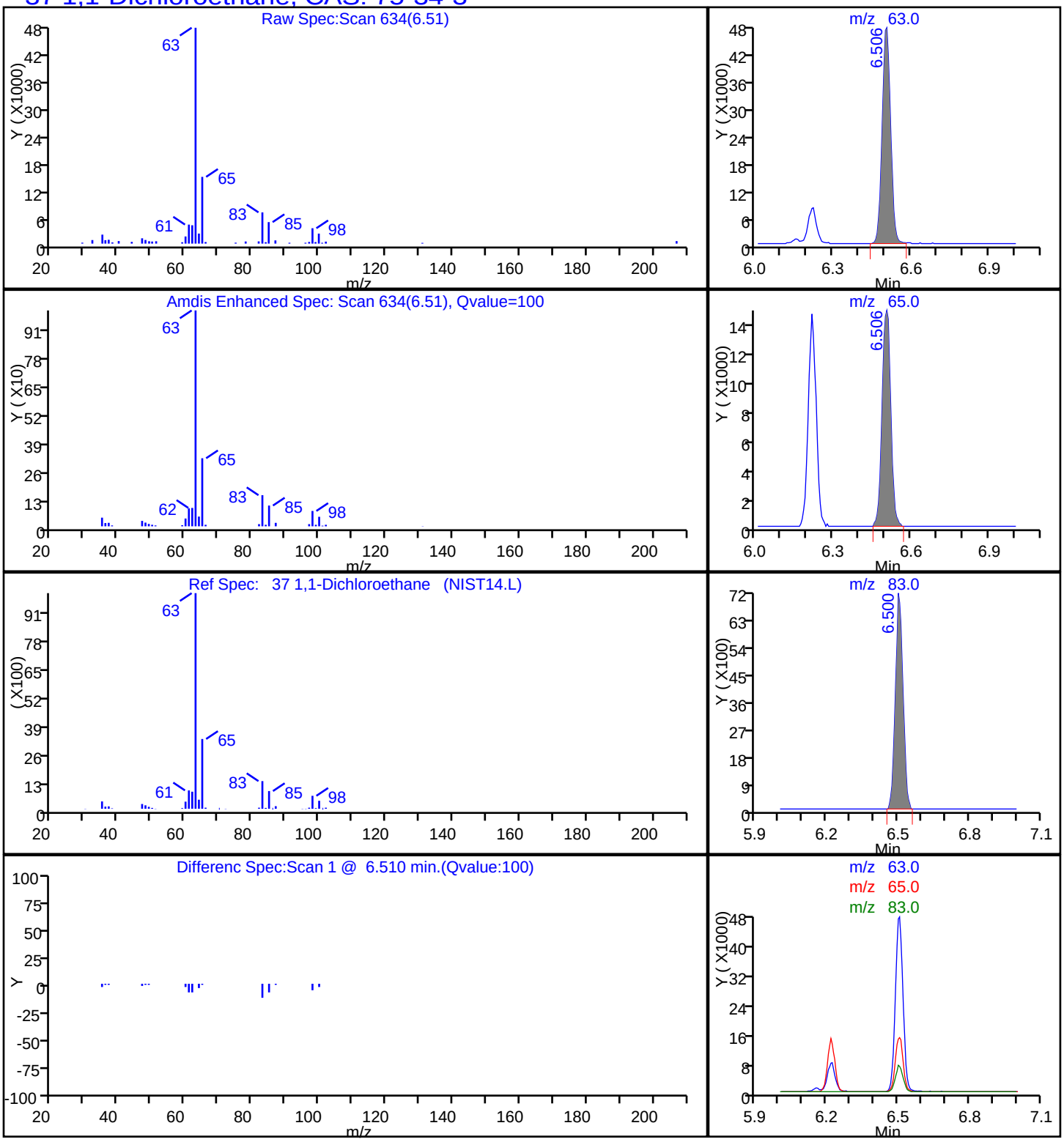
8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p106.D		
Injection Date:	15-Mar-2018 21:55:30	Instrument ID:	MR
Lims ID:	140-10921-A-3	Lab Sample ID:	140-10921-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:		ALS Bottle#:	6 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



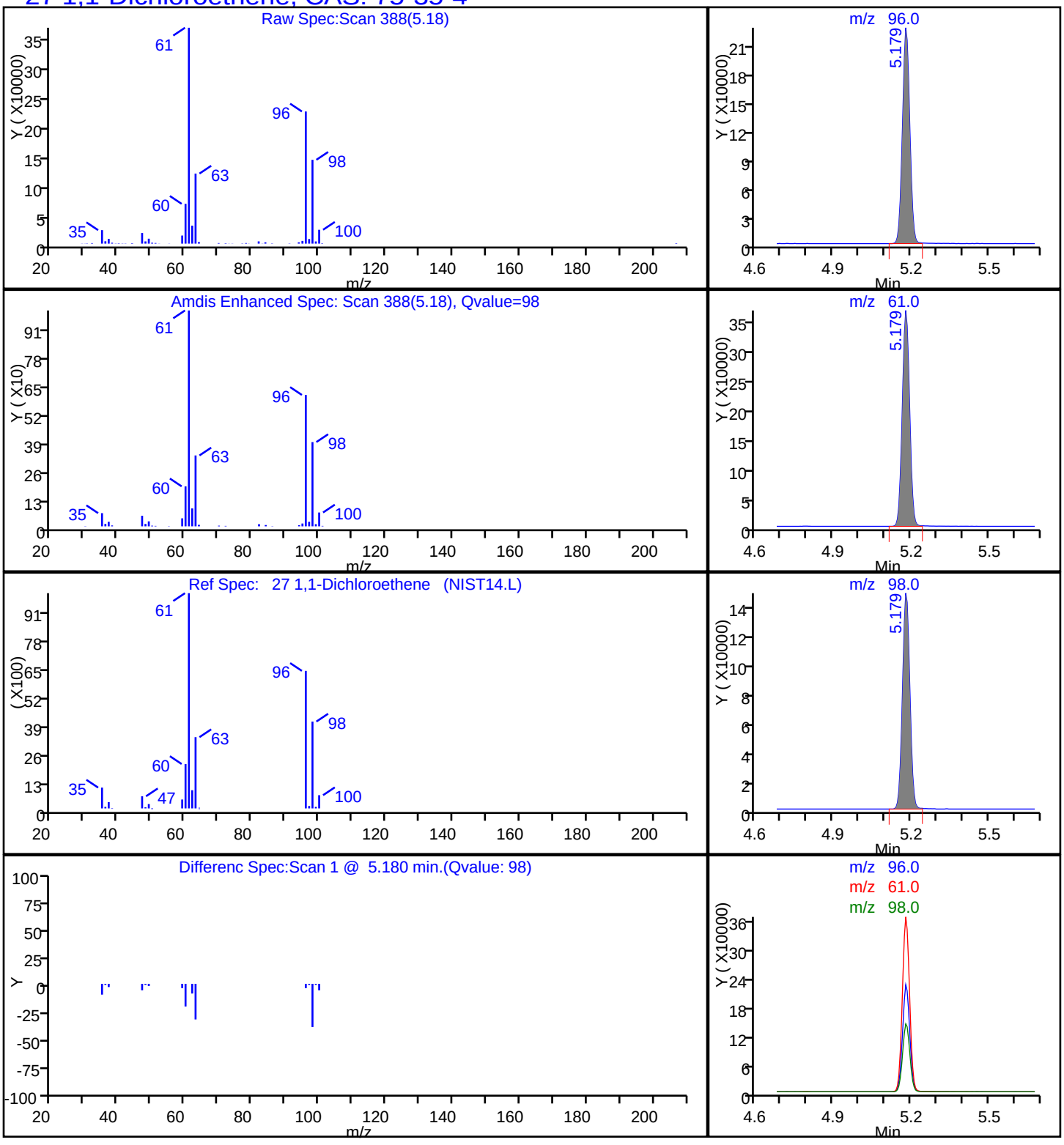
Report Date: 16-Mar-2018 10:41:50 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p106.D

Injection Date:	15-Mar-2018 21:55:30	Instrument ID:	MR
Lims ID:	140-10921-A-3	Lab Sample ID:	140-10921-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:		ALS Bottle#:	6 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

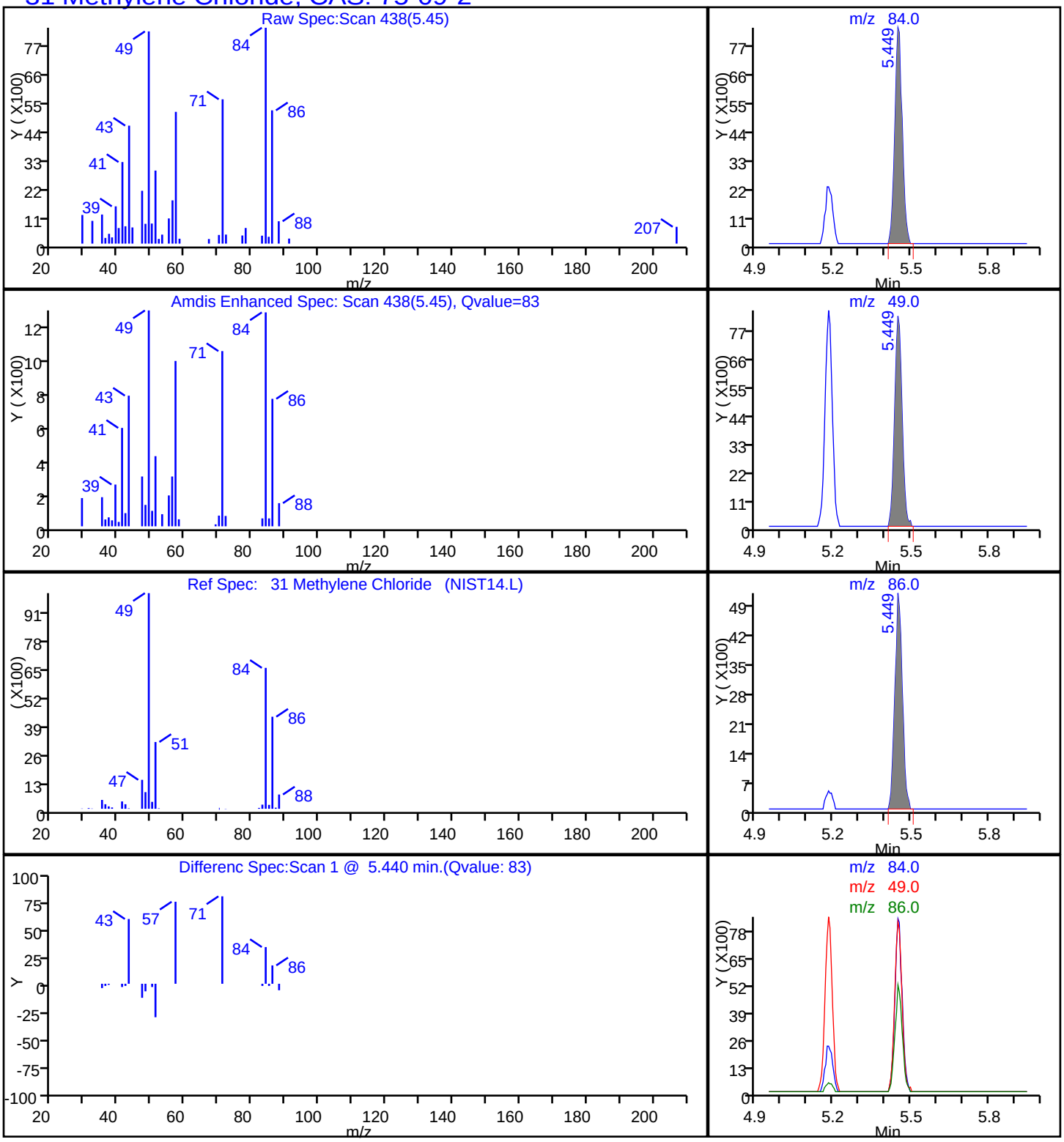
27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

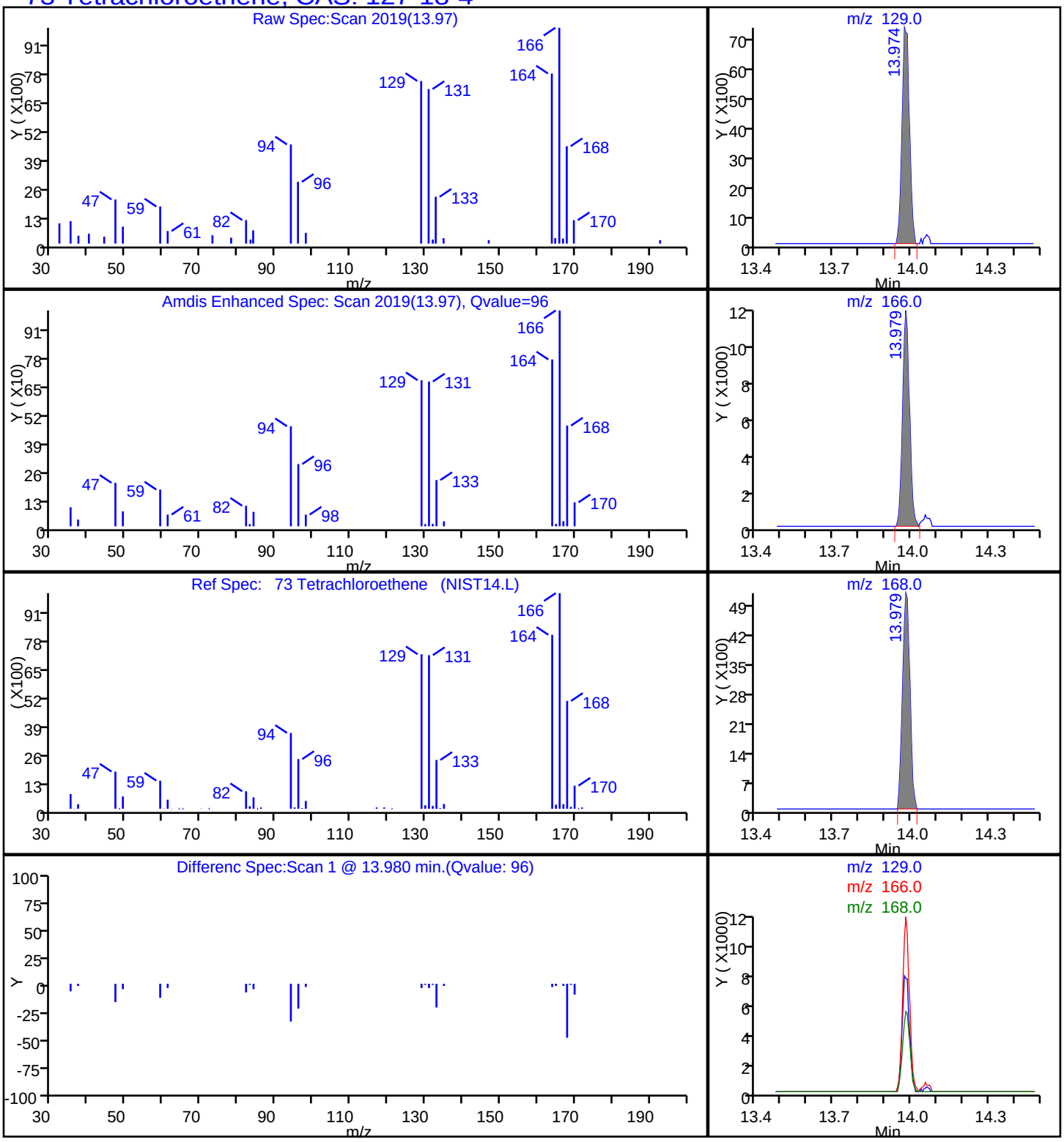
Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p106.D		
Injection Date:	15-Mar-2018 21:55:30	Instrument ID:	MR
Lims ID:	140-10921-A-3	Lab Sample ID:	140-10921-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:		ALS Bottle#:	6 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

31 Methylene Chloride, CAS: 75-09-2



Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p106.D
Injection Date: 15-Mar-2018 21:55:30 Instrument ID: MR
Lims ID: 140-10921-A-3 Lab Sample ID: 140-10921-3
Client ID: BLDG-A EFFLUENT
Operator ID: ALS Bottle#: 6 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

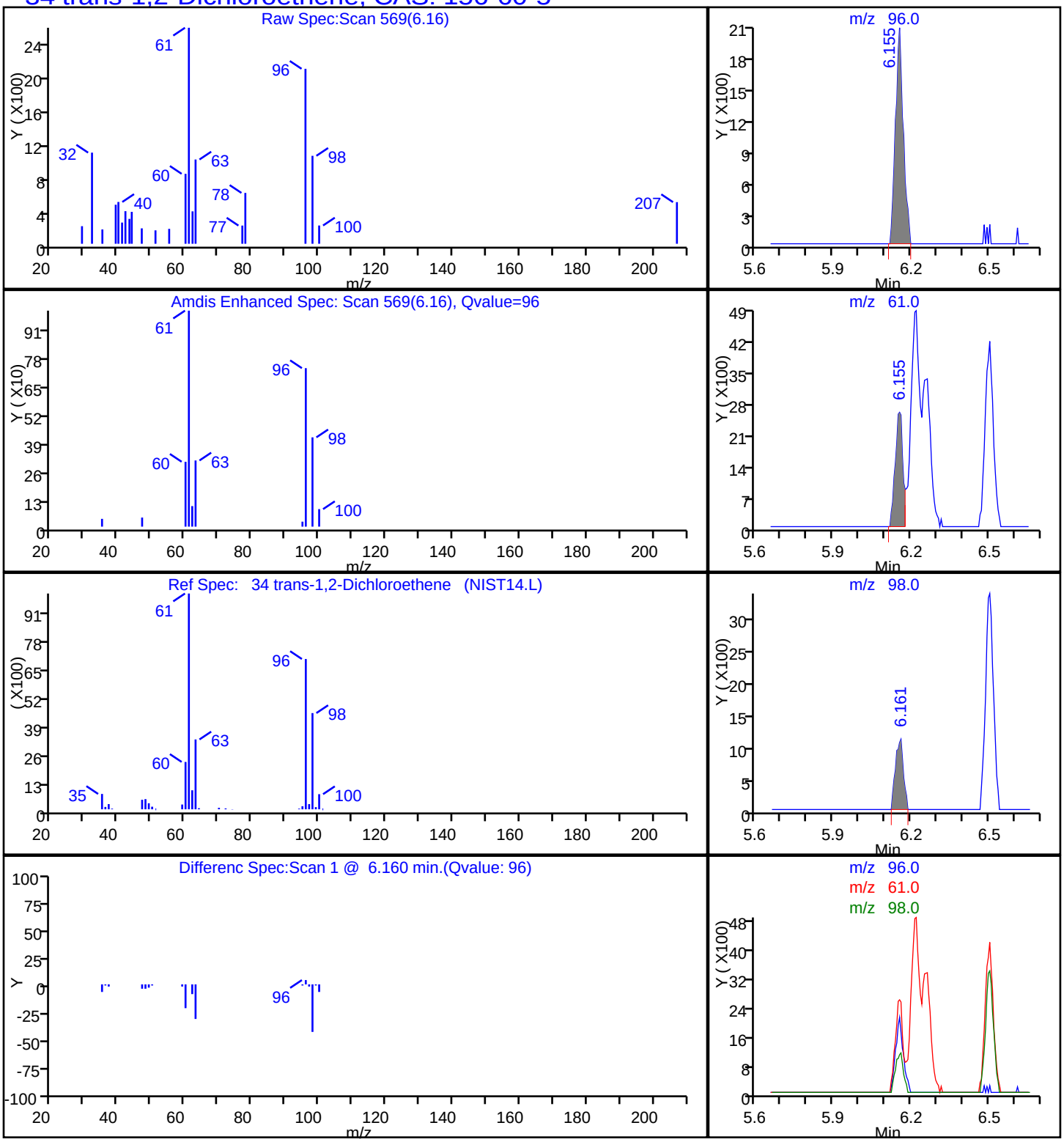
73 Tetrachloroethene, CAS: 127-18-4



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p106.D		
Injection Date:	15-Mar-2018 21:55:30	Instrument ID:	MR
Lims ID:	140-10921-A-3	Lab Sample ID:	140-10921-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:		ALS Bottle#:	6 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

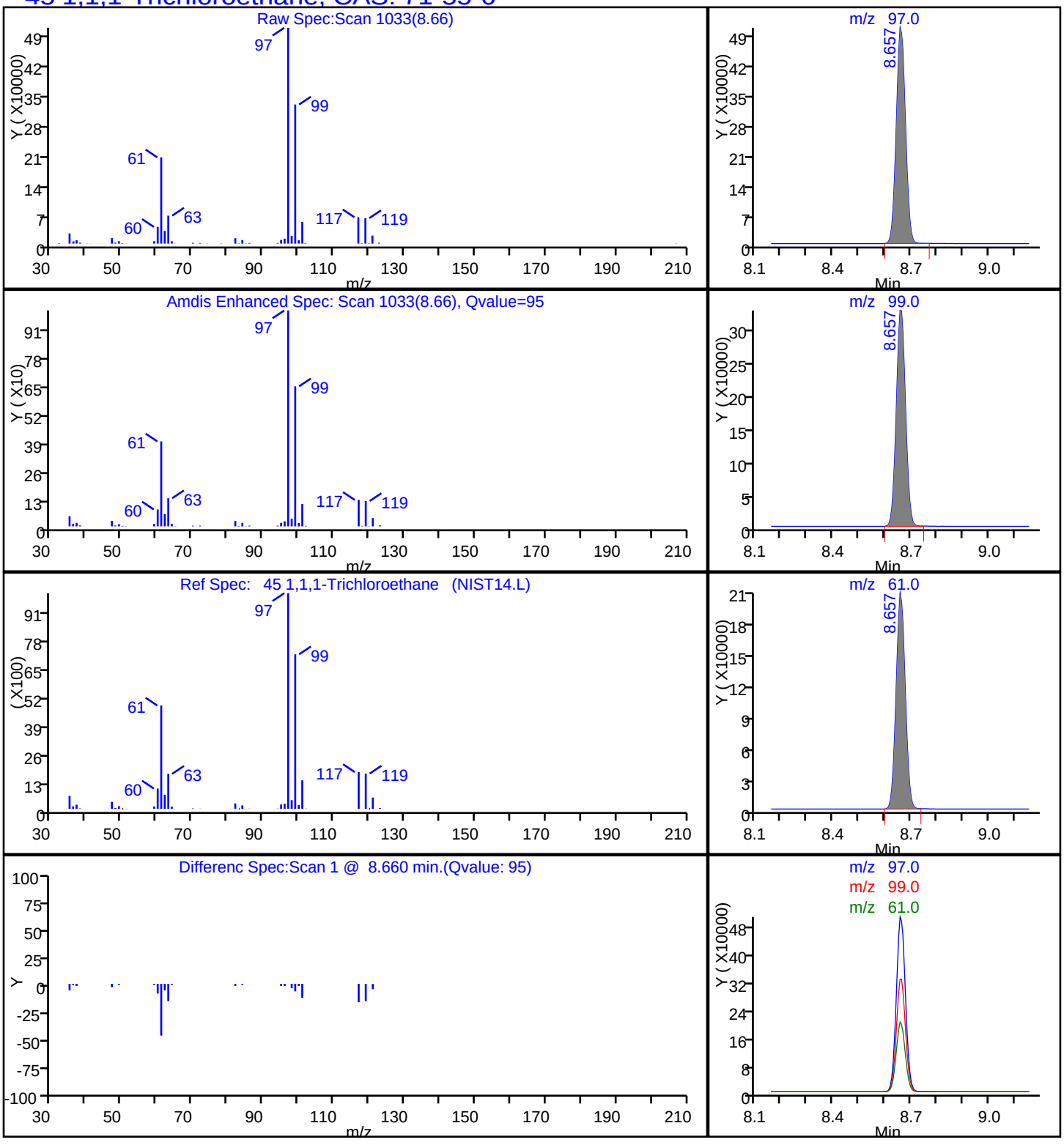
34 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

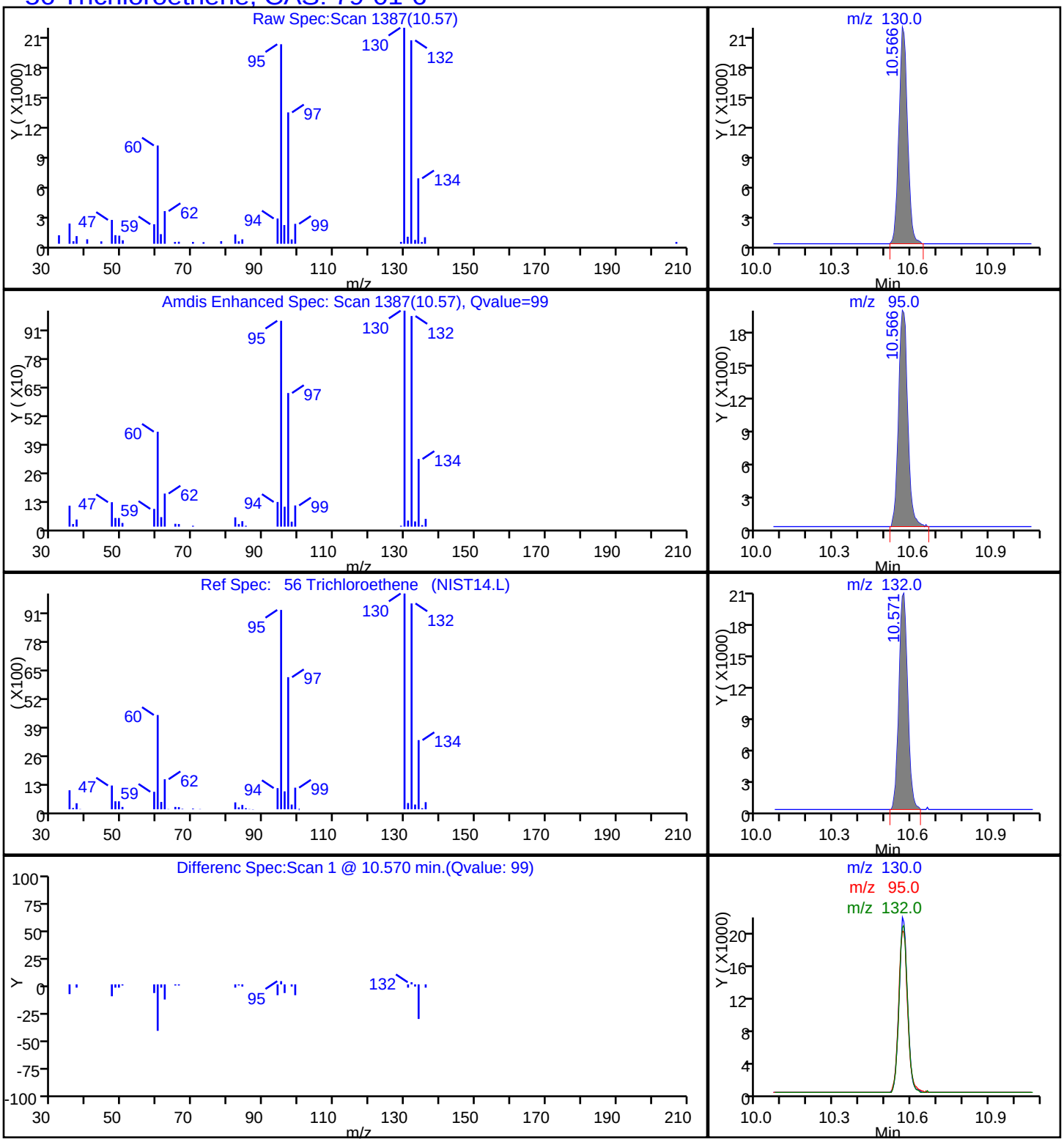
Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p106.D		
Injection Date:	15-Mar-2018 21:55:30	Instrument ID:	MR
Lims ID:	140-10921-A-3	Lab Sample ID:	140-10921-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:		ALS Bottle#:	6 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p106.D
Injection Date: 15-Mar-2018 21:55:30 Instrument ID: MR
Lims ID: 140-10921-A-3 Lab Sample ID: 140-10921-3
Client ID: BLDG-A EFFLUENT
Operator ID: ALS Bottle#: 6 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

56 Trichloroethene, CAS: 79-01-6



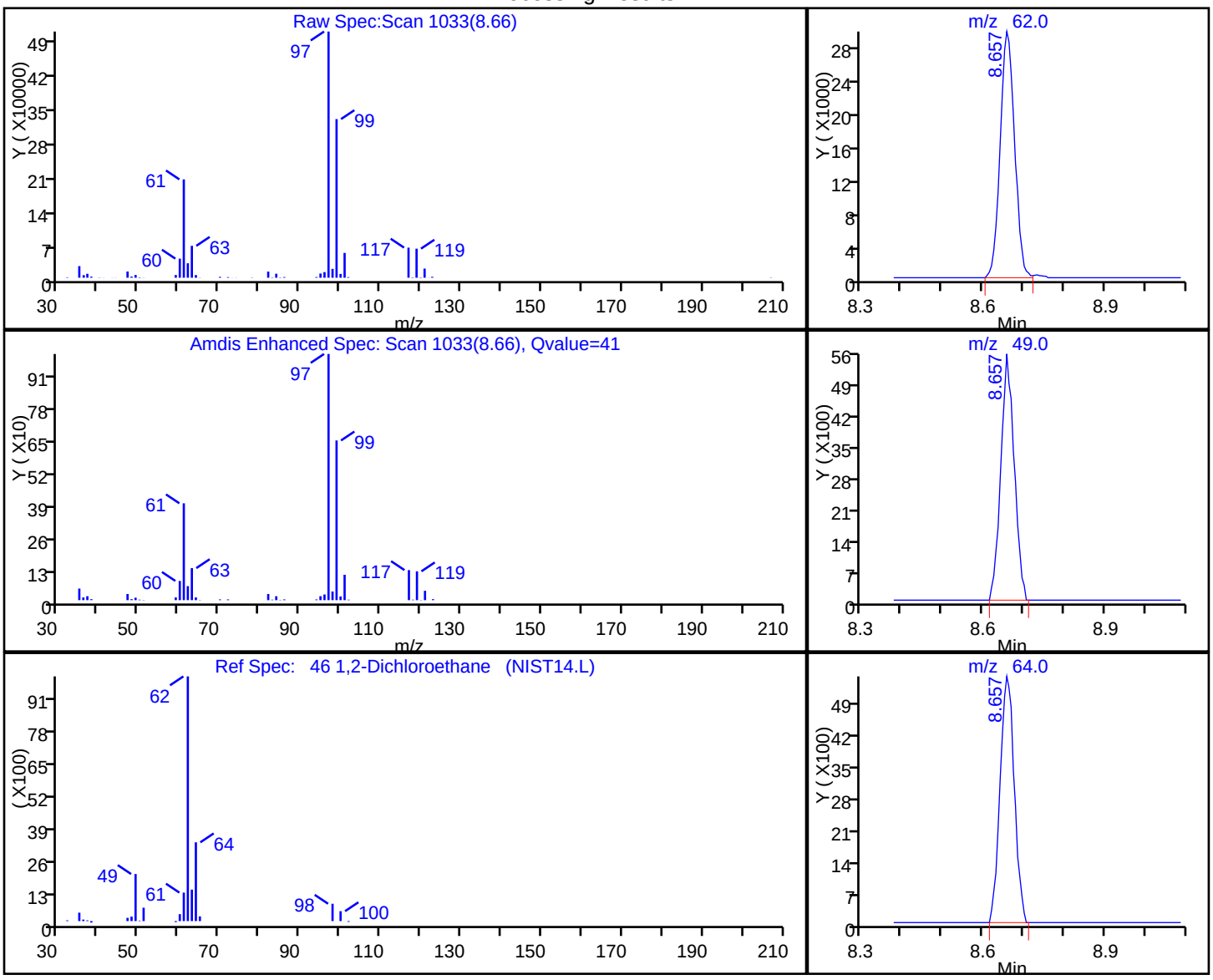
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p106.D				
Injection Date:	15-Mar-2018 21:55:30	Instrument ID:	MR		
Lims ID:	140-10921-A-3	Lab Sample ID:	140-10921-3		
Client ID:	BLDG-A EFFLUENT				
Operator ID:		ALS Bottle#:	6	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

46 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
8.66	62.00	73386	0.404360
8.66	49.00	12871	
8.66	64.00	13234	

Reviewer: barlozhetskayaa, 16-Mar-2018 10:41:49

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

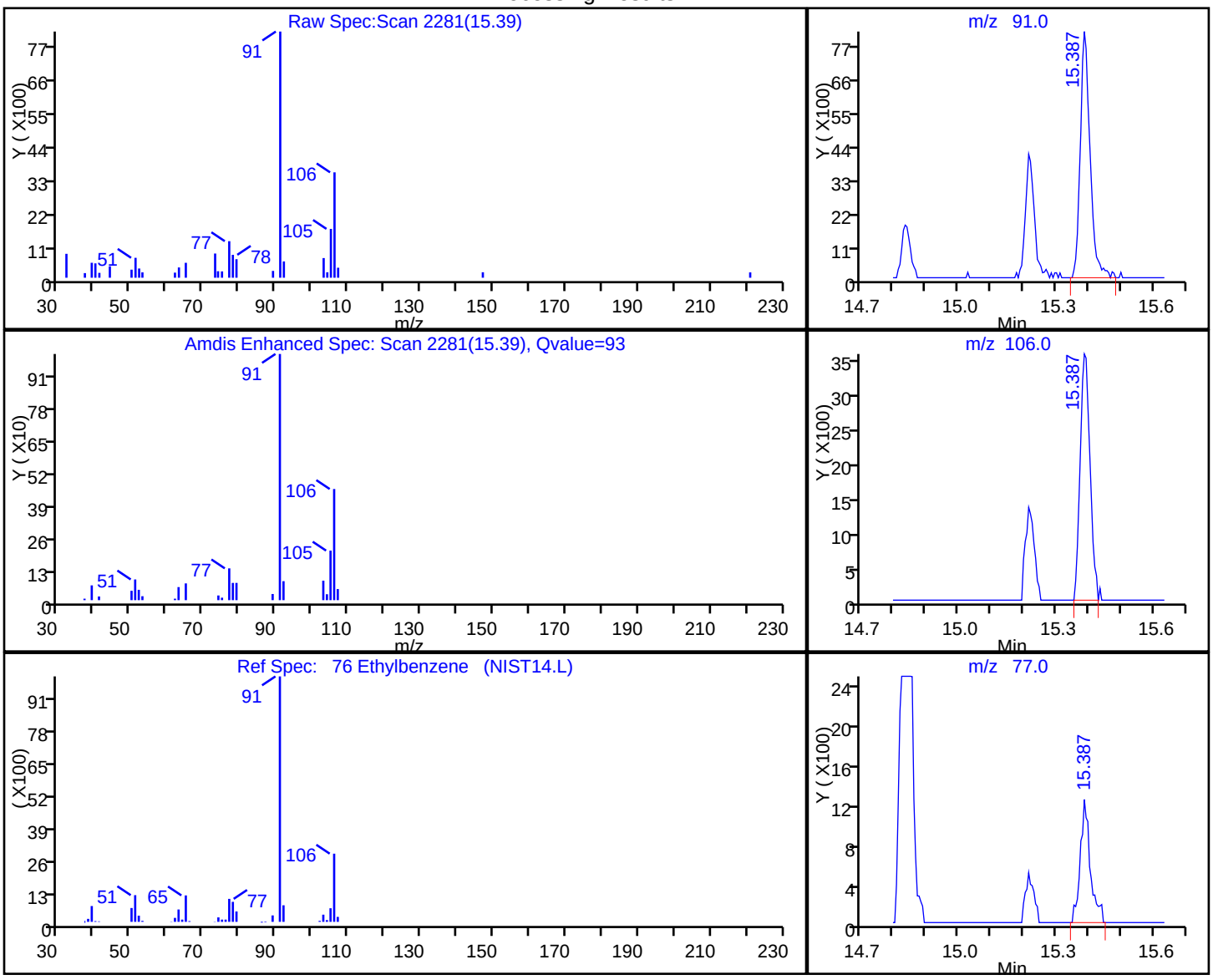
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p106.D				
Injection Date:	15-Mar-2018 21:55:30	Instrument ID:	MR		
Lims ID:	140-10921-A-3	Lab Sample ID:	140-10921-3		
Client ID:	BLDG-A EFFLUENT				
Operator ID:		ALS Bottle#:	6	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

76 Ethylbenzene, CAS: 100-41-4

Processing Results



RT	Mass	Response	Amount
15.39	91.00	17364	0.033387
15.39	106.00	7452	
15.39	77.00	2636	

Reviewer: barlozhetskayaa, 16-Mar-2018 10:41:49

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

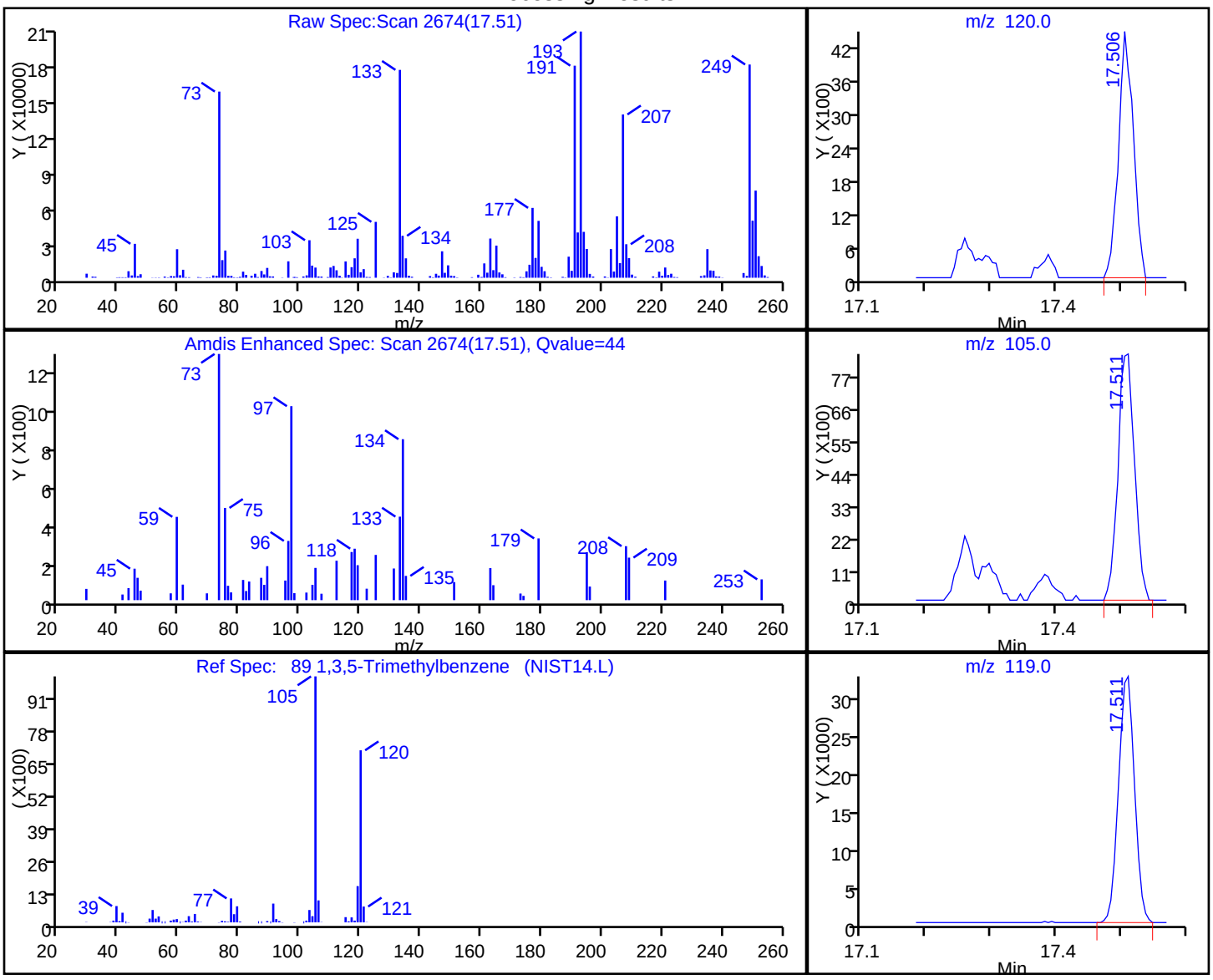
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p106.D				
Injection Date:	15-Mar-2018 21:55:30	Instrument ID:	MR		
Lims ID:	140-10921-A-3	Lab Sample ID:	140-10921-3		
Client ID:	BLDG-A EFFLUENT				
Operator ID:		ALS Bottle#:	6	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

89 1,3,5-Trimethylbenzene, CAS: 108-67-8

Processing Results



RT	Mass	Response	Amount
17.51	120.00	7165	0.030020
17.51	105.00	15048	
17.51	119.00	56907	

Reviewer: barlozhetskayaa, 16-Mar-2018 10:41:49

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10921-1

SDG No.:

Client Sample ID: BLDG-C EFFLUENT | Lab Sample ID: 140-10921-4

Matrix: Air | Lab File ID: RC16p202.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2018 14:42

Sample wt/vol: 100(mL) | Date Analyzed: 03/17/2018 05:58

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18835 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.6		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.3		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.40		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.16	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.96	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND	*	0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.072	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.61		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.97		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.42		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.59	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10921-1

SDG No.:

Client Sample ID: BLDG-C EFFLUENT | Lab Sample ID: 140-10921-4

Matrix: Air | Lab File ID: RC16p202.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2018 14:42

Sample wt/vol: 100(mL) | Date Analyzed: 03/17/2018 05:58

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18835 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	5.1		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.6		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.70	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND	*	3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.39	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	3.3		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	4.8		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	2.1		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.6	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\RC16p202.D
Lims ID: 140-10921-A-4
Client ID: BLDG-C EFFLUENT
Sample Type: Client
Inject. Date: 17-Mar-2018 05:58:30 ALS Bottle#: 2 Worklist Smp#: 24
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007656-024
Misc. Info.: 140-10921-A-4
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Mar-2018 12:17:18 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK005

First Level Reviewer: barlozhetskayaa Date: 17-Mar-2018 12:17:18

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
*	1 Chlorobromomethane (IS)	128	7.676	7.670	0.006	74	274320	4.00	
*	2 1,4-Difluorobenzene	114	9.817	9.811	0.006	94	1628869	4.00	
*	3 Chlorobenzene-d5 (IS)	117	14.837	14.837	0.000	87	1380857	4.00	
$	4 4-Bromofluorobenzene (Surr	95	16.546	16.540	0.000	90	1069984	4.09	
	6 Chlorodifluoromethane	67	3.448	3.435	0.011	96	8794	0.2628	
	8 Dichlorodifluoromethane	85	3.497	3.483	0.011	99	20840	0.0809	
	31 Methylene Chloride	84	5.476	5.450	0.022	84	20537	0.1914	
	45 1,1,1-Trichloroethane	97	8.673	8.656	0.010	96	3833	0.0144	
	47 Benzene	78	9.240	9.234	0.006	92	100052	0.3215	
	56 Trichloroethene	130	10.571	10.571	-0.001	99	18054	0.1228	
	65 Toluene	91	12.766	12.761	0.000	93	91739	0.2412	
	76 Ethylbenzene	91	15.214	15.209	0.000	98	16124	0.0324	
	77 m-Xylene & p-Xylene	91	15.387	15.381	0.000	99	33312	0.0863	
	82 o-Xylene	91	15.926	15.915	0.005	97	12661	0.0311	
	89 1,3,5-Trimethylbenzene	120	17.377	17.370	0.000	93	19415	0.0850	
	93 1,2,4-Trimethylbenzene	105	17.862	17.855	0.000	98	92212	0.1937	
S	119 Xylenes, Total	100				0		0.1174	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

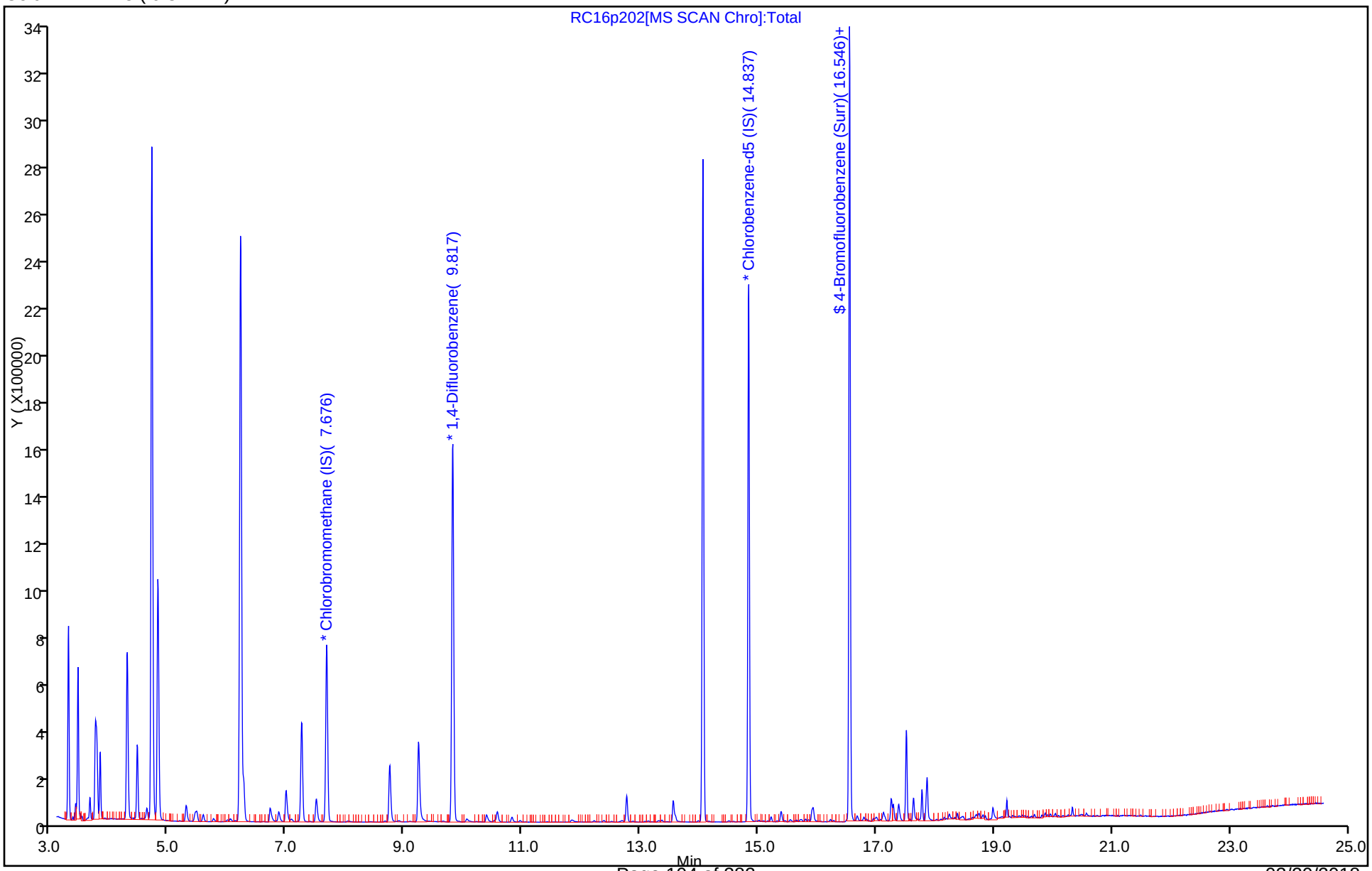
Report Date: 17-Mar-2018 12:17:19 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\RC16p202.D

Injection Date:	17-Mar-2018 05:58:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10921-A-4	Lab Sample ID:	140-10921-4	Worklist Smp#:	24
Client ID:	BLDG-C EFFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

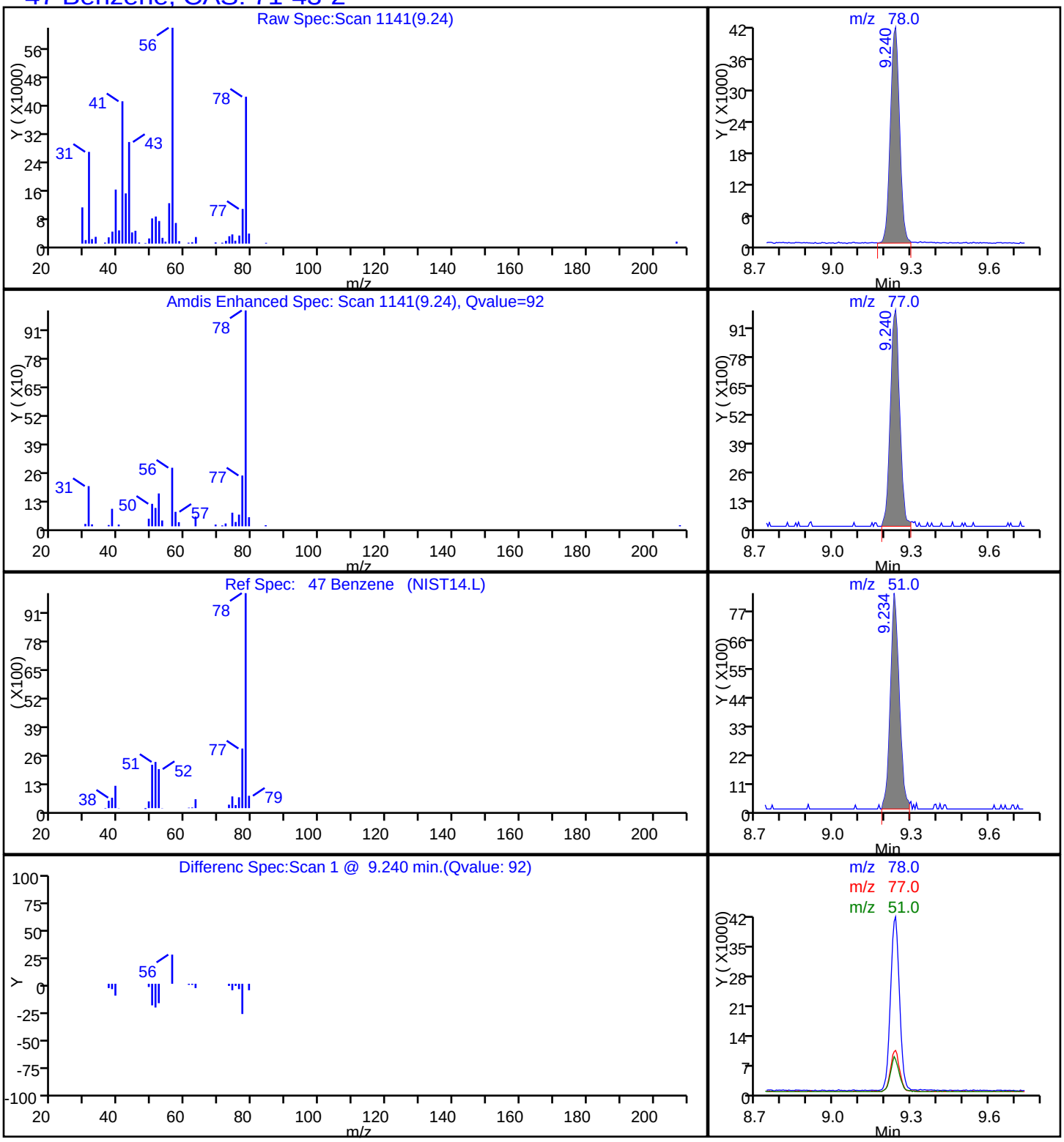
Data File:	\\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\RC16p202.D				
Lims ID:	140-10921-A-4				
Client ID:	BLDG-C EFFLUENT				
Sample Type:	Client				
Inject. Date:	17-Mar-2018 05:58:30	ALS Bottle#:	2	Worklist Smp#:	24
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007656-024				
Misc. Info.:	140-10921-A-4				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	17-Mar-2018 12:17:18	Calib Date:	30-Jan-2018 19:38:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK005				
First Level Reviewer: barlozhetskayaa		Date:	17-Mar-2018 12:17:18		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.09	102.18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\RC16p202.D		
Injection Date:	17-Mar-2018 05:58:30	Instrument ID:	MR
Lims ID:	140-10921-A-4	Lab Sample ID:	140-10921-4
Client ID:	BLDG-C EFFLUENT		
Operator ID:		ALS Bottle#:	2 Worklist Smp#: 24
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

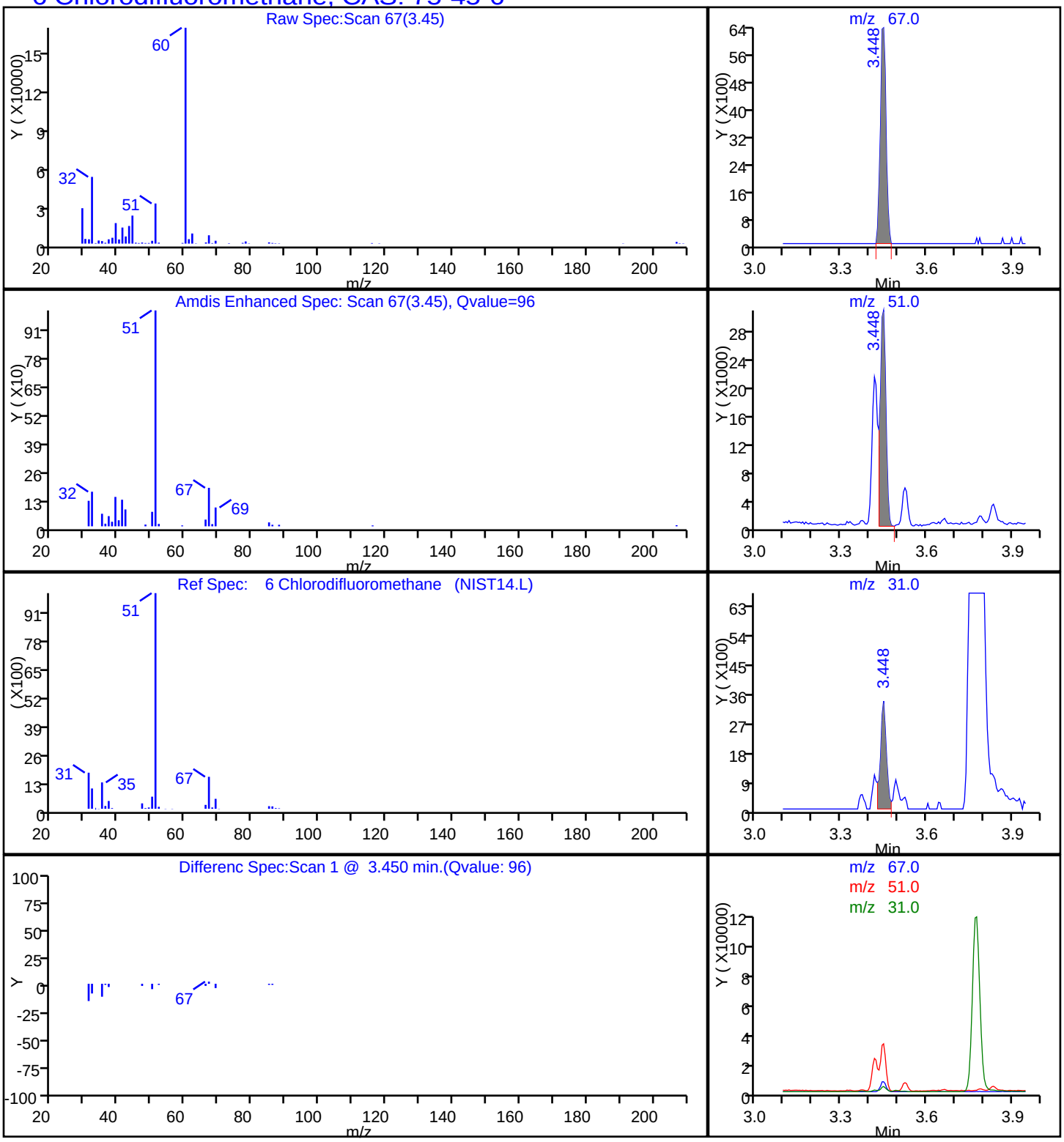
47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\RC16p202.D				
Injection Date:	17-Mar-2018 05:58:30	Instrument ID:	MR		
Lims ID:	140-10921-A-4	Lab Sample ID:	140-10921-4		
Client ID:	BLDG-C EFFLUENT				
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	24
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

6 Chlorodifluoromethane, CAS: 75-45-6

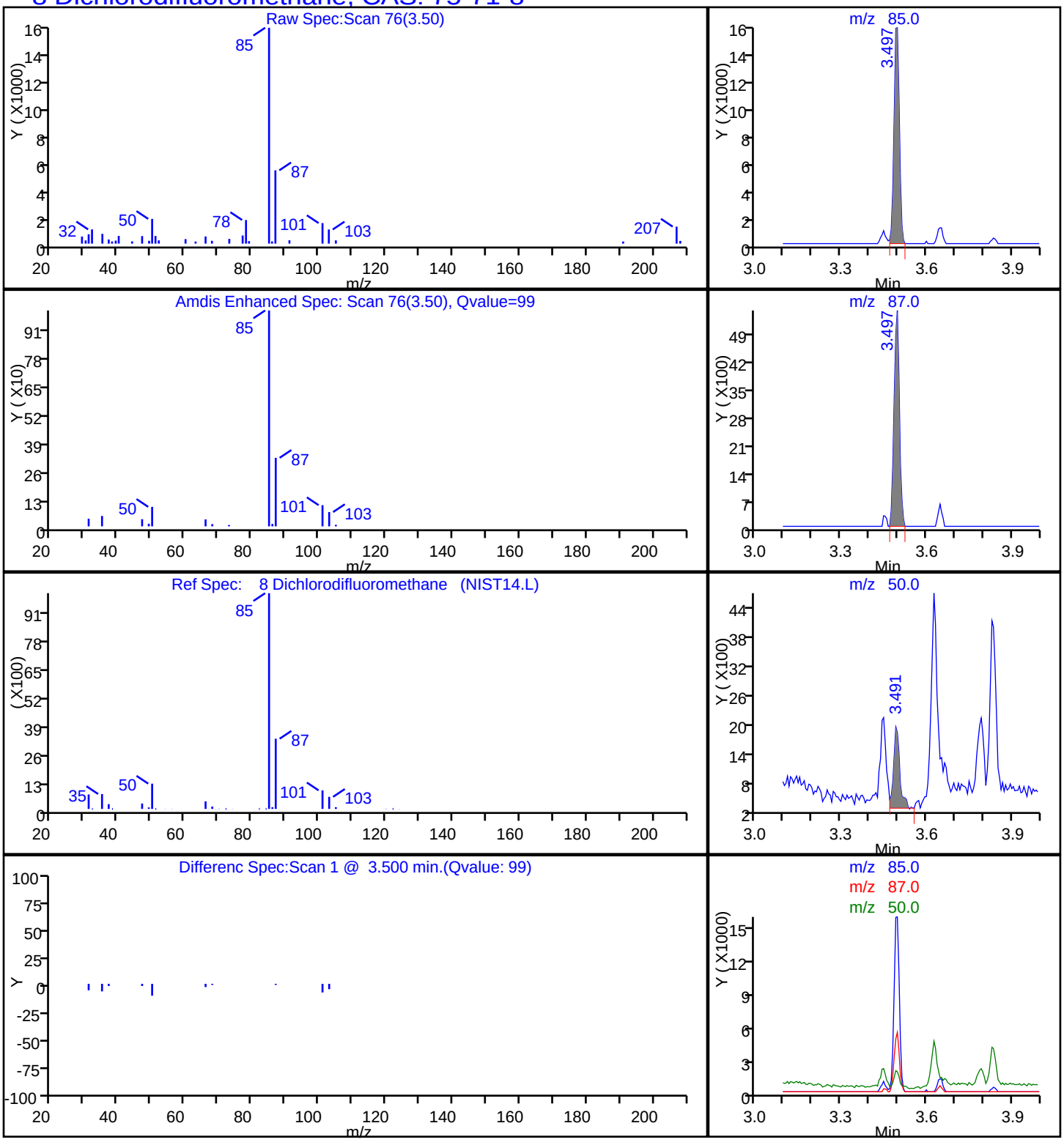


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\RC16p202.D

Injection Date:	17-Mar-2018 05:58:30	Instrument ID:	MR
Lims ID:	140-10921-A-4	Lab Sample ID:	140-10921-4
Client ID:	BLDG-C EFFLUENT		
Operator ID:		ALS Bottle#:	2 Worklist Smp#: 24
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

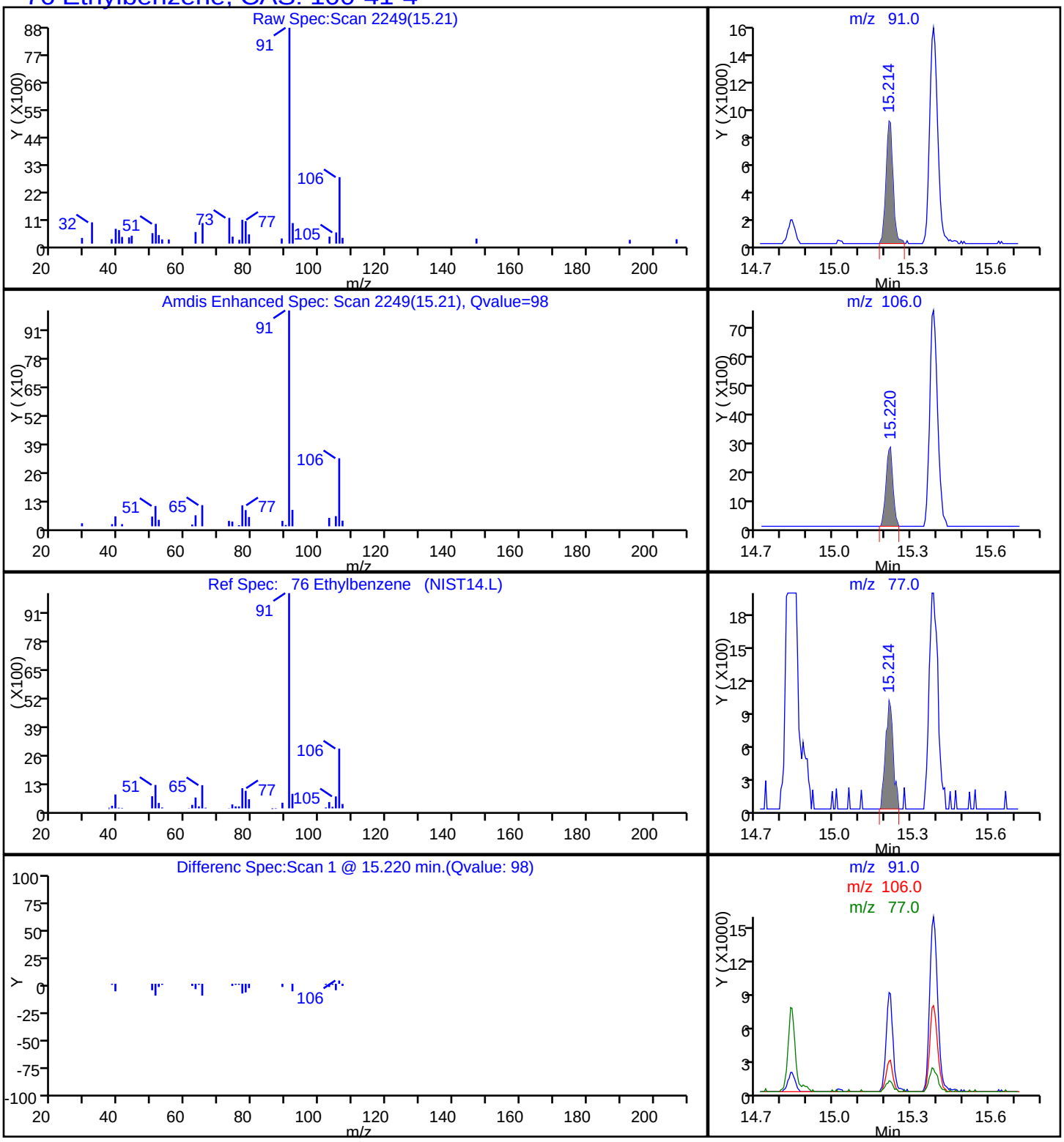
8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\RC16p202.D		
Injection Date:	17-Mar-2018 05:58:30	Instrument ID:	MR
Lims ID:	140-10921-A-4	Lab Sample ID:	140-10921-4
Client ID:	BLDG-C EFFLUENT		
Operator ID:		ALS Bottle#:	2 Worklist Smp#: 24
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

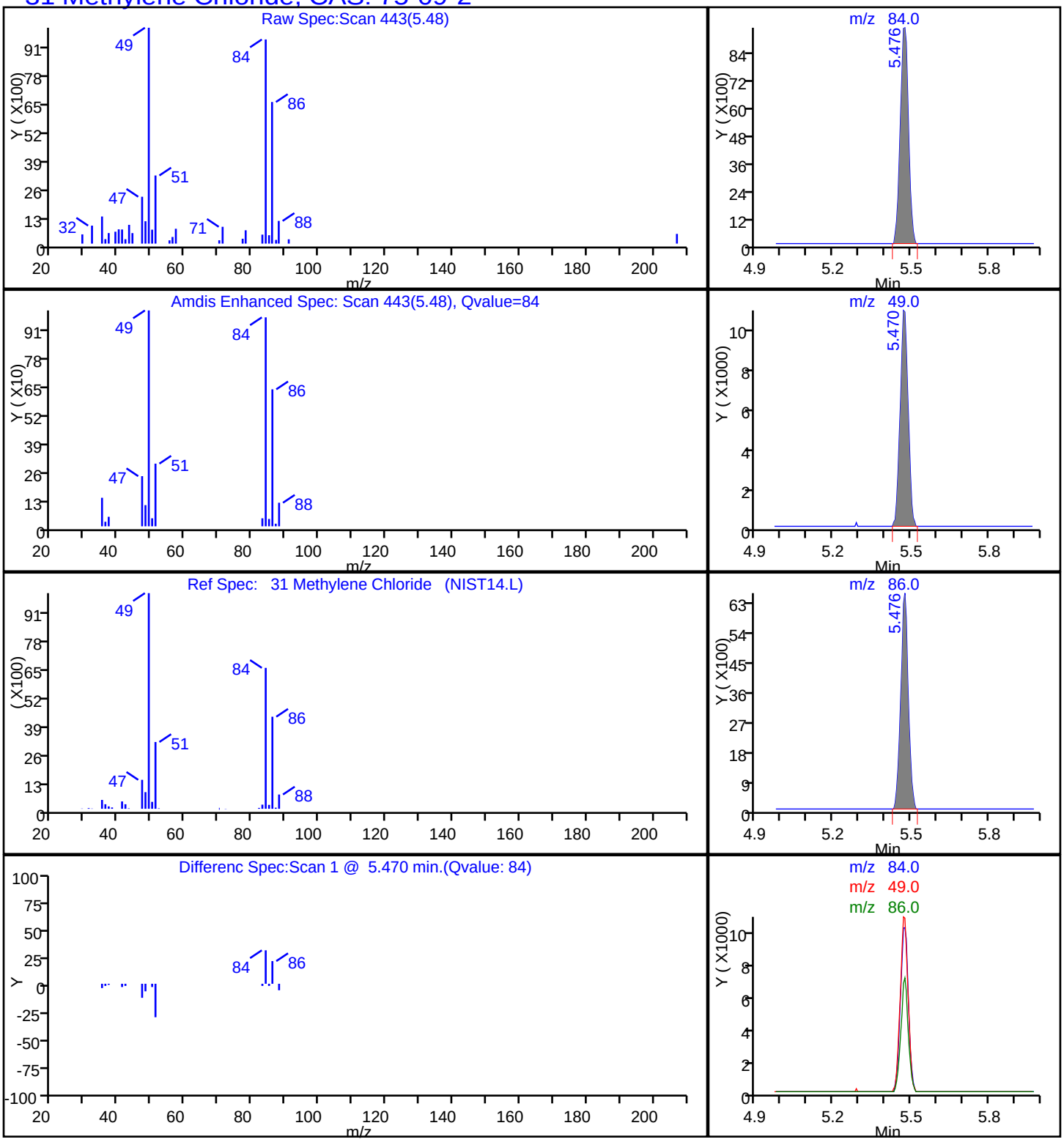
76 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\RC16p202.D		
Injection Date:	17-Mar-2018 05:58:30	Instrument ID:	MR
Lims ID:	140-10921-A-4	Lab Sample ID:	140-10921-4
Client ID:	BLDG-C EFFLUENT		
Operator ID:		ALS Bottle#:	2 Worklist Smp#: 24
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

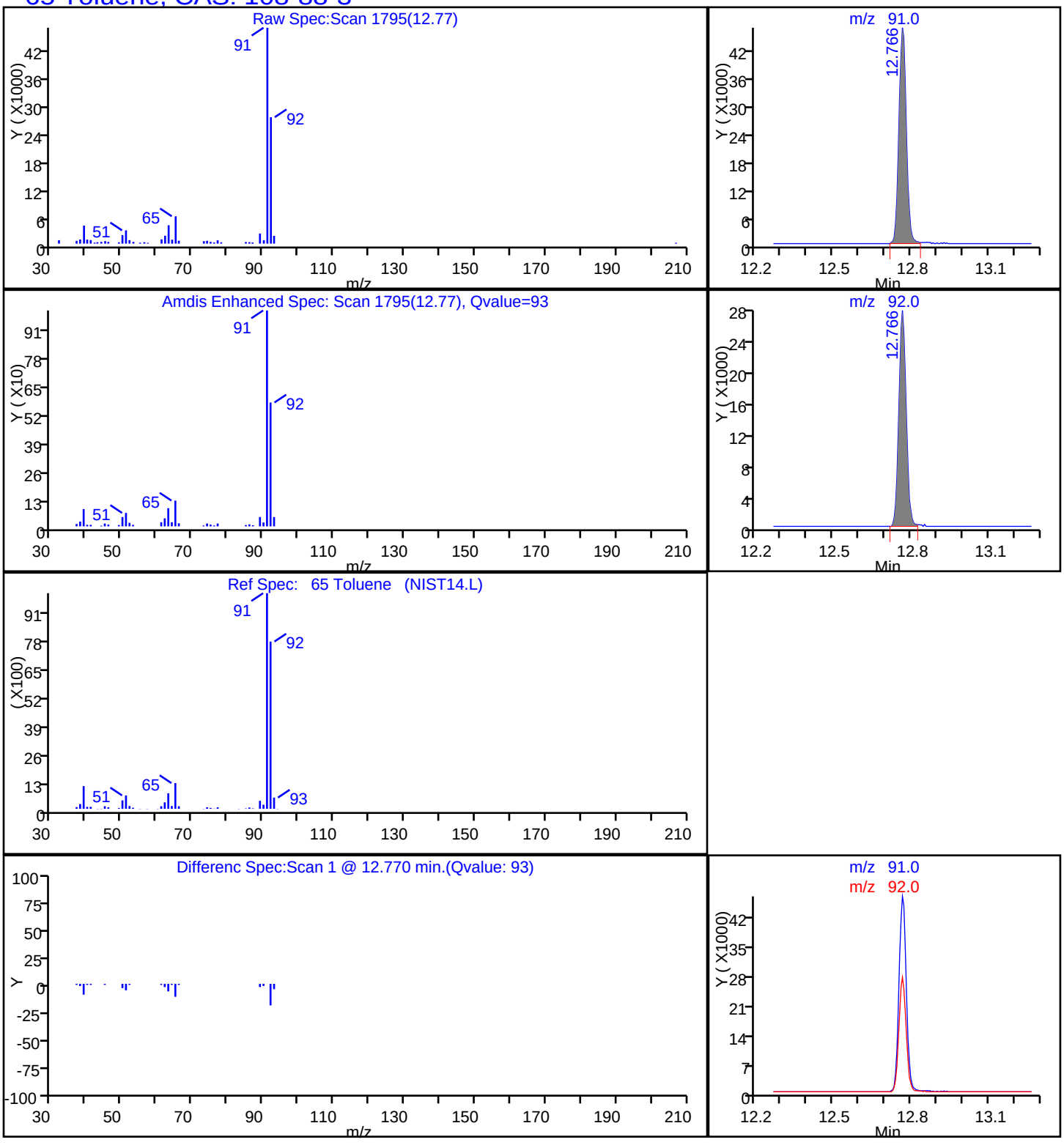
31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\RC16p202.D		
Injection Date:	17-Mar-2018 05:58:30	Instrument ID:	MR
Lims ID:	140-10921-A-4	Lab Sample ID:	140-10921-4
Client ID:	BLDG-C EFFLUENT		
Operator ID:		ALS Bottle#:	2 Worklist Smp#: 24
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

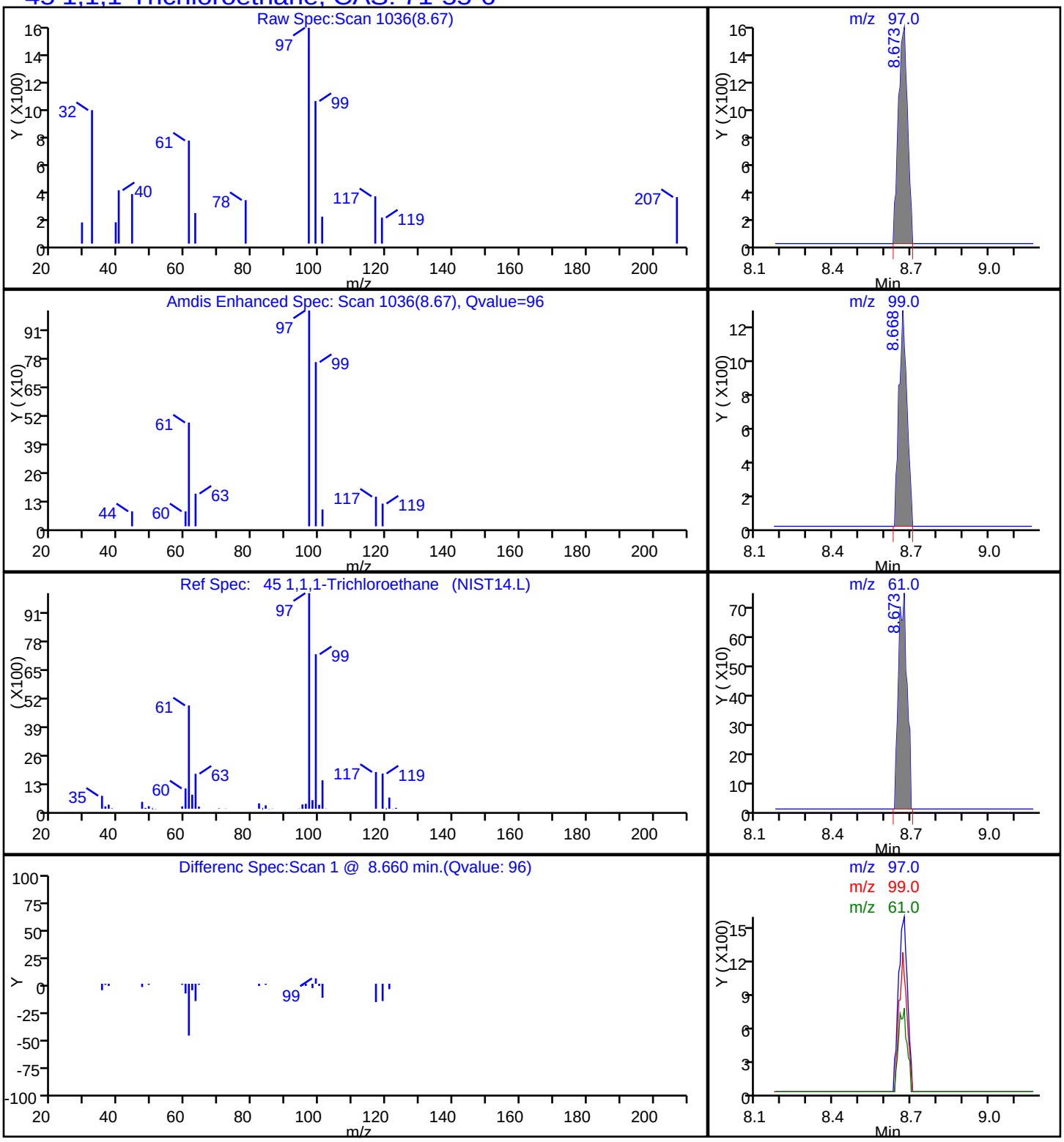
65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

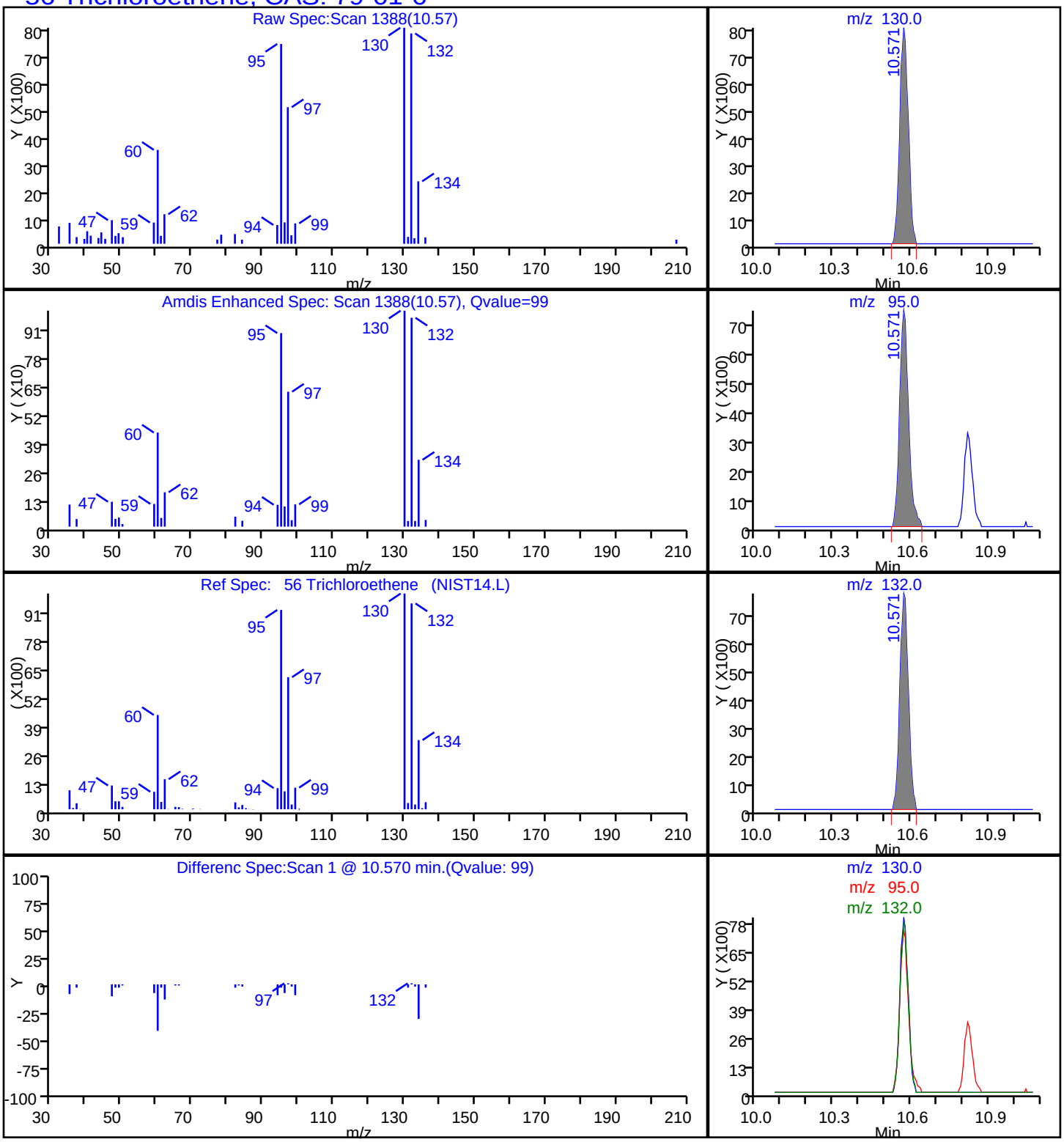
Data File:	\\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\RC16p202.D		
Injection Date:	17-Mar-2018 05:58:30	Instrument ID:	MR
Lims ID:	140-10921-A-4	Lab Sample ID:	140-10921-4
Client ID:	BLDG-C EFFLUENT		
Operator ID:		ALS Bottle#:	2 Worklist Smp#: 24
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



Data File: \\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\RC16p202.D
Injection Date: 17-Mar-2018 05:58:30 Instrument ID: MR
Lims ID: 140-10921-A-4 Lab Sample ID: 140-10921-4
Client ID: BLDG-C EFFLUENT
Operator ID: ALS Bottle#: 2 Worklist Smp#: 24
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

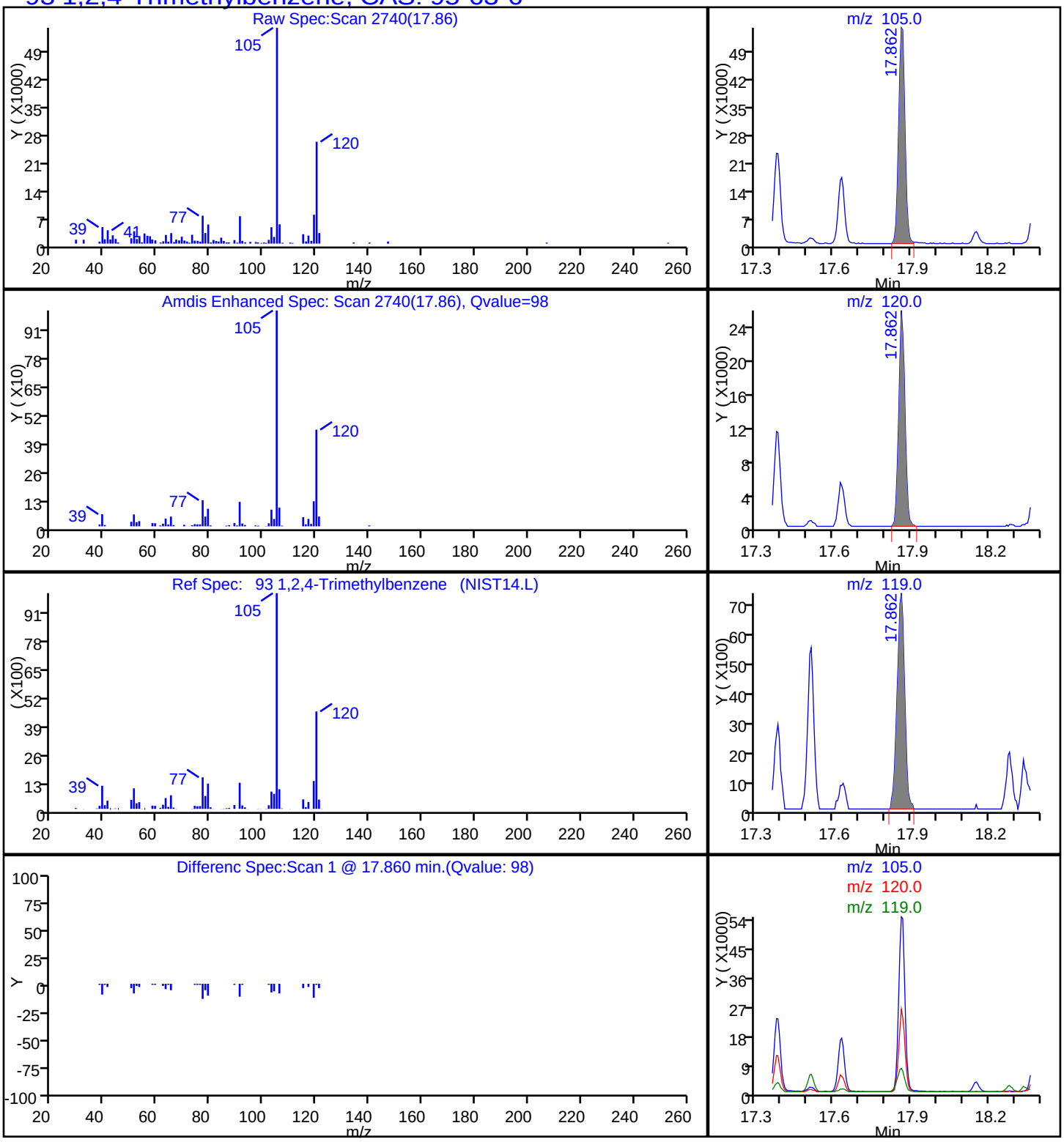
56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

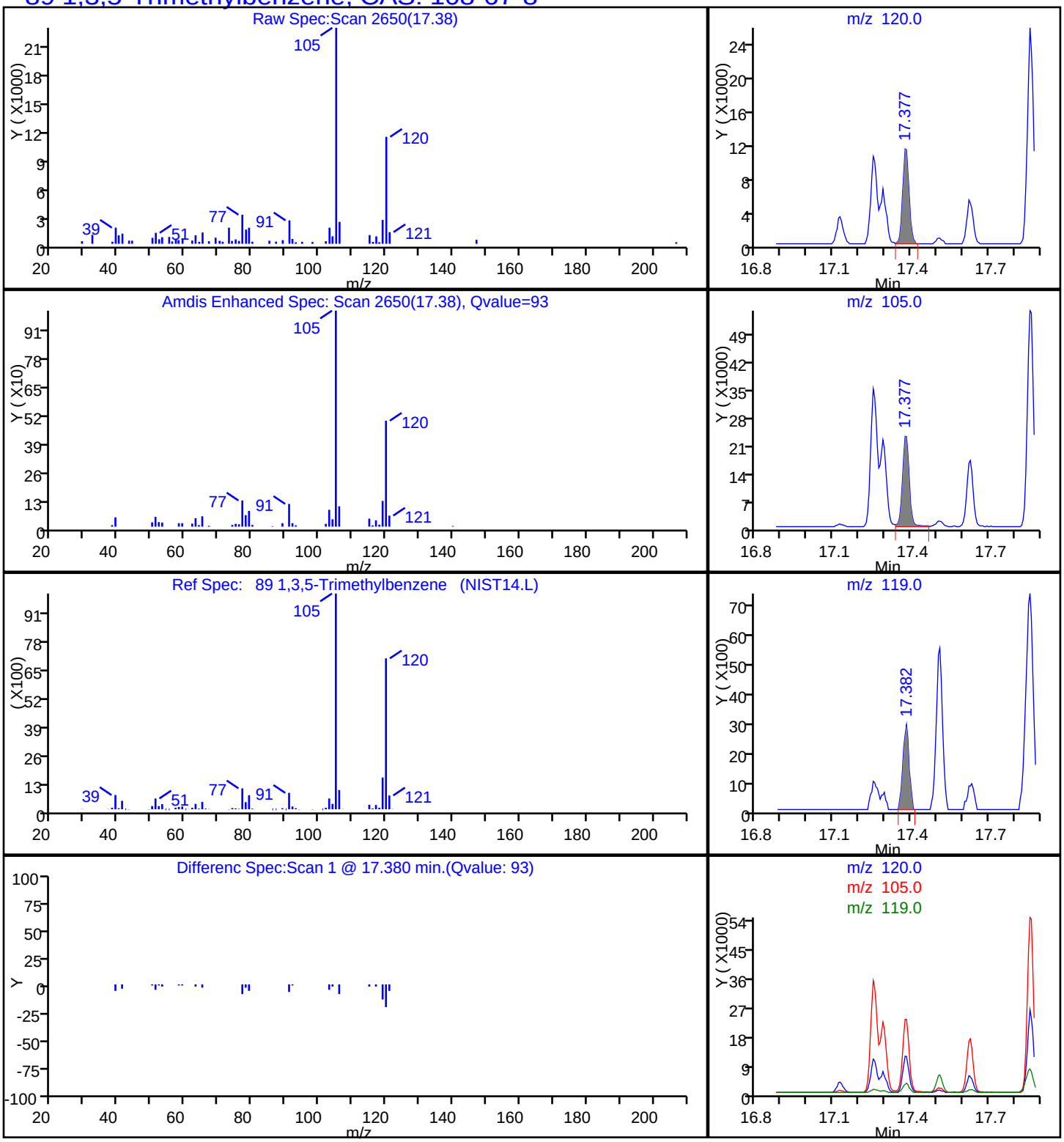
Data File:	\\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\RC16p202.D		
Injection Date:	17-Mar-2018 05:58:30	Instrument ID:	MR
Lims ID:	140-10921-A-4	Lab Sample ID:	140-10921-4
Client ID:	BLDG-C EFFLUENT		
Operator ID:		ALS Bottle#:	2 Worklist Smp#: 24
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

93 1,2,4-Trimethylbenzene, CAS: 95-63-6



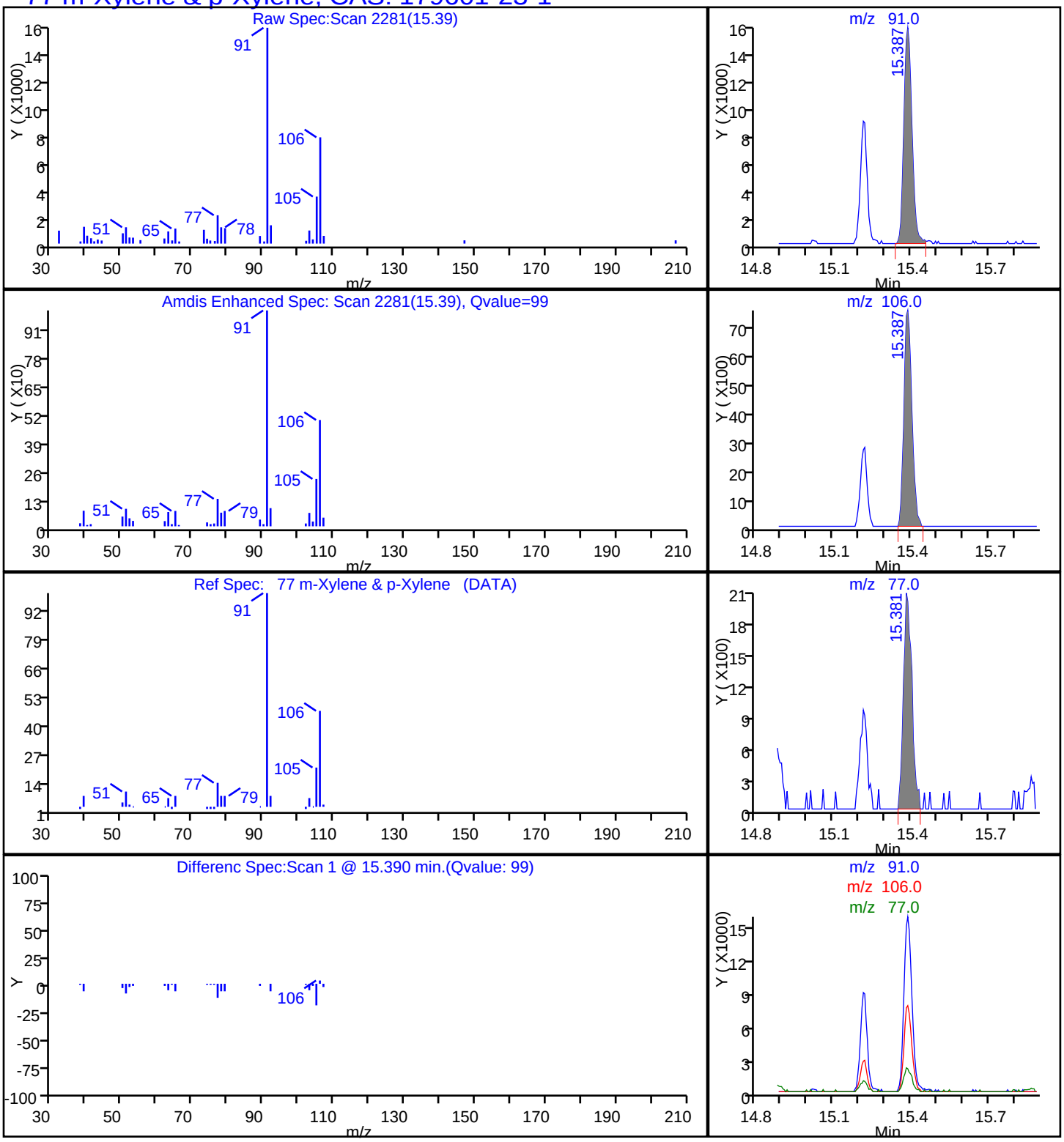
Data File: \\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\RC16p202.D
Injection Date: 17-Mar-2018 05:58:30 Instrument ID: MR
Lims ID: 140-10921-A-4 Lab Sample ID: 140-10921-4
Client ID: BLDG-C EFFLUENT
Operator ID: ALS Bottle#: 2 Worklist Smp#: 24
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



Data File:	\\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\RC16p202.D		
Injection Date:	17-Mar-2018 05:58:30	Instrument ID:	MR
Lims ID:	140-10921-A-4	Lab Sample ID:	140-10921-4
Client ID:	BLDG-C EFFLUENT		
Operator ID:		ALS Bottle#:	2 Worklist Smp#: 24
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

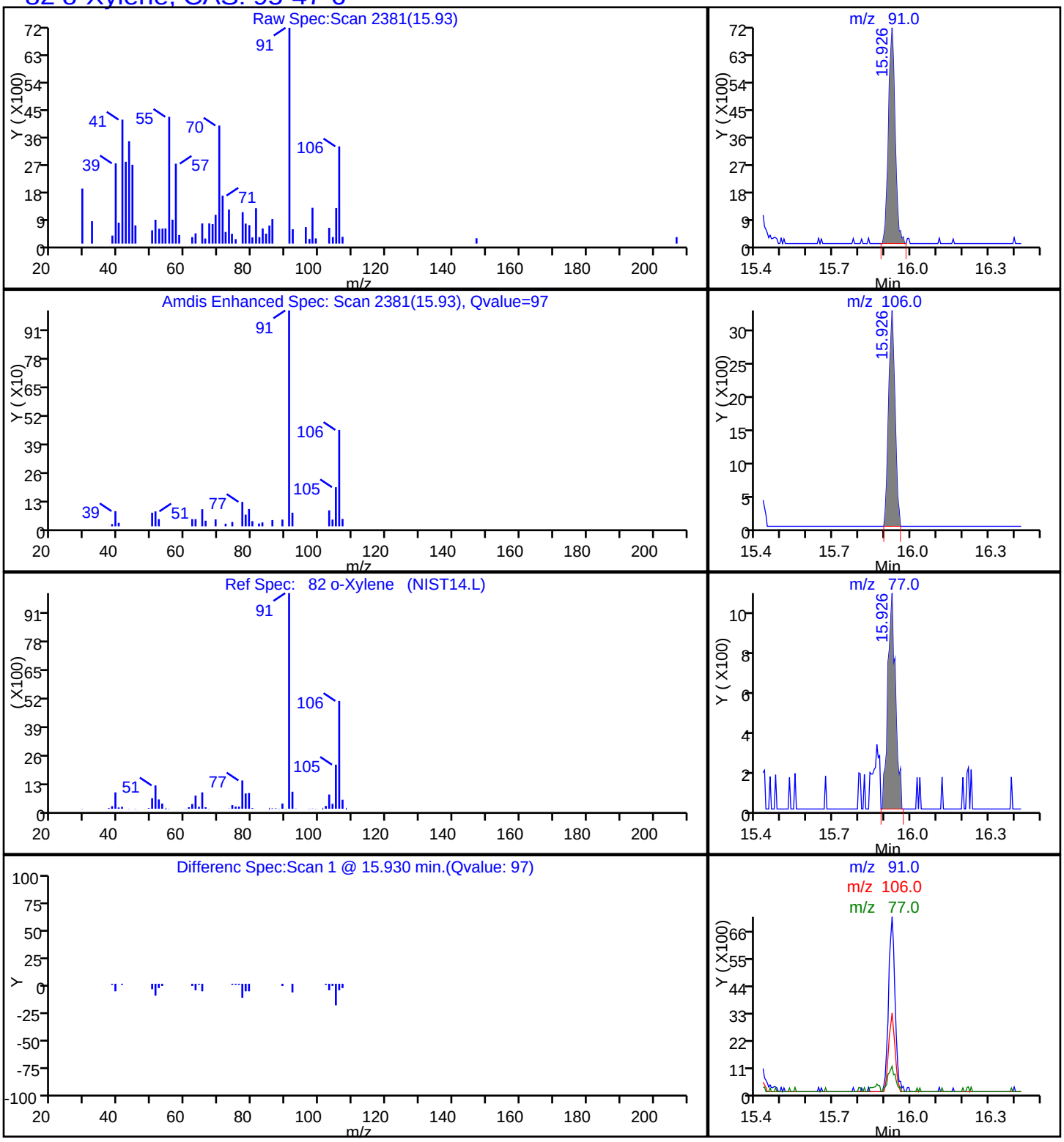
77 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\RC16p202.D		
Injection Date:	17-Mar-2018 05:58:30	Instrument ID:	MR
Lims ID:	140-10921-A-4	Lab Sample ID:	140-10921-4
Client ID:	BLDG-C EFFLUENT		
Operator ID:		ALS Bottle#:	2 Worklist Smp#: 24
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

82 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10921-1

SDG No.:

Client Sample ID: BLDG-C MIDGAC | Lab Sample ID: 140-10921-5

Matrix: Air | Lab File ID: RC15p108.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2018 14:46

Sample wt/vol: 100(mL) | Date Analyzed: 03/15/2018 23:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18783 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.8		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.3		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.85	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.72		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND	*	0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.28	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.35		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.22	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND	*	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.45	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Client Sample ID: BLDG-C MIDGAC Lab Sample ID: 140-10921-5

Matrix: Air Lab File ID: RC15p108.D

Analysis Method: TO 15 LL Date Collected: 03/08/2018 14:46

Sample wt/vol: 100(mL) Date Analyzed: 03/15/2018 23:29

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18783 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	8.9		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.0	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND	*	3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.5	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.9		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.1	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND	*	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.0	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p108.D				
Lims ID:	140-10921-A-5				
Client ID:	BLDG-C MIDGAC				
Sample Type:	Client				
Inject. Date:	15-Mar-2018 23:29:30	ALS Bottle#:	8	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007635-013				
Misc. Info.:	140-10921-A-5				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	16-Mar-2018 10:42:20	Calib Date:	30-Jan-2018 19:38:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK031				
First Level Reviewer: barlozhetskayaa		Date:	16-Mar-2018 10:42:20		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.676	7.670	0.006	75	289802	4.00	
* 2 1,4-Difluorobenzene	114	9.817	9.816	0.001	94	1730603	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.837	14.837	0.000	87	1469067	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.546	16.546	0.000	90	1123003	4.03	
6 Chlorodifluoromethane	67	3.459	3.440	0.022	94	9383	0.2654	
8 Dichlorodifluoromethane	85	3.508	3.494	0.017	99	24484	0.0900	
31 Methylene Chloride	84	5.470	5.459	0.011	85	19343	0.1707	
45 1,1,1-Trichloroethane	97	8.668	8.669	0.006	95	15515	0.0551	
47 Benzene	78	9.240	9.229	0.006	96	185198	0.5602	
56 Trichloroethene	130	10.572	10.566	0.001	99	10917	0.0699	
65 Toluene	91	12.766	12.766	0.000	93	58108	0.1436	
77 m-Xylene & p-Xylene	91	15.387	15.381	0.000	99	27496	0.0670	
82 o-Xylene	91	15.921	15.915	0.000	97	10666	0.0246	
93 1,2,4-Trimethylbenzene	105	17.867	17.862	0.005	98	22154	0.0437	
S 119 Xylenes, Total	100				0		0.0916	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

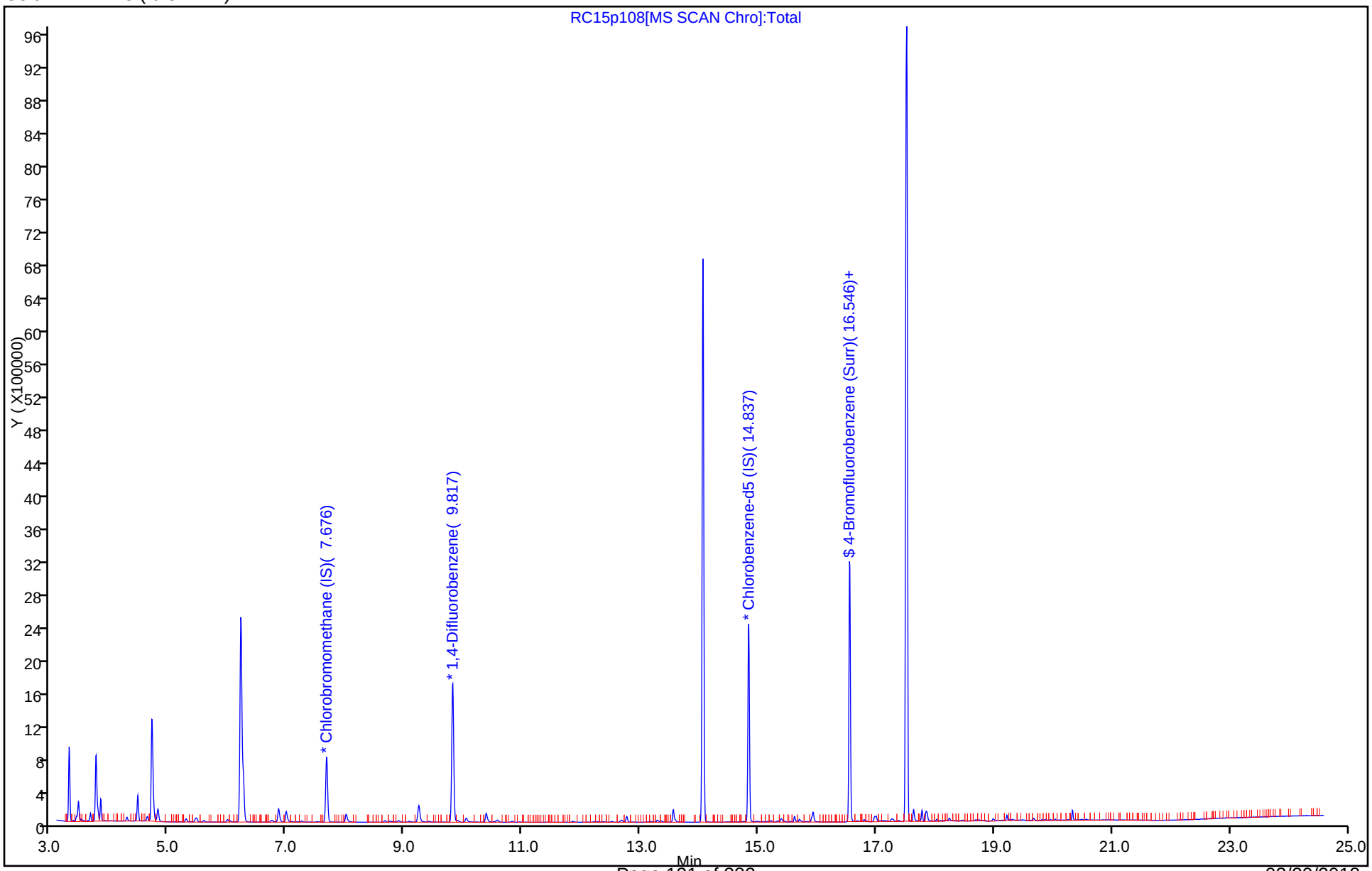
Report Date: 16-Mar-2018 10:42:21 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p108.D

Injection Date:	15-Mar-2018 23:29:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10921-A-5	Lab Sample ID:	140-10921-5	Worklist Smp#:	13
Client ID:	BLDG-C MIDGAC				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p108.D				
Lims ID:	140-10921-A-5				
Client ID:	BLDG-C MIDGAC				
Sample Type:	Client				
Inject. Date:	15-Mar-2018 23:29:30	ALS Bottle#:	8	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007635-013				
Misc. Info.:	140-10921-A-5				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	16-Mar-2018 10:42:20	Calib Date:	30-Jan-2018 19:38:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK031				
First Level Reviewer: barlozhetskayaa		Date:	16-Mar-2018 10:42:20		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.03	100.80

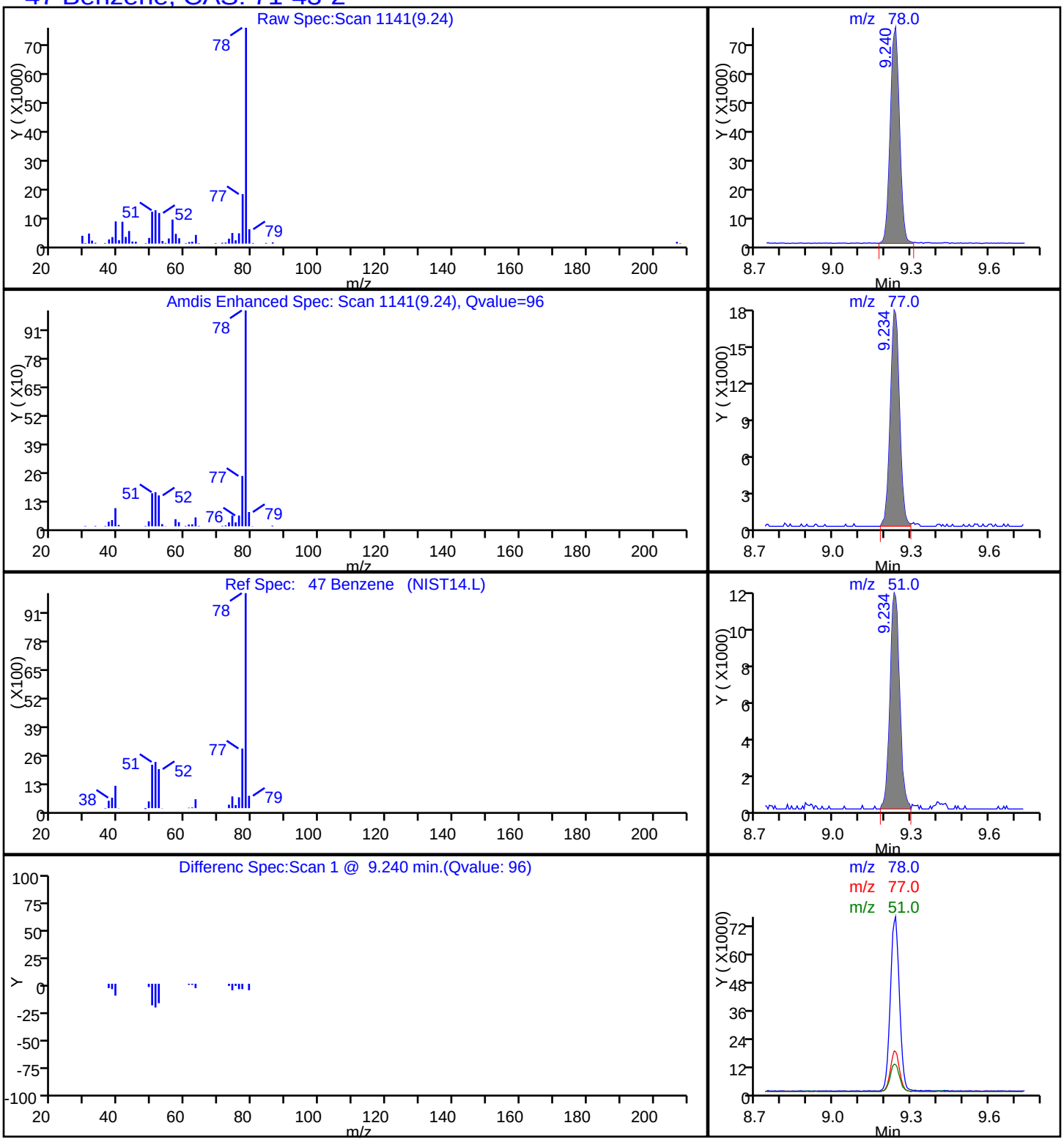
Report Date: 16-Mar-2018 10:42:21 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p108.D

Injection Date:	15-Mar-2018 23:29:30	Instrument ID:	MR		
Lims ID:	140-10921-A-5	Lab Sample ID:	140-10921-5		
Client ID:	BLDG-C MIDGAC				
Operator ID:		ALS Bottle#:	8	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

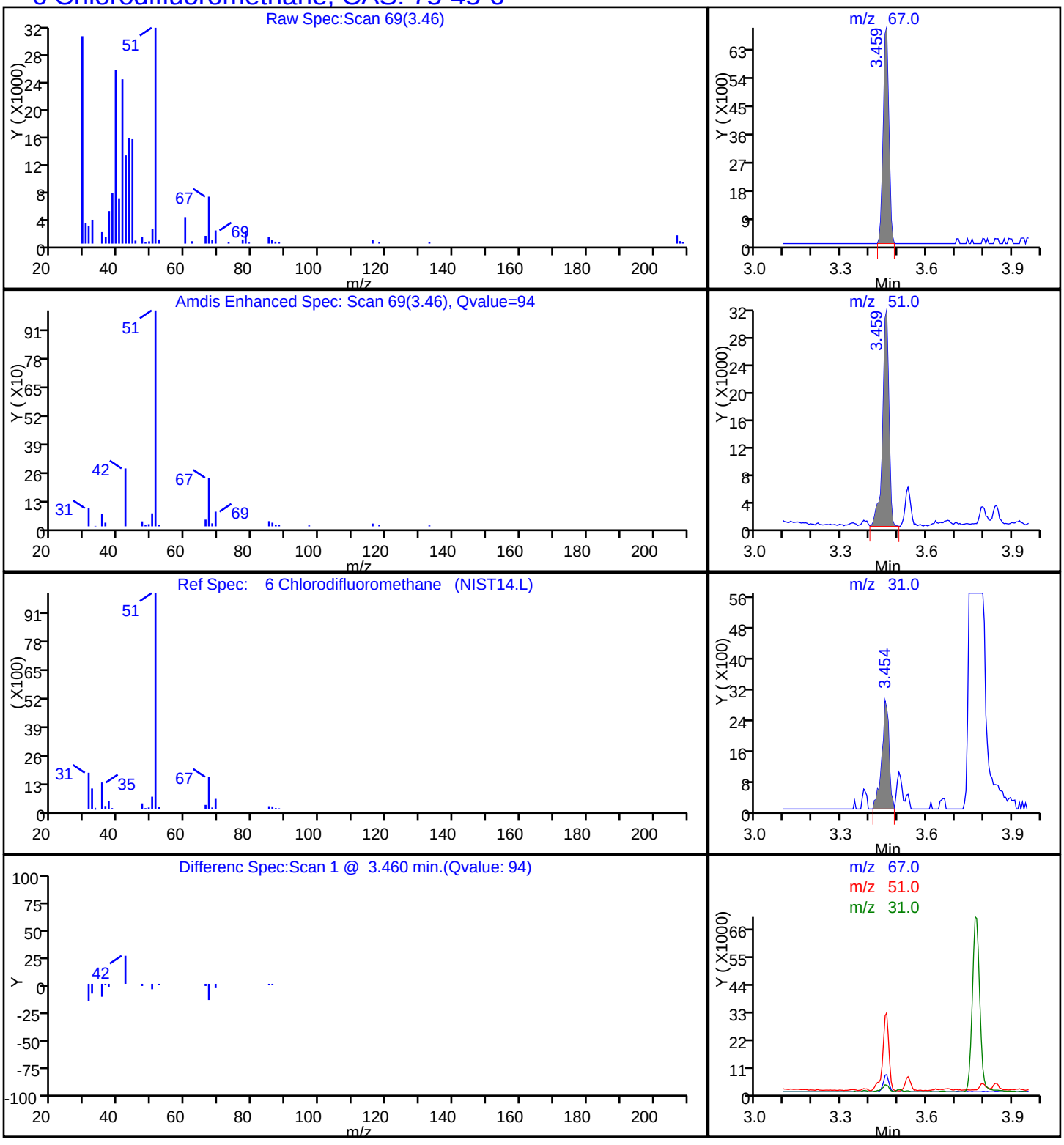
47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

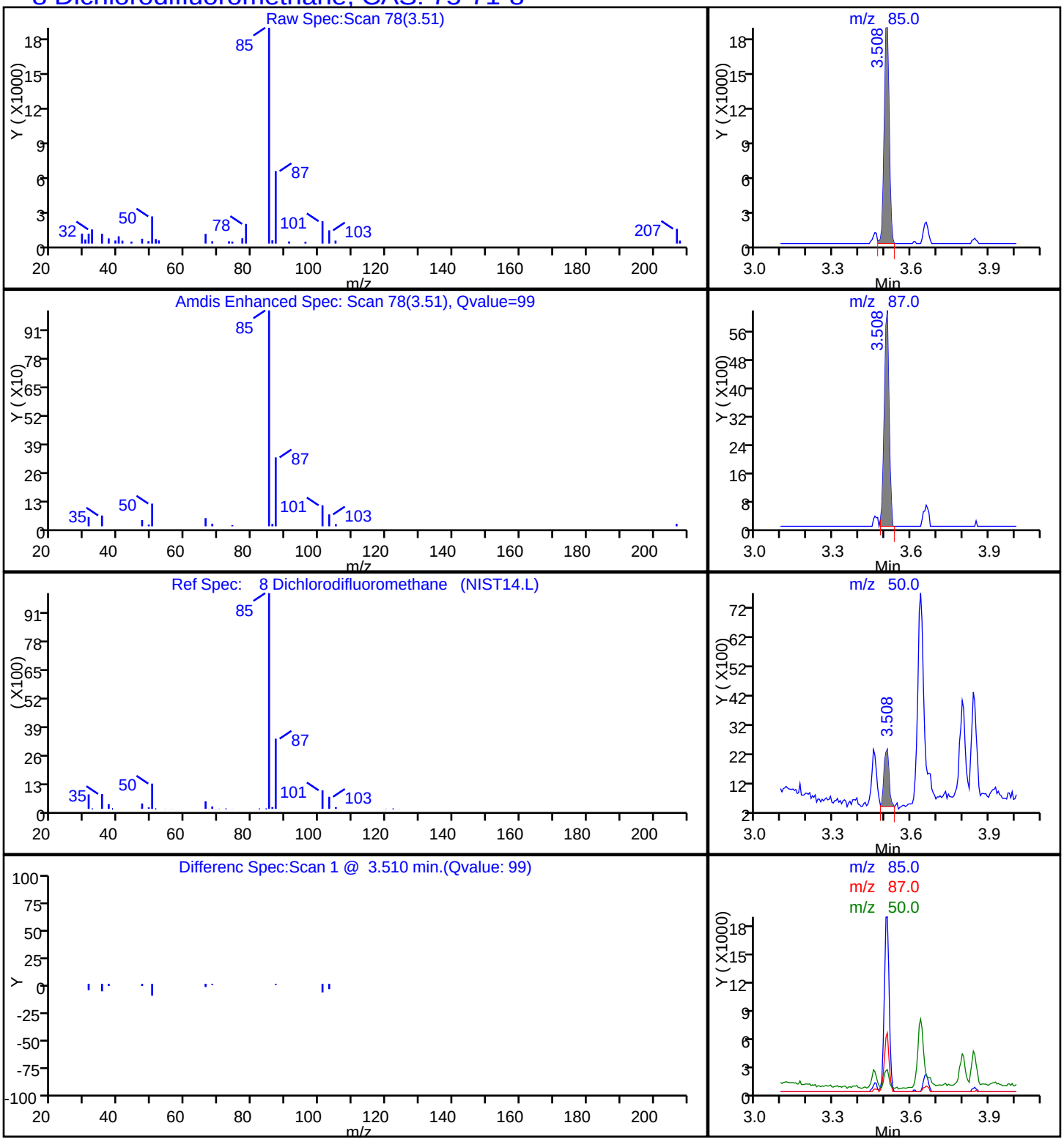
Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p108.D				
Injection Date:	15-Mar-2018 23:29:30	Instrument ID:	MR		
Lims ID:	140-10921-A-5	Lab Sample ID:	140-10921-5		
Client ID:	BLDG-C MIDGAC				
Operator ID:		ALS Bottle#:	8	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

6 Chlorodifluoromethane, CAS: 75-45-6



Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p108.D
Injection Date: 15-Mar-2018 23:29:30 Instrument ID: MR
Lims ID: 140-10921-A-5 Lab Sample ID: 140-10921-5
Client ID: BLDG-C MIDGAC
Operator ID: ALS Bottle#: 8 Worklist Smp#: 13
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

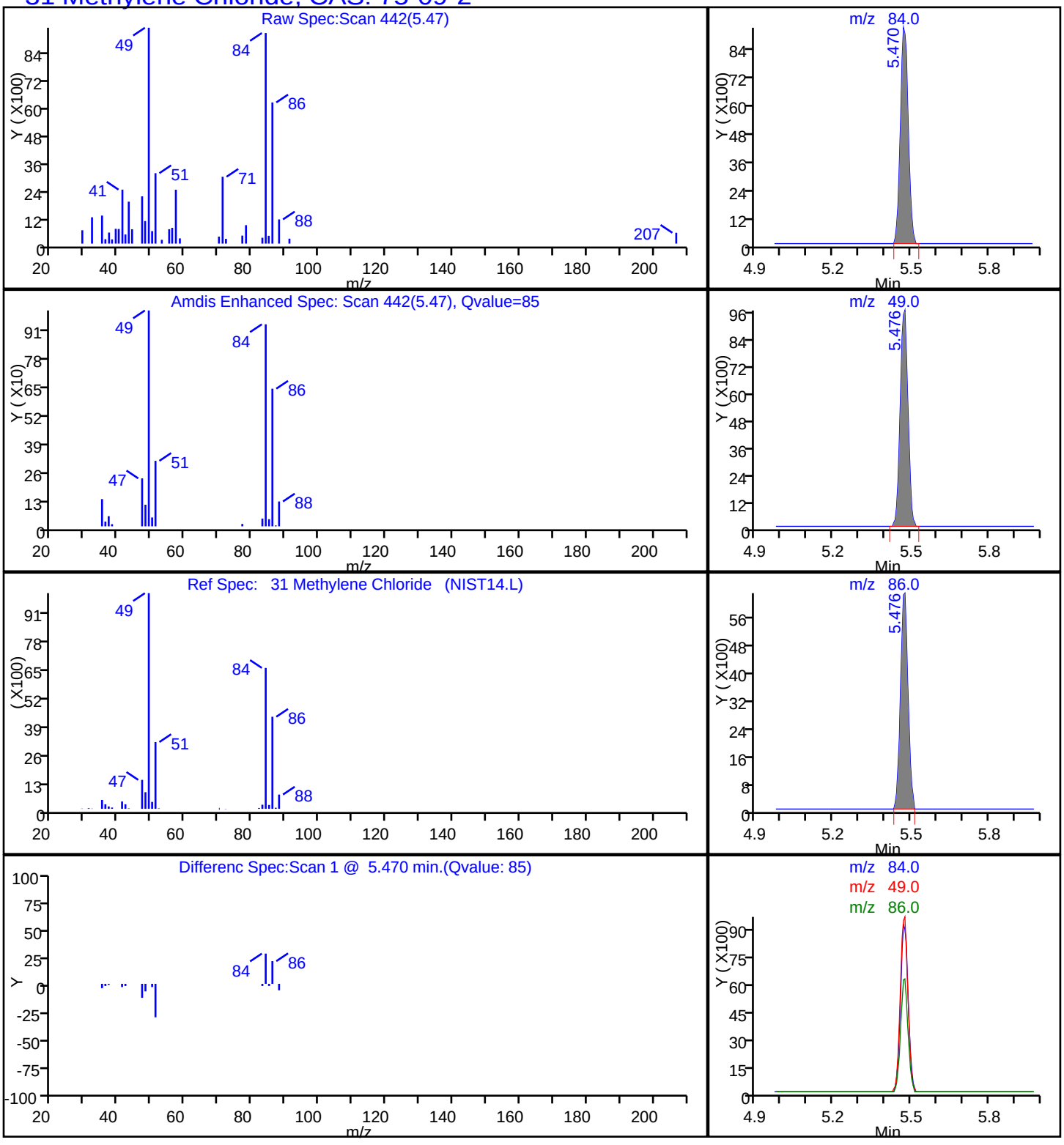
8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

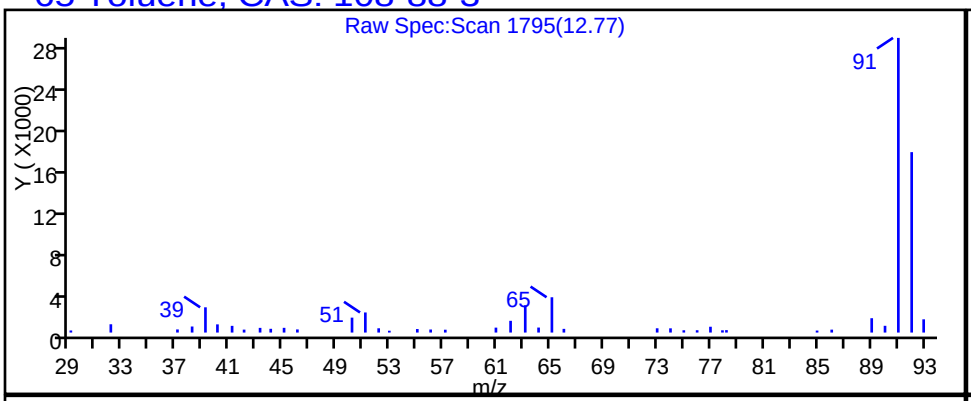
Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p108.D		
Injection Date:	15-Mar-2018 23:29:30	Instrument ID:	MR
Lims ID:	140-10921-A-5	Lab Sample ID:	140-10921-5
Client ID:	BLDG-C MIDGAC		
Operator ID:		ALS Bottle#:	8 Worklist Smp#: 13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

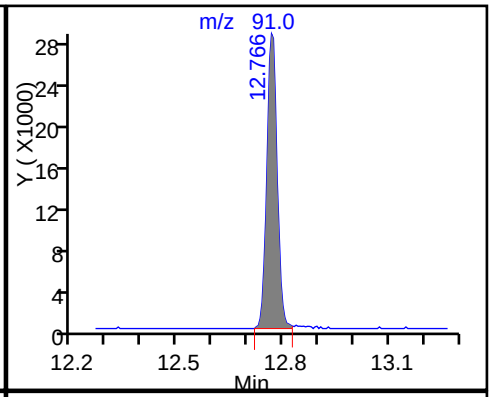
31 Methylene Chloride, CAS: 75-09-2

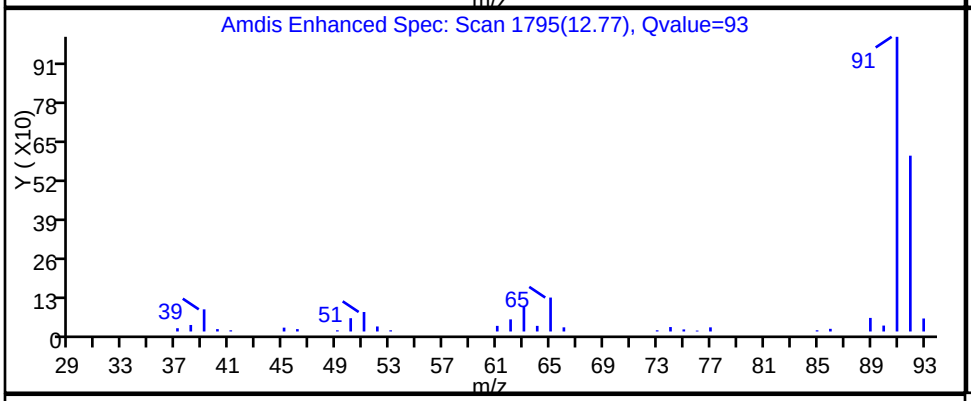


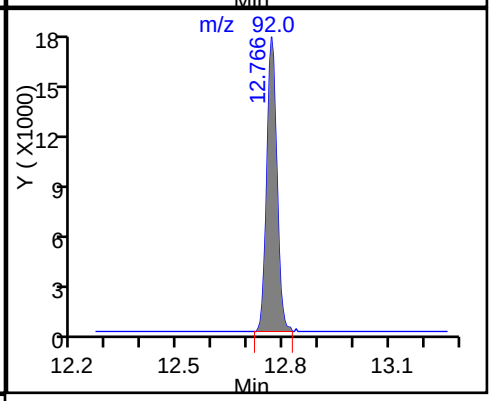
Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p108.D
Injection Date: 15-Mar-2018 23:29:30 Instrument ID: MR
Lims ID: 140-10921-A-5 Lab Sample ID: 140-10921-5
Client ID: BLDG-C MIDGAC
Operator ID: ALS Bottle#: 8 Worklist Smp#: 13
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

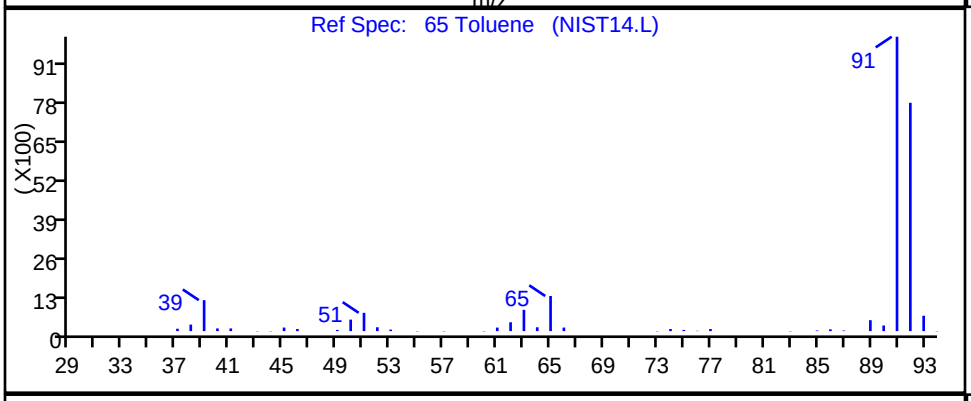
65 Toluene, CAS: 108-88-3

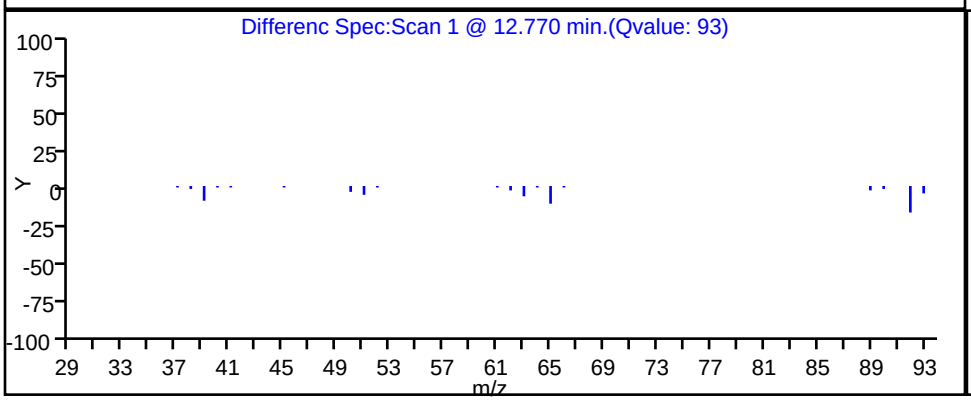


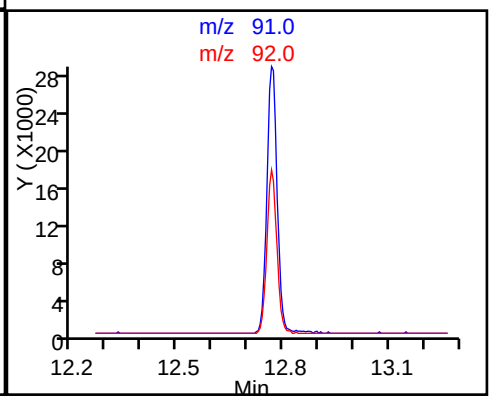






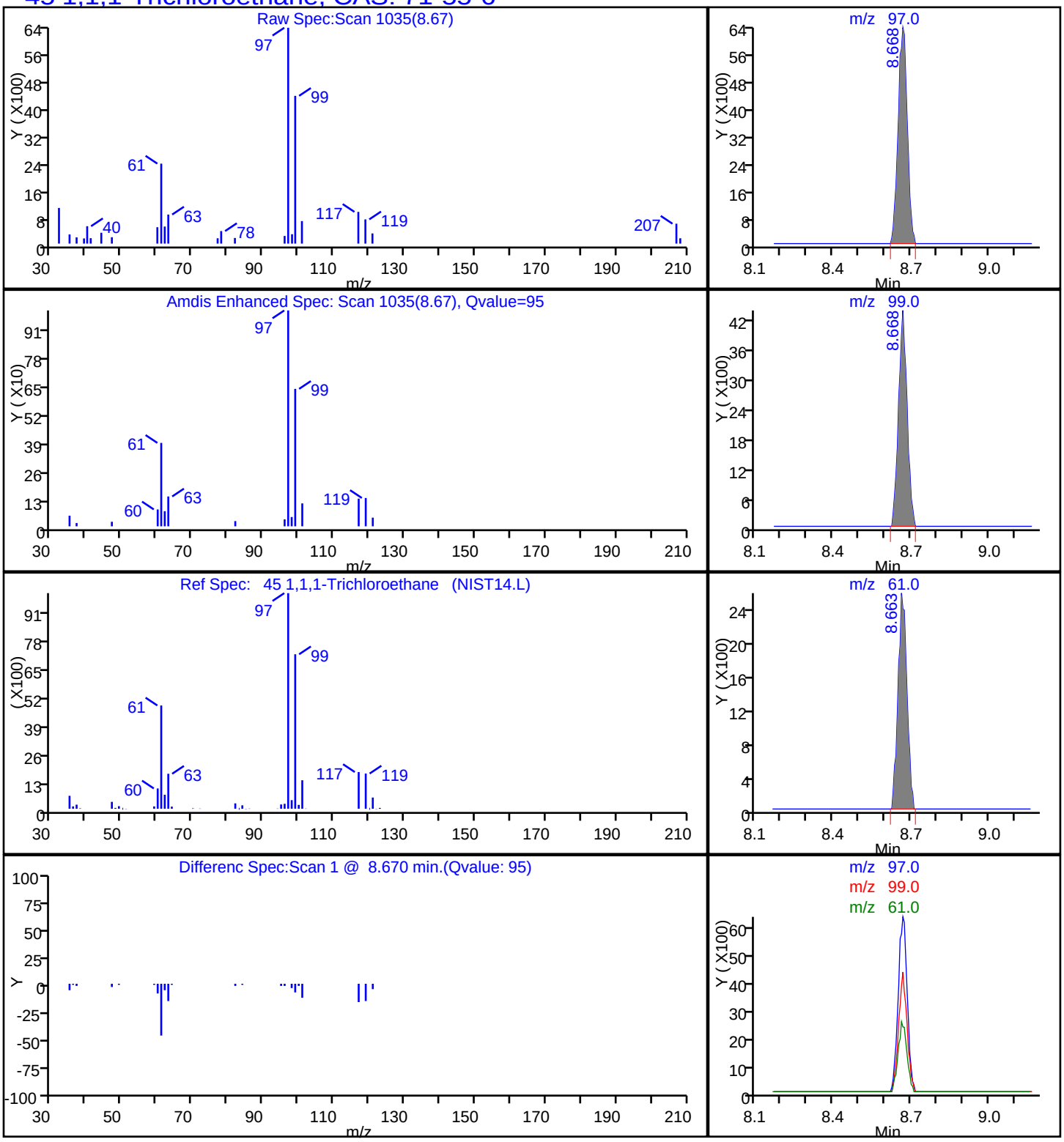






Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p108.D
Injection Date: 15-Mar-2018 23:29:30 Instrument ID: MR
Lims ID: 140-10921-A-5 Lab Sample ID: 140-10921-5
Client ID: BLDG-C MIDGAC
Operator ID: ALS Bottle#: 8 Worklist Smp#: 13
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



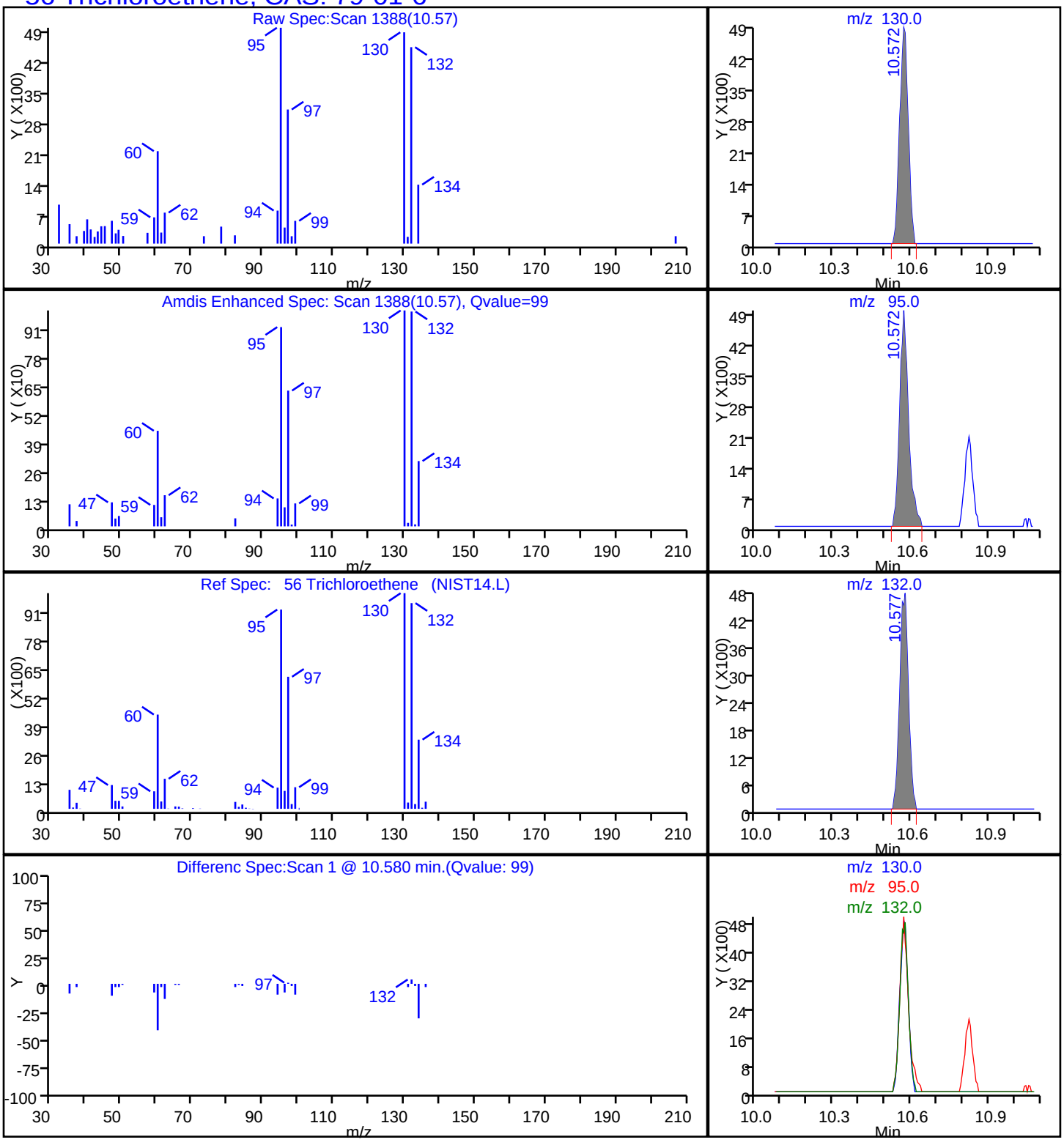
Report Date: 16-Mar-2018 10:42:21 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p108.D

Injection Date:	15-Mar-2018 23:29:30	Instrument ID:	MR
Lims ID:	140-10921-A-5	Lab Sample ID:	140-10921-5
Client ID:	BLDG-C MIDGAC		
Operator ID:		ALS Bottle#:	8 Worklist Smp#: 13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

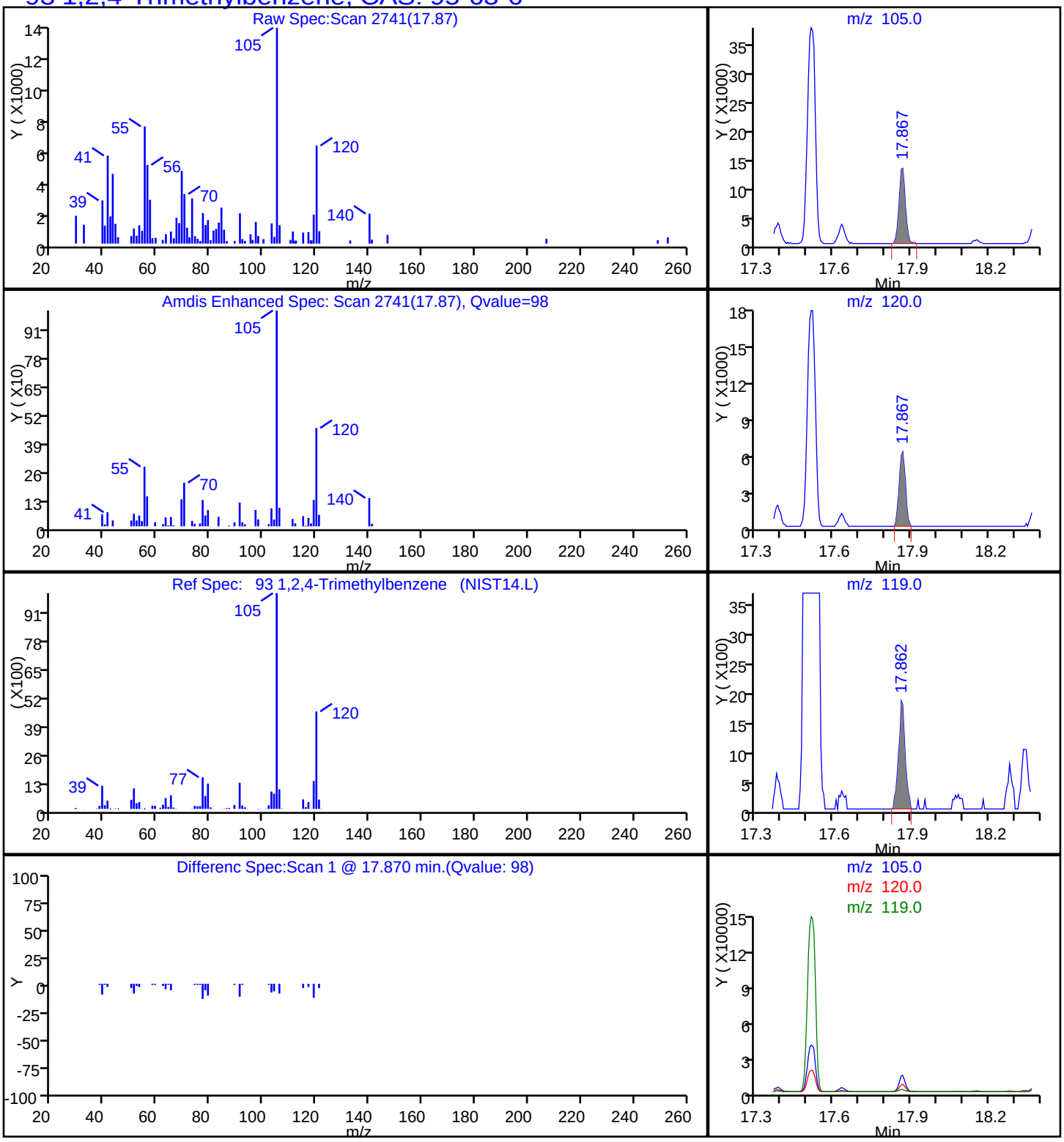
56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p108.D		
Injection Date:	15-Mar-2018 23:29:30	Instrument ID:	MR
Lims ID:	140-10921-A-5	Lab Sample ID:	140-10921-5
Client ID:	BLDG-C MIDGAC		
Operator ID:		ALS Bottle#:	8 Worklist Smp#: 13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

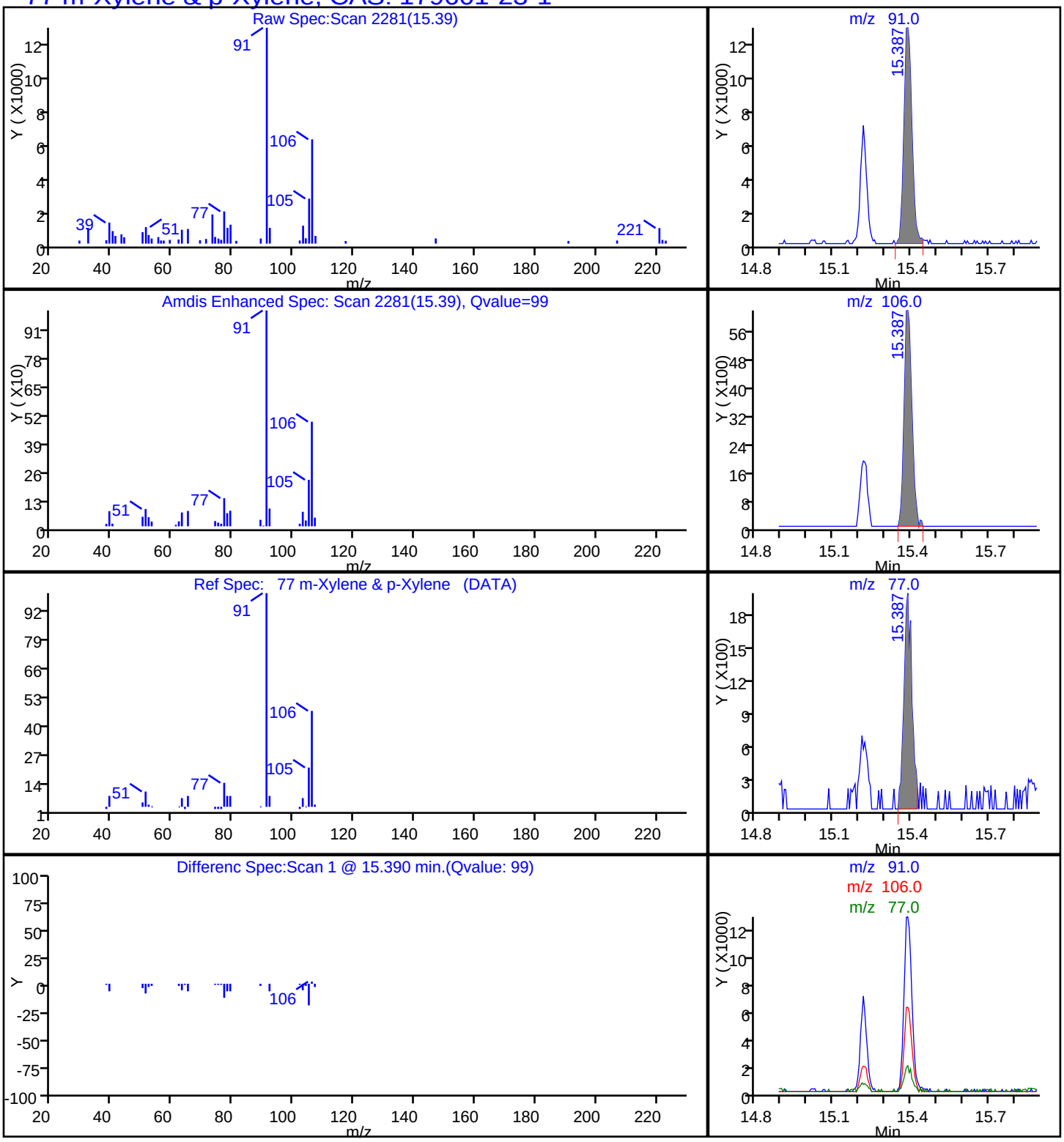
93 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p108.D		
Injection Date:	15-Mar-2018 23:29:30	Instrument ID:	MR
Lims ID:	140-10921-A-5	Lab Sample ID:	140-10921-5
Client ID:	BLDG-C MIDGAC		
Operator ID:		ALS Bottle#:	8 Worklist Smp#: 13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

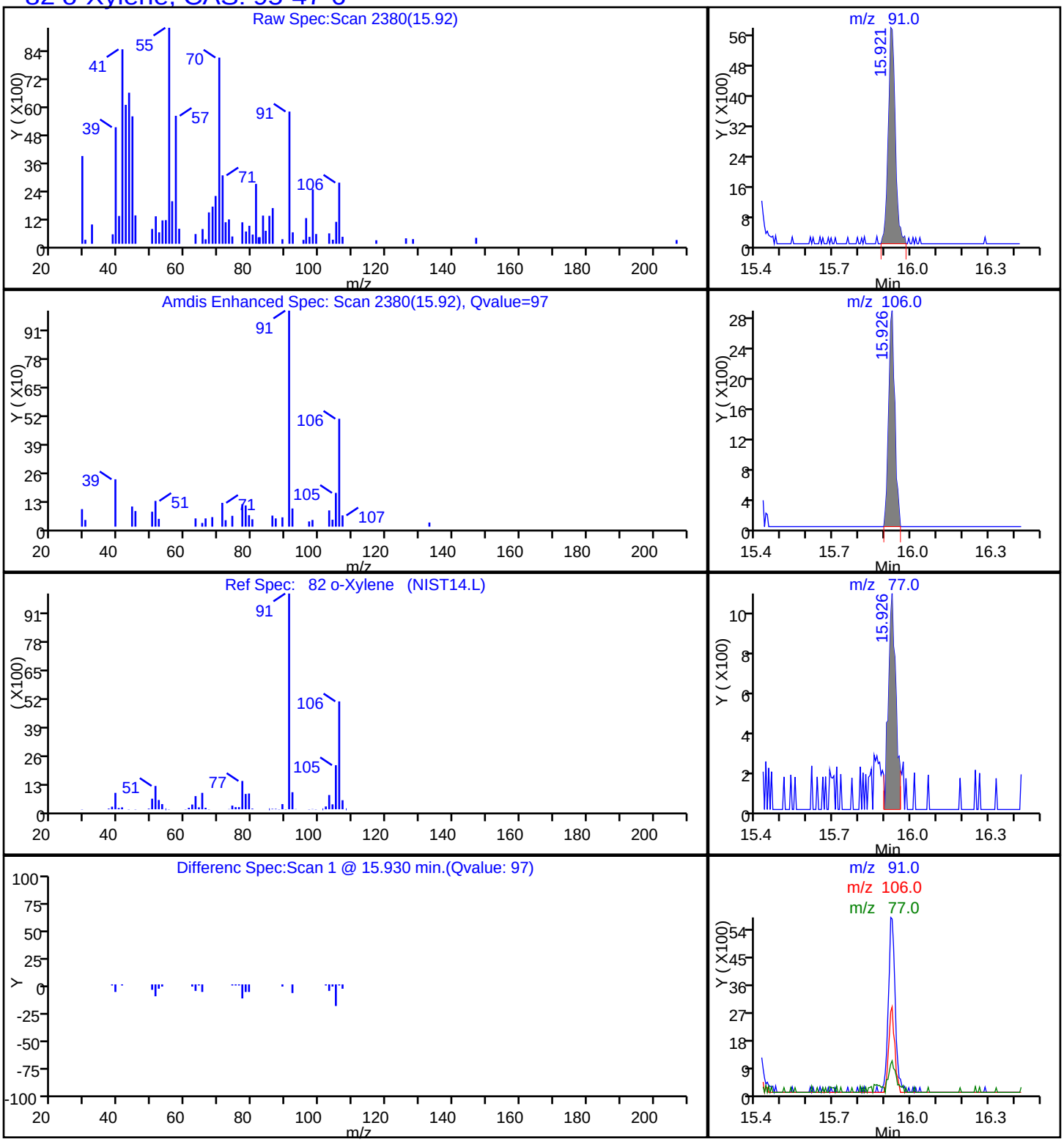
77 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p108.D		
Injection Date:	15-Mar-2018 23:29:30	Instrument ID:	MR
Lims ID:	140-10921-A-5	Lab Sample ID:	140-10921-5
Client ID:	BLDG-C MIDGAC		
Operator ID:		ALS Bottle#:	8 Worklist Smp#: 13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

82 o-Xylene, CAS: 95-47-6



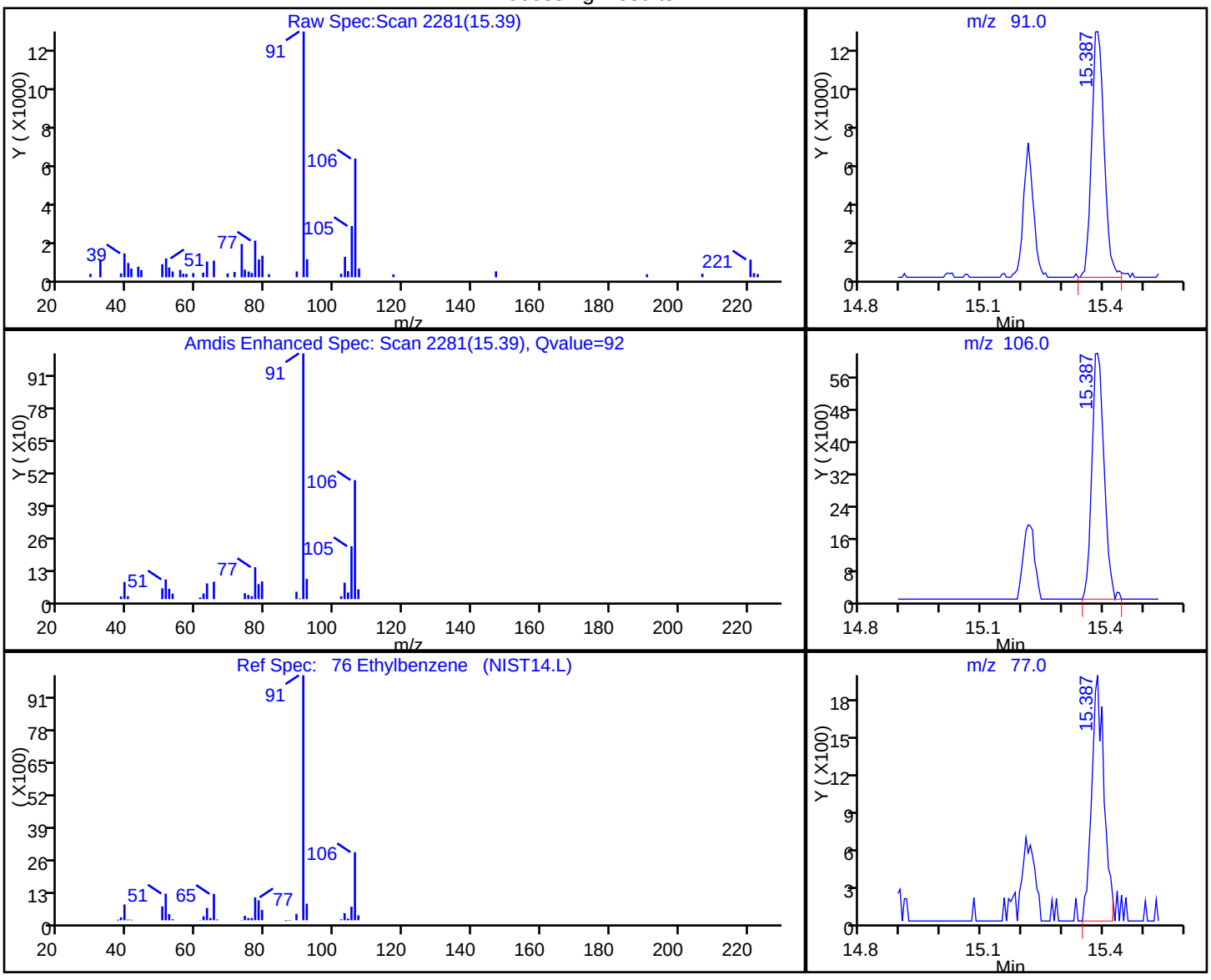
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p108.D				
Injection Date:	15-Mar-2018 23:29:30	Instrument ID:	MR		
Lims ID:	140-10921-A-5	Lab Sample ID:	140-10921-5		
Client ID:	BLDG-C MIDGAC				
Operator ID:		ALS Bottle#:	8	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

76 Ethylbenzene, CAS: 100-41-4

Processing Results



RT	Mass	Response	Amount
15.39	91.00	27496	0.051925
15.39	106.00	12961	
15.39	77.00	4031	

Reviewer: barlozhetskayaa, 16-Mar-2018 10:42:20

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

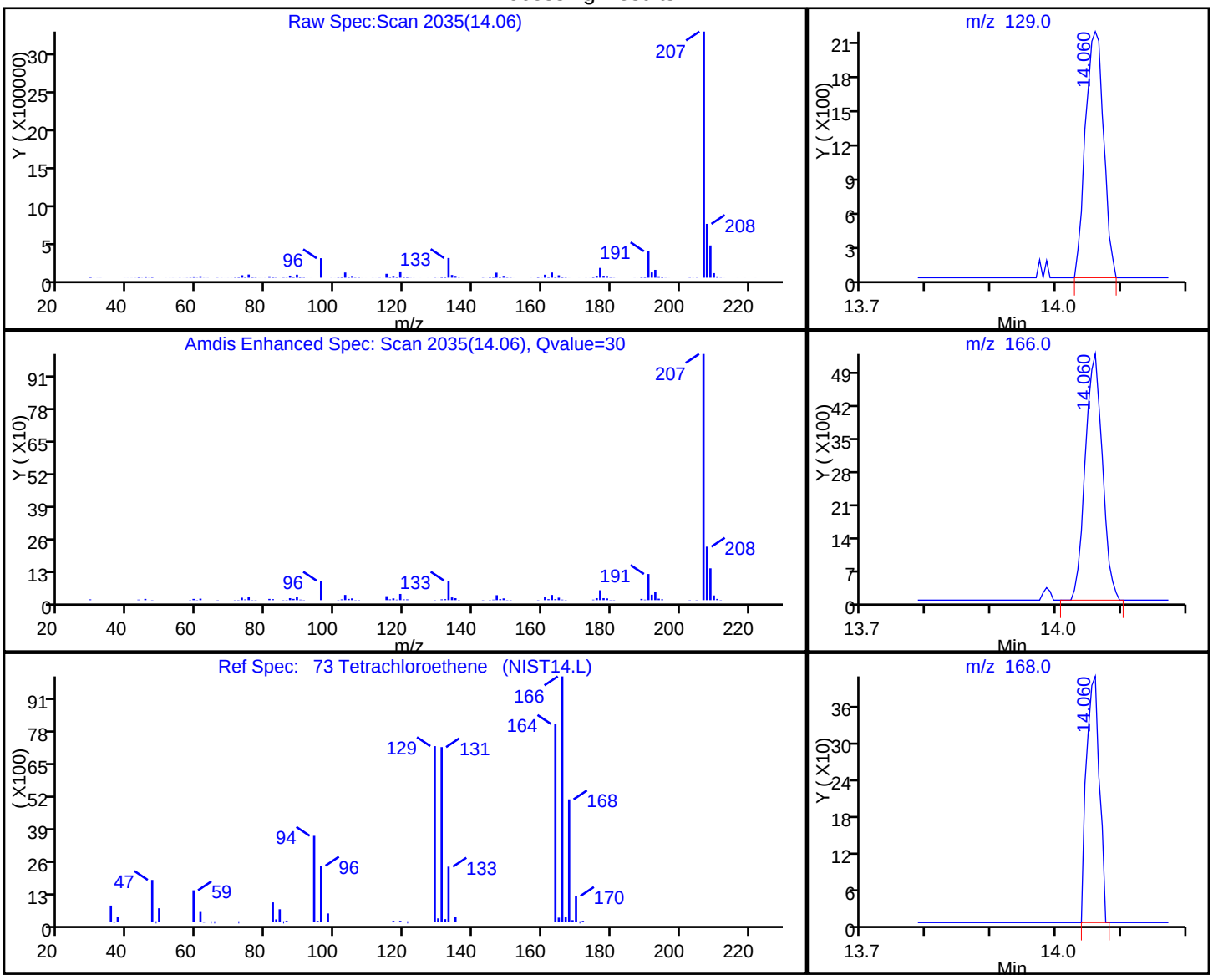
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p108.D				
Injection Date:	15-Mar-2018 23:29:30	Instrument ID:	MR		
Lims ID:	140-10921-A-5	Lab Sample ID:	140-10921-5		
Client ID:	BLDG-C MIDGAC				
Operator ID:		ALS Bottle#:	8	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

73 Tetrachloroethene, CAS: 127-18-4

Processing Results



RT	Mass	Response	Amount
14.06	129.00	4284	0.028406
14.06	166.00	9699	
14.06	168.00	567	

Reviewer: barlozhetskayaa, 16-Mar-2018 10:42:20

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

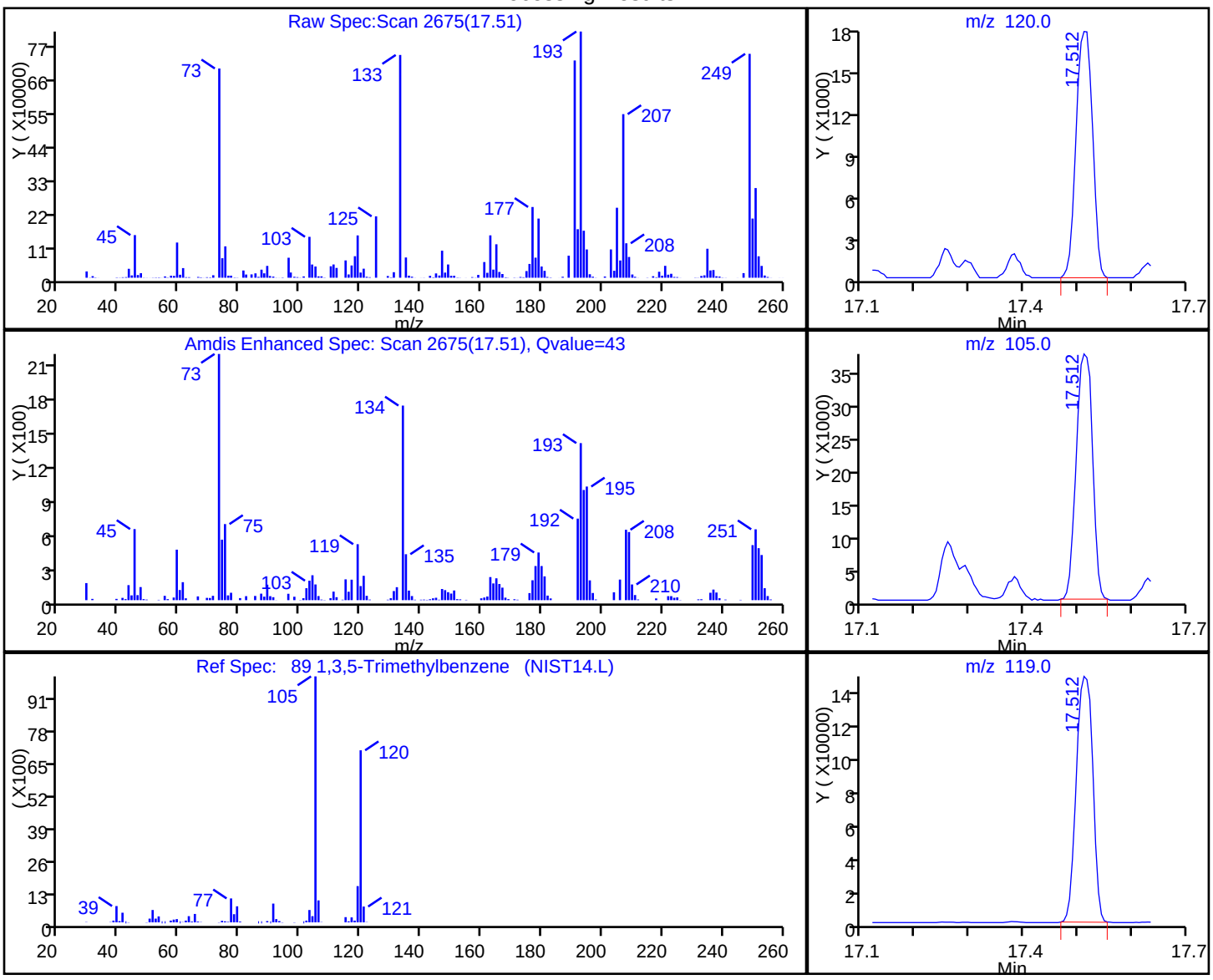
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p108.D		
Injection Date:	15-Mar-2018 23:29:30	Instrument ID:	MR
Lims ID:	140-10921-A-5	Lab Sample ID:	140-10921-5
Client ID:	BLDG-C MIDGAC		
Operator ID:		ALS Bottle#:	8 Worklist Smp#: 13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8

Processing Results



RT	Mass	Response	Amount
17.51	120.00	36636	0.150761
17.51	105.00	78456	
17.51	119.00	300399	

Reviewer: barlozhetskayaa, 16-Mar-2018 10:16:49

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10921-1

SDG No.:

Client Sample ID: BLDG-C INFLUENT | Lab Sample ID: 140-10921-6

Matrix: Air | Lab File ID: RC15p109.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2018 14:52

Sample wt/vol: 100(mL) | Date Analyzed: 03/16/2018 00:17

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18783 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.34	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.090	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.3		0.40	0.075
67-66-3	Chloroform	119.38	0.13	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	1.2		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.16	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.71	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.73		0.40	0.080
108-88-3	Toluene	92.14	0.74		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND	*	0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.080	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	8.8		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.54		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.19	J *	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.75	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10921-1

SDG No.:

Client Sample ID: BLDG-C INFLUENT | Lab Sample ID: 140-10921-6

Matrix: Air | Lab File ID: RC15p109.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2018 14:52

Sample wt/vol: 100(mL) | Date Analyzed: 03/16/2018 00:17

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18783 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.57	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.5		1.4	0.27
67-66-3	Chloroform	119.38	0.63	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	4.9		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.70	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.5	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	5.0		2.7	0.54
108-88-3	Toluene	92.14	2.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND	*	3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.44	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	47		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	2.6		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.96	J *	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p109.D
Lims ID: 140-10921-A-6
Client ID: BLDG-C INFLUENT
Sample Type: Client
Inject. Date: 16-Mar-2018 00:17:30 ALS Bottle#: 9 Worklist Smp#: 14
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007635-014
Misc. Info.: 140-10921-A-6
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 16-Mar-2018 10:42:20 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa Date: 16-Mar-2018 10:42:44

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.676	7.670	0.006	75	296614	4.00	
* 2 1,4-Difluorobenzene	114	9.811	9.816	-0.005	94	1758319	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.837	14.837	0.000	87	1471095	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.546	16.546	0.000	93	1137041	4.08	
6 Chlorodifluoromethane	67	3.459	3.440	0.022	95	9281	0.2565	
8 Dichlorodifluoromethane	85	3.507	3.494	0.016	99	22603	0.0812	
31 Methylene Chloride	84	5.470	5.459	0.011	86	16579	0.1429	
41 cis-1,2-Dichloroethene	96	7.390	7.390	0.006	92	30378	0.2487	
43 Chloroform	83	7.708	7.714	0.000	90	7060	0.0257	
45 1,1,1-Trichloroethane	97	8.668	8.669	0.006	91	4619	0.0160	
47 Benzene	78	9.240	9.229	0.006	52	22585	0.0672	
50 Carbon tetrachloride	117	9.272	9.277	-0.005	93	4879	0.0180	
56 Trichloroethene	130	10.571	10.566	0.000	99	279441	1.76	
65 Toluene	91	12.766	12.766	0.000	94	60011	0.1481	
73 Tetrachloroethene	129	13.979	13.979	0.000	97	22101	0.1463	
76 Ethylbenzene	91	15.214	15.214	0.000	98	17166	0.0324	
77 m-Xylene & p-Xylene	91	15.381	15.381	-0.006	99	43589	0.1060	
82 o-Xylene	91	15.921	15.915	0.000	96	19234	0.0443	
89 1,3,5-Trimethylbenzene	120	17.382	17.377	0.006	92	9460	0.0389	
93 1,2,4-Trimethylbenzene	105	17.862	17.862	0.000	98	54502	0.1074	
S 119 Xylenes, Total	100				0		0.1503	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

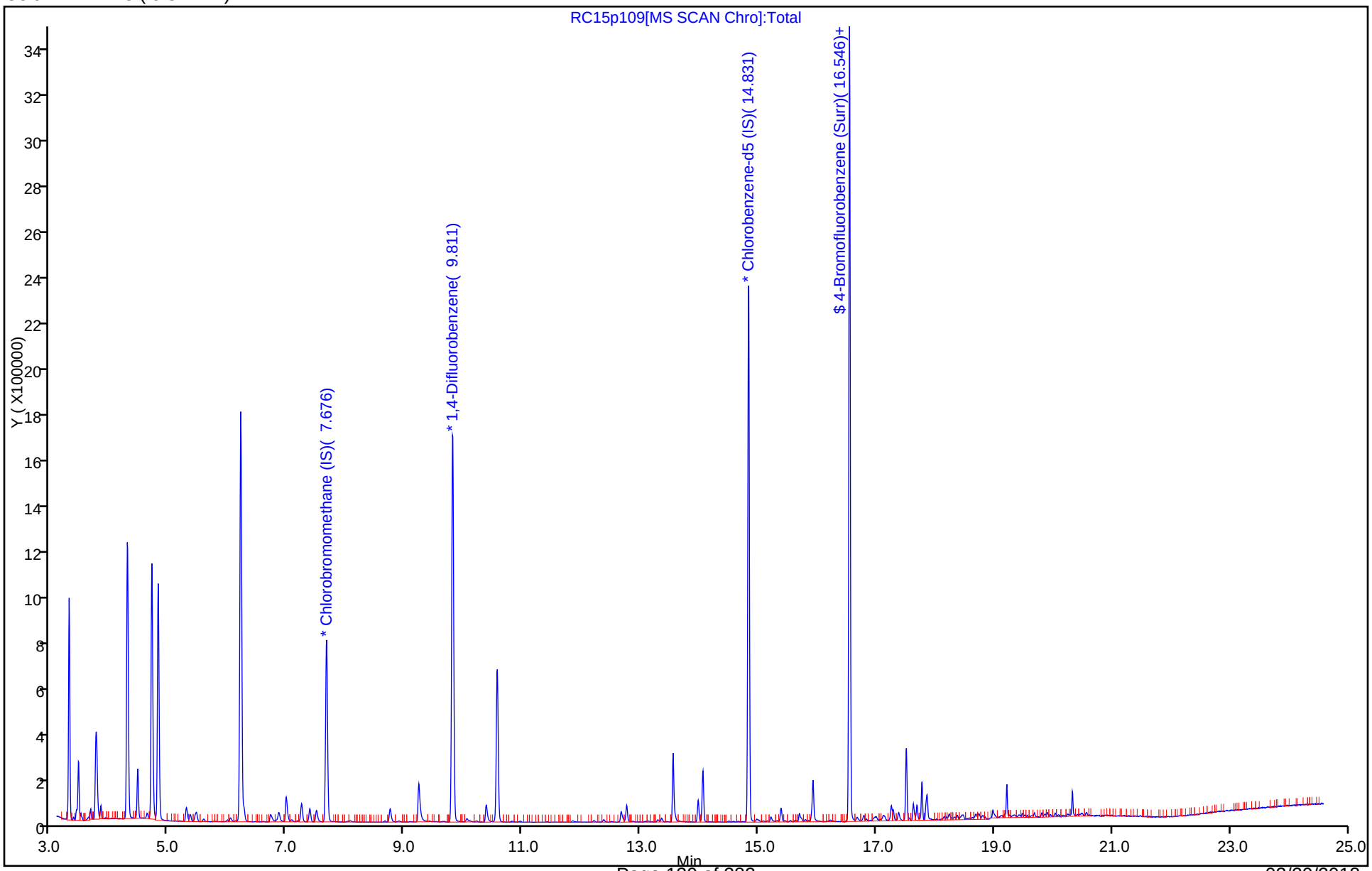
Report Date: 16-Mar-2018 10:42:45 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p109.D

Injection Date:	16-Mar-2018 00:17:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10921-A-6	Lab Sample ID:	140-10921-6	Worklist Smp#:	14
Client ID:	BLDG-C INFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

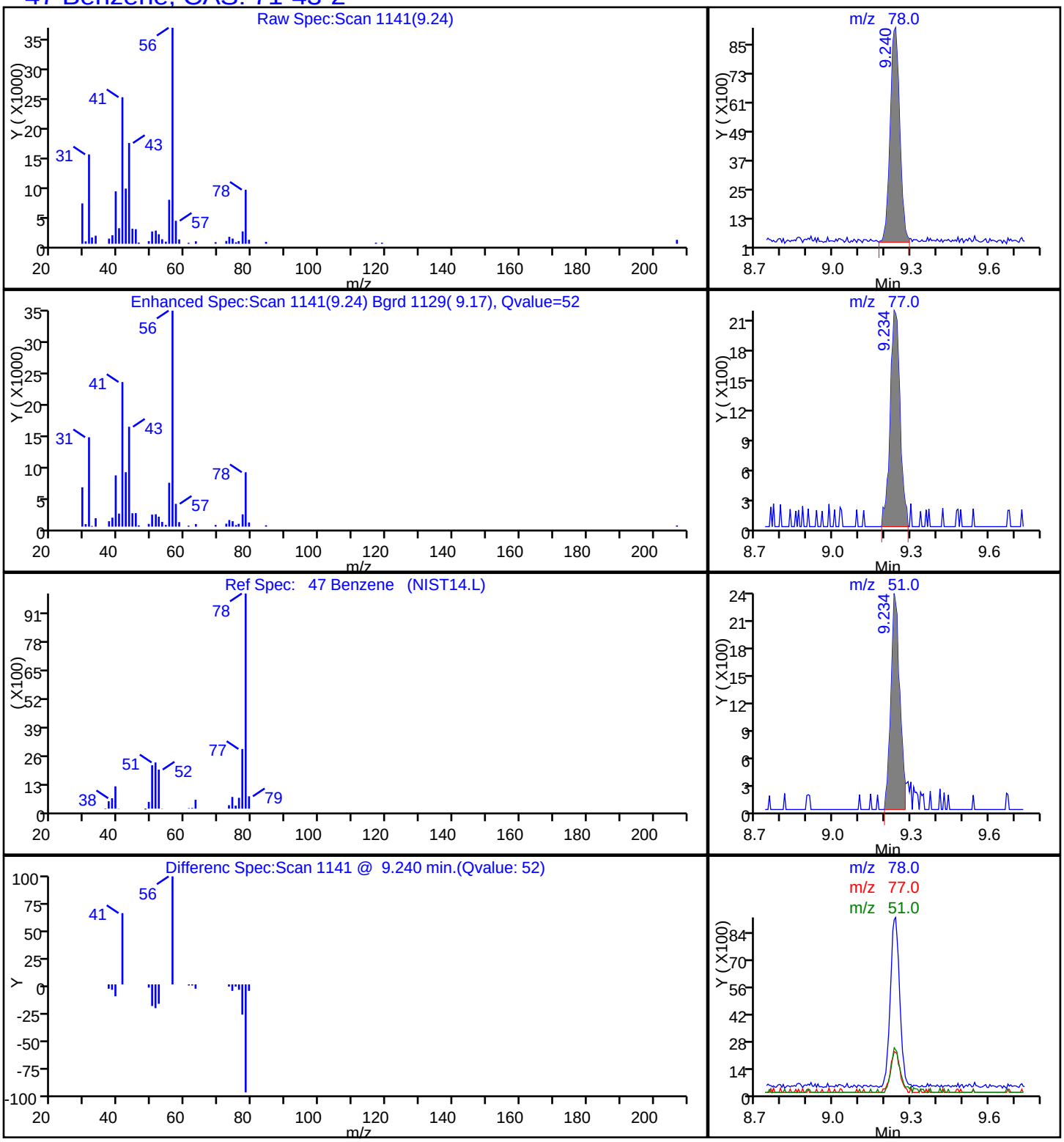
Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p109.D				
Lims ID:	140-10921-A-6				
Client ID:	BLDG-C INFLUENT				
Sample Type:	Client				
Inject. Date:	16-Mar-2018 00:17:30	ALS Bottle#:	9	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007635-014				
Misc. Info.:	140-10921-A-6				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	16-Mar-2018 10:42:20	Calib Date:	30-Jan-2018 19:38:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK031				
First Level Reviewer: barlozhetskayaa		Date:	16-Mar-2018 10:42:44		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.08	101.92

TestAmerica Knoxville

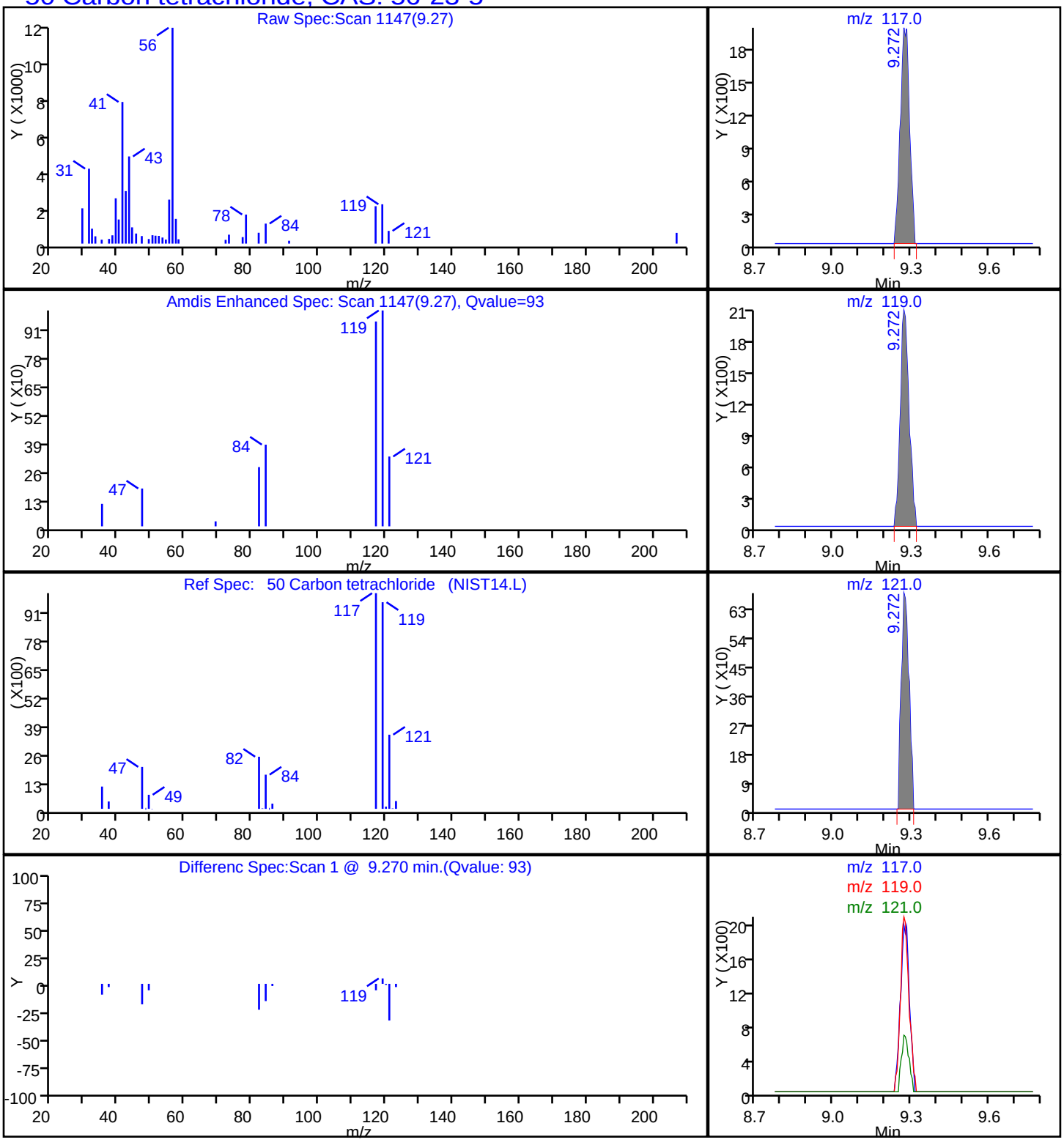
Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p109.D		
Injection Date:	16-Mar-2018 00:17:30	Instrument ID:	MR
Lims ID:	140-10921-A-6	Lab Sample ID:	140-10921-6
Client ID:	BLDG-C INFLUENT		
Operator ID:		ALS Bottle#:	9 Worklist Smp#: 14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

47 Benzene, CAS: 71-43-2



Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p109.D
Injection Date: 16-Mar-2018 00:17:30 Instrument ID: MR
Lims ID: 140-10921-A-6 Lab Sample ID: 140-10921-6
Client ID: BLDG-C INFLUENT
Operator ID: ALS Bottle#: 9 Worklist Smp#: 14
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

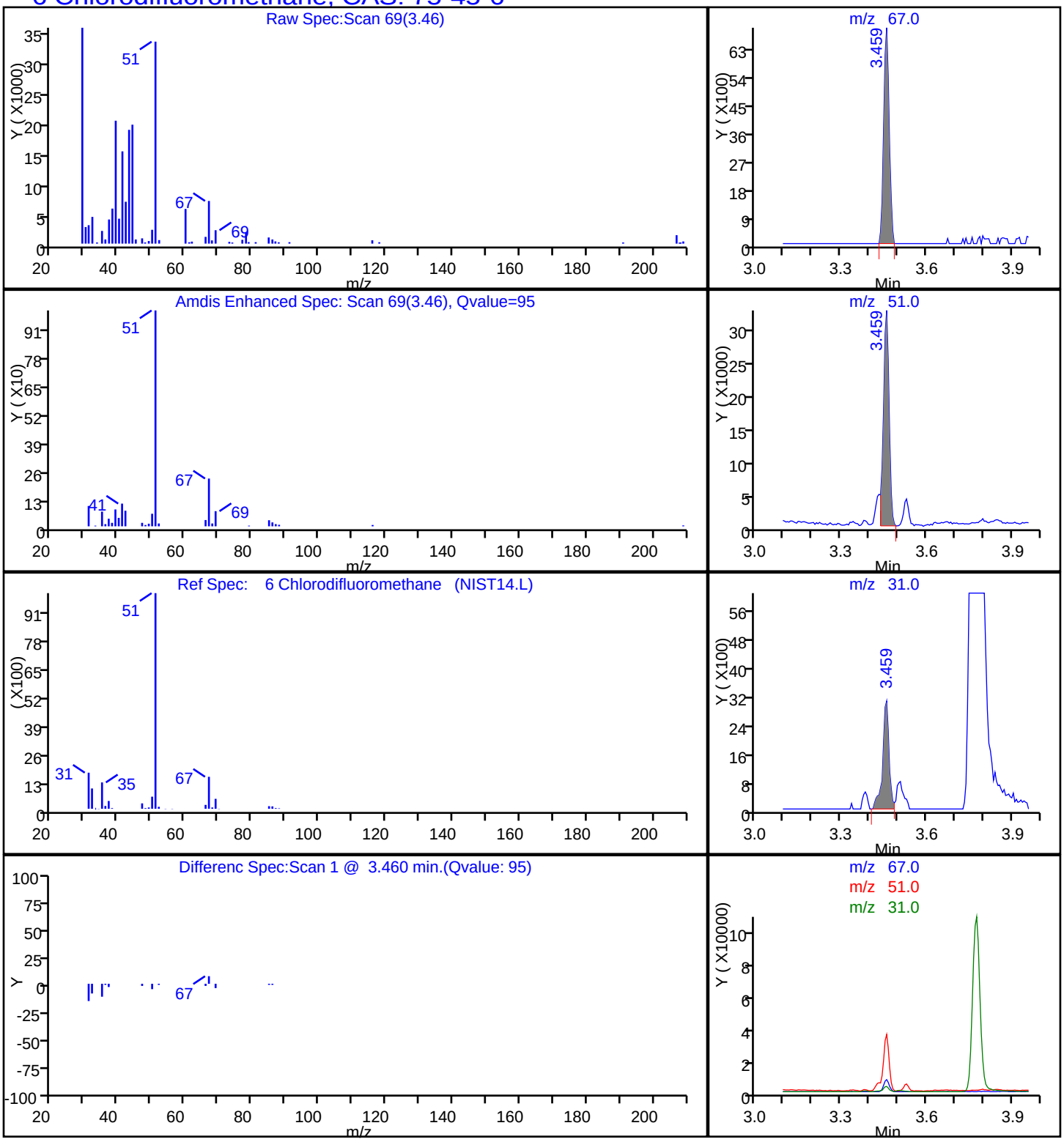
50 Carbon tetrachloride, CAS: 56-23-5



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p109.D				
Injection Date:	16-Mar-2018 00:17:30	Instrument ID:	MR		
Lims ID:	140-10921-A-6	Lab Sample ID:	140-10921-6		
Client ID:	BLDG-C INFLUENT				
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

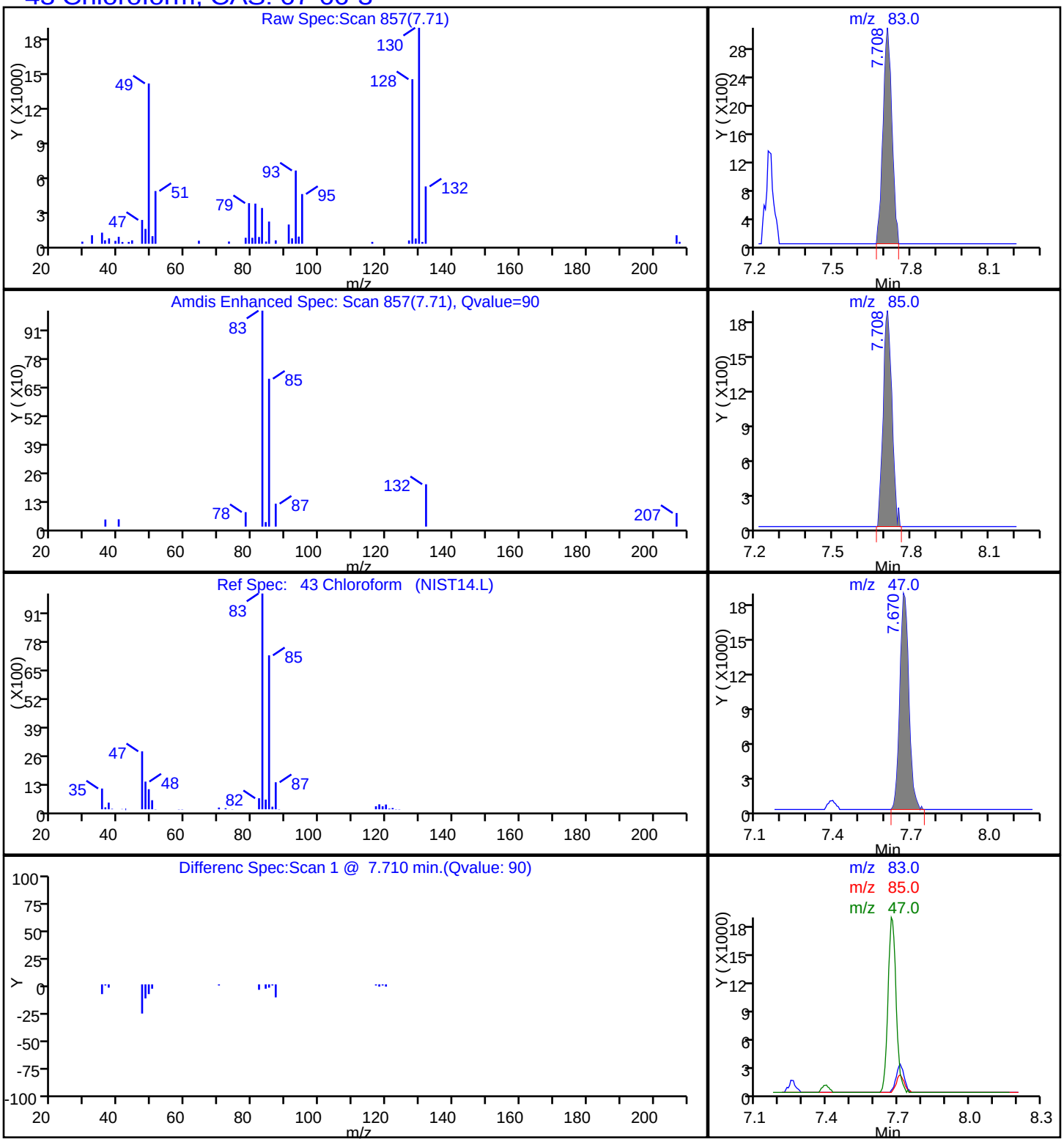
6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p109.D		
Injection Date:	16-Mar-2018 00:17:30	Instrument ID:	MR
Lims ID:	140-10921-A-6	Lab Sample ID:	140-10921-6
Client ID:	BLDG-C INFLUENT		
Operator ID:		ALS Bottle#:	9 Worklist Smp#: 14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

43 Chloroform, CAS: 67-66-3



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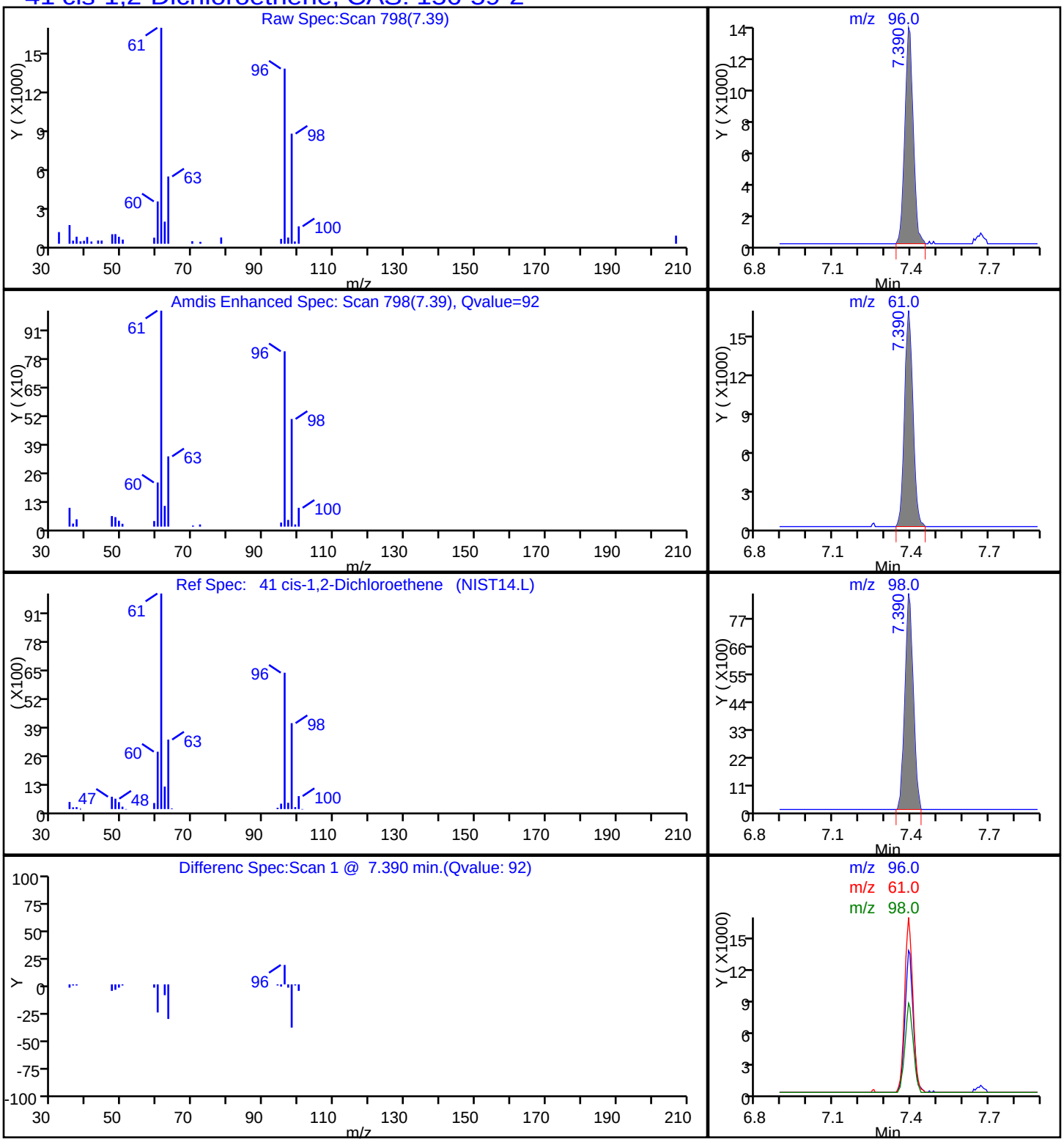
Injection Date: 16-Mar-2018 00:17:30 Instrument ID: MR
Lims ID: 140-10921-A-6 Lab Sample ID: 140-10921-6
Client ID: BLDG-C INFLUENT
Operator ID: ALS Bottle#: 9 Worklist Smp#: 14
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



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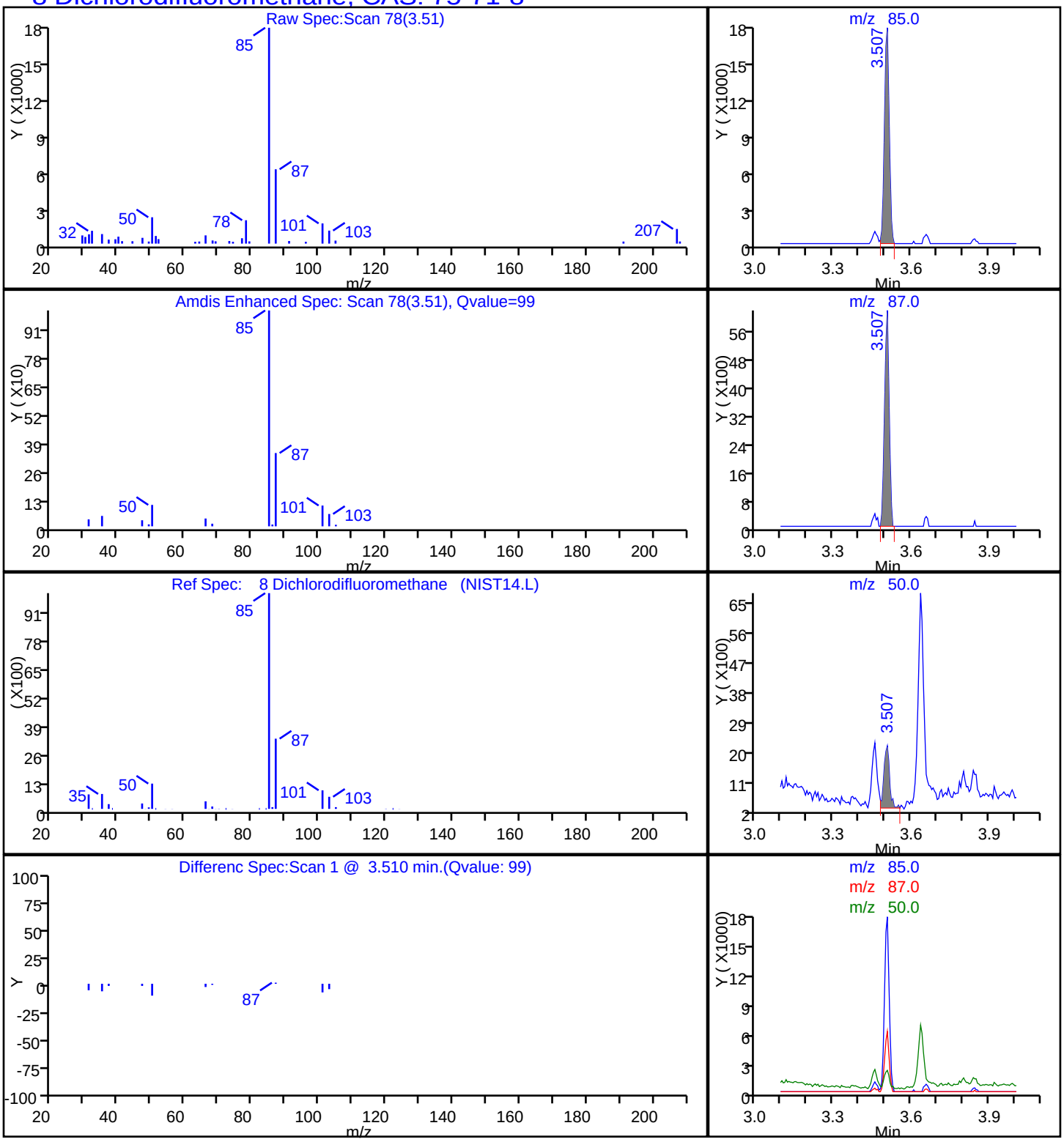
Injection Date: 16-Mar-2018 00:17:30 Instrument ID: MR
Lims ID: 140-10921-A-6 Lab Sample ID: 140-10921-6
Client ID: BLDG-C INFLUENT
Operator ID: ALS Bottle#: 9 Worklist Smp#: 14
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

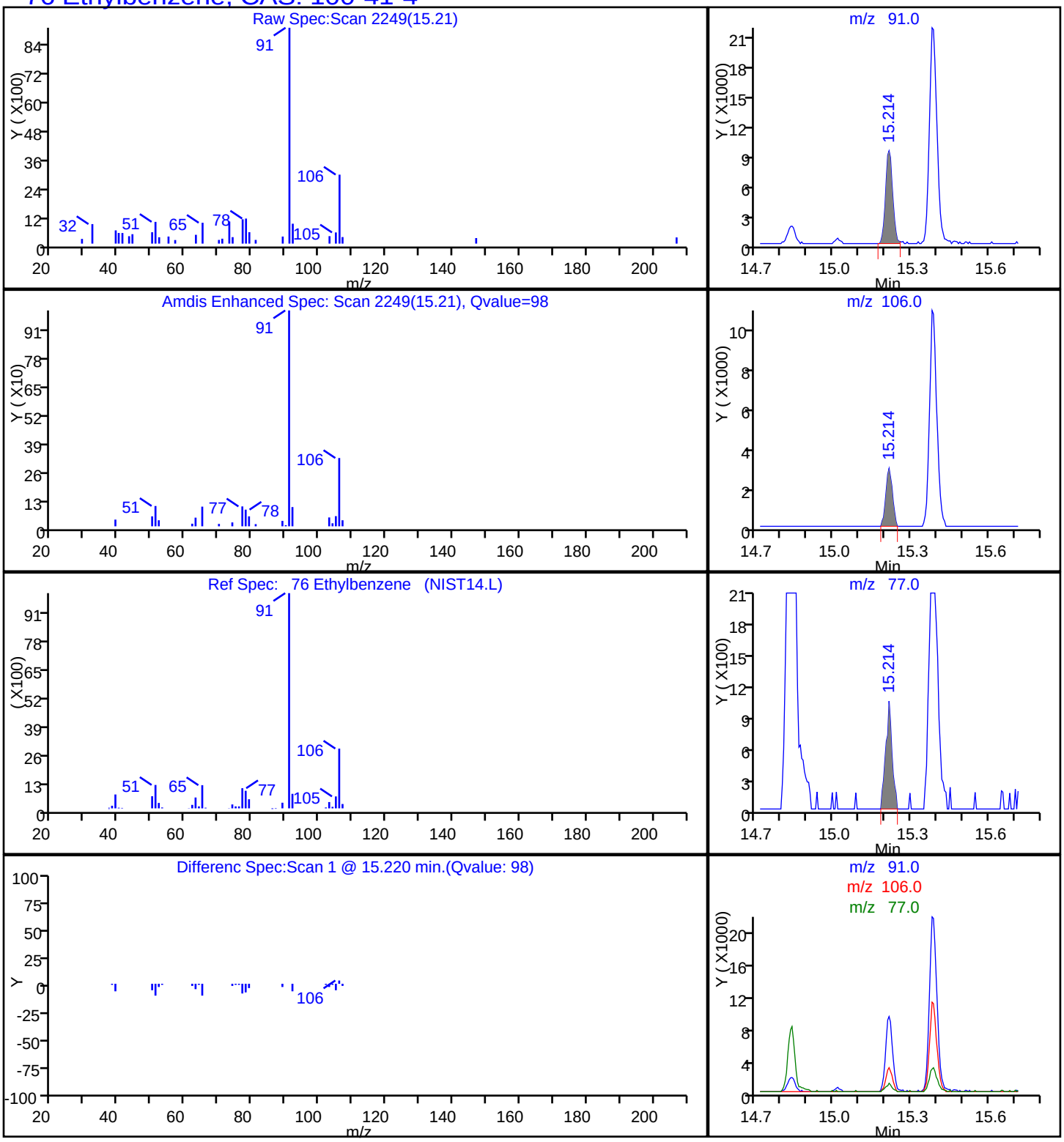
8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p109.D		
Injection Date:	16-Mar-2018 00:17:30	Instrument ID:	MR
Lims ID:	140-10921-A-6	Lab Sample ID:	140-10921-6
Client ID:	BLDG-C INFLUENT		
Operator ID:		ALS Bottle#:	9 Worklist Smp#: 14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

76 Ethylbenzene, CAS: 100-41-4



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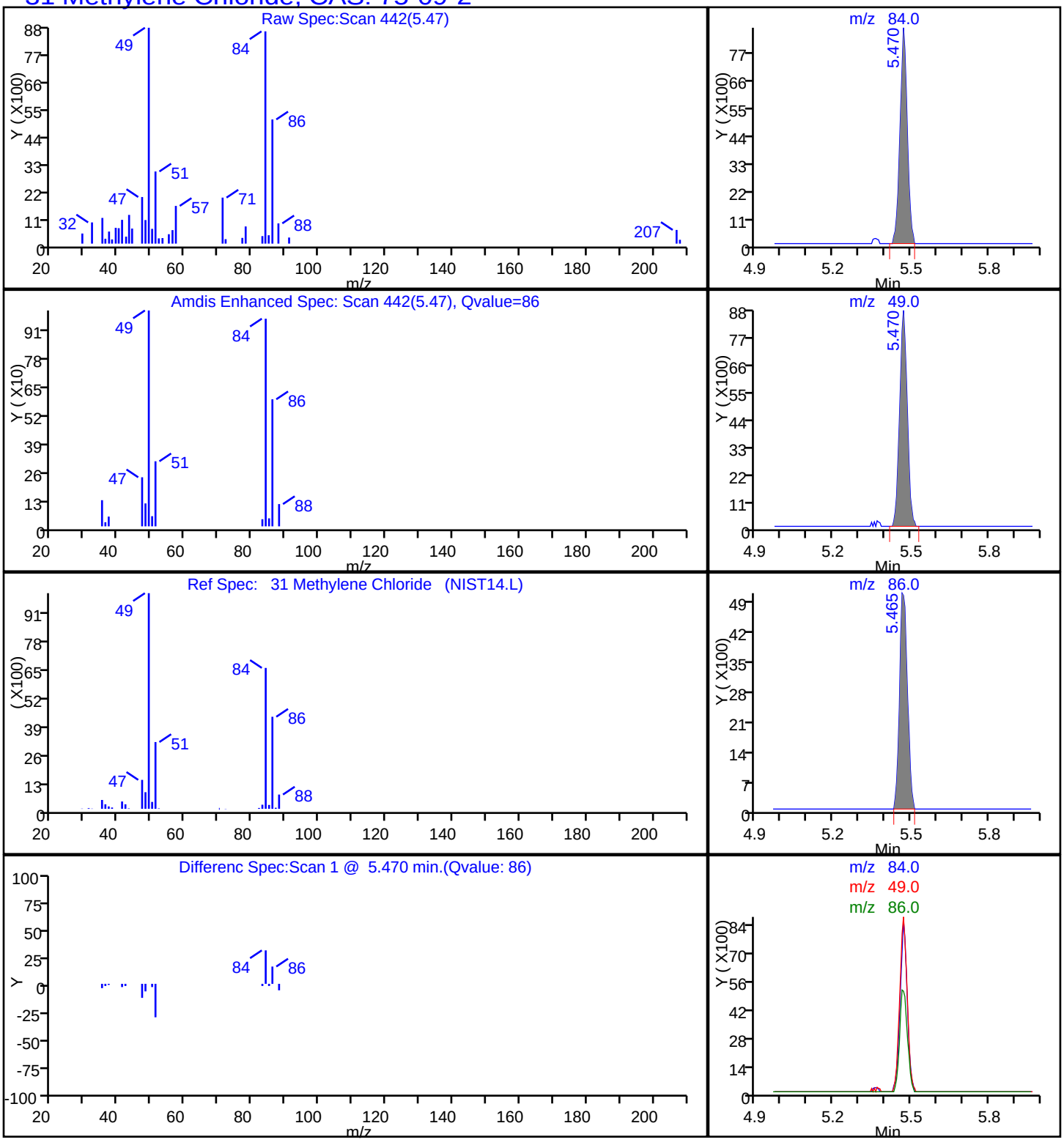
Lims ID:	140-10921-A-6	Lab Sample ID:	140-10921-6
Client ID:	BLDG-C INFLUENT		
Operator ID:		ALS Bottle#:	9 Worklist Smp#: 14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

31 Methylene Chloride, CAS: 75-09-2



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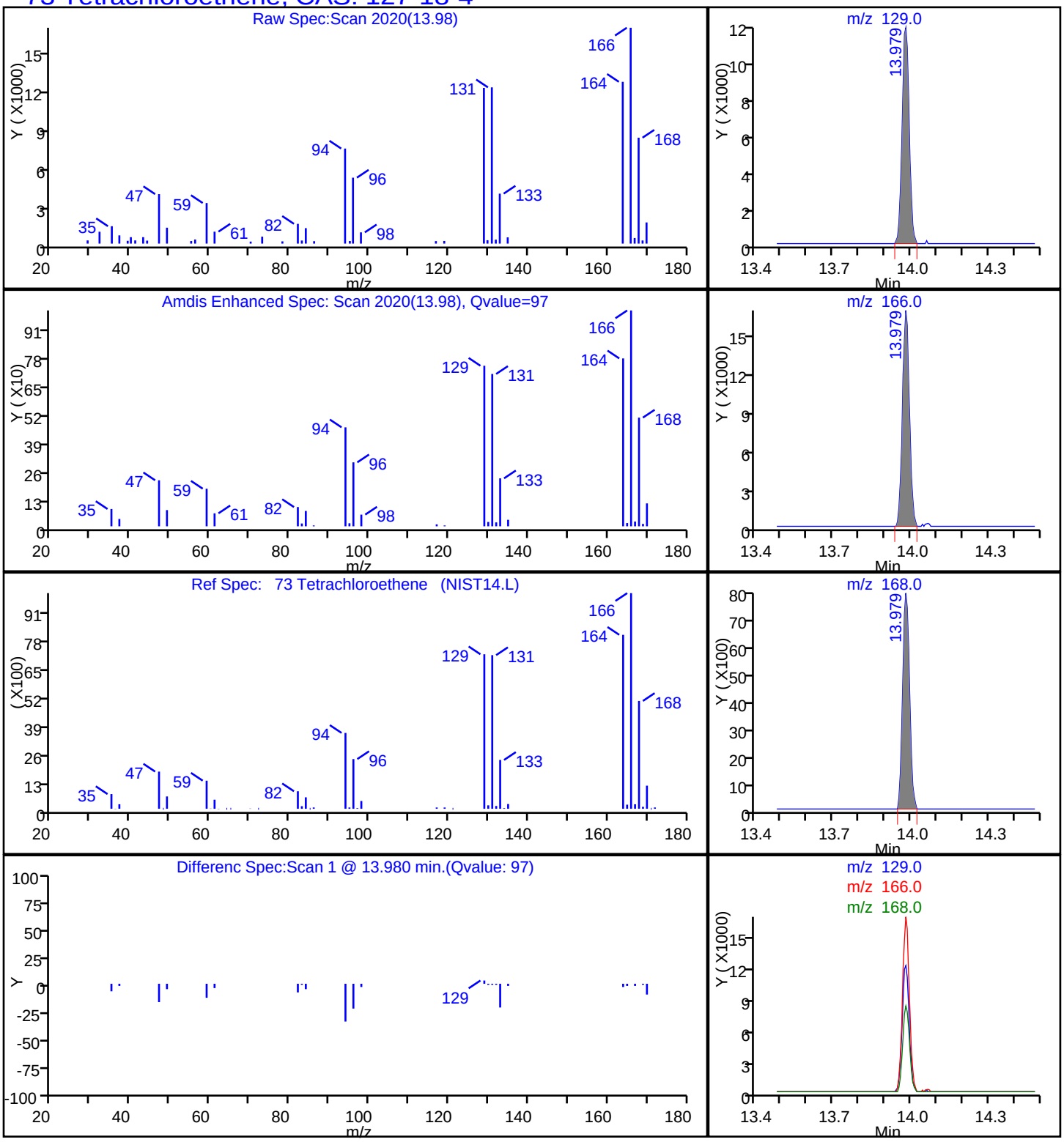
Lims ID: 140-10921-A-6 Lab Sample ID: 140-10921-6
Client ID: BLDG-C INFLUENT
Operator ID: ALS Bottle#: 9 Worklist Smp#: 14
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

73 Tetrachloroethene, CAS: 127-18-4

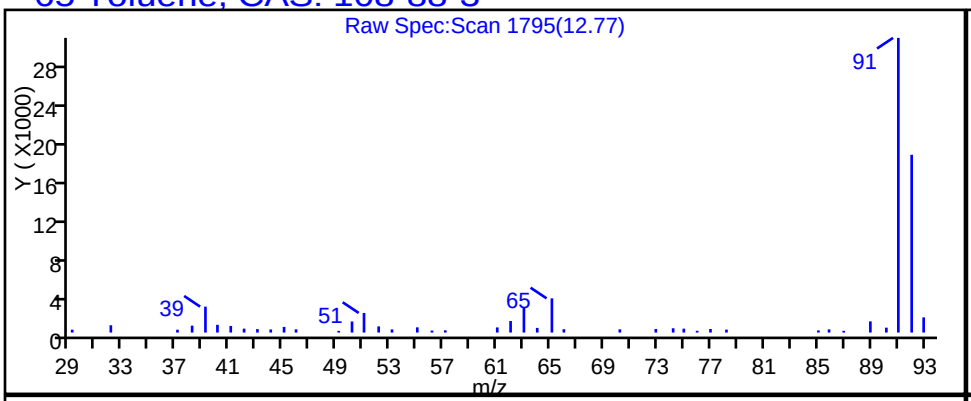


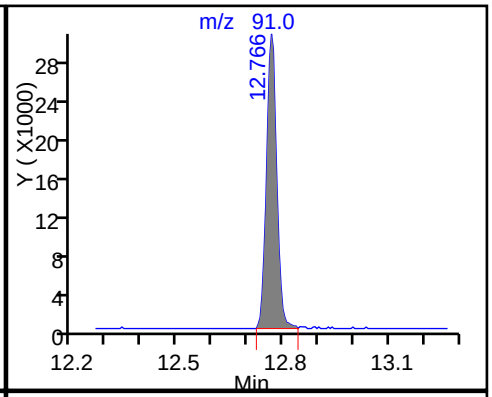
TestAmerica Knoxville

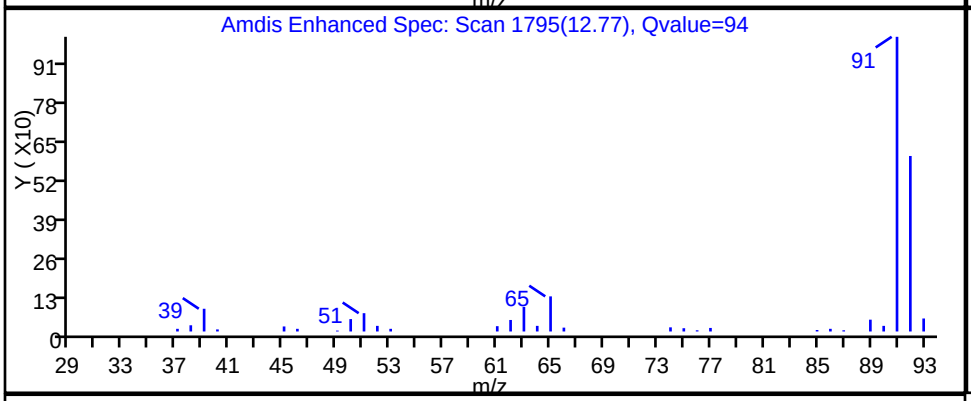
Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p109.D

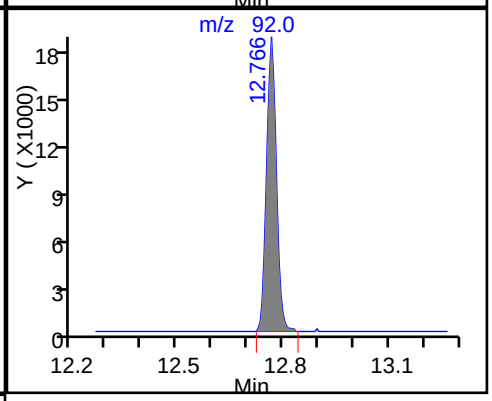
Injection Date:	16-Mar-2018 00:17:30	Instrument ID:	MR
Lims ID:	140-10921-A-6	Lab Sample ID:	140-10921-6
Client ID:	BLDG-C INFLUENT		
Operator ID:		ALS Bottle#:	9 Worklist Smp#: 14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

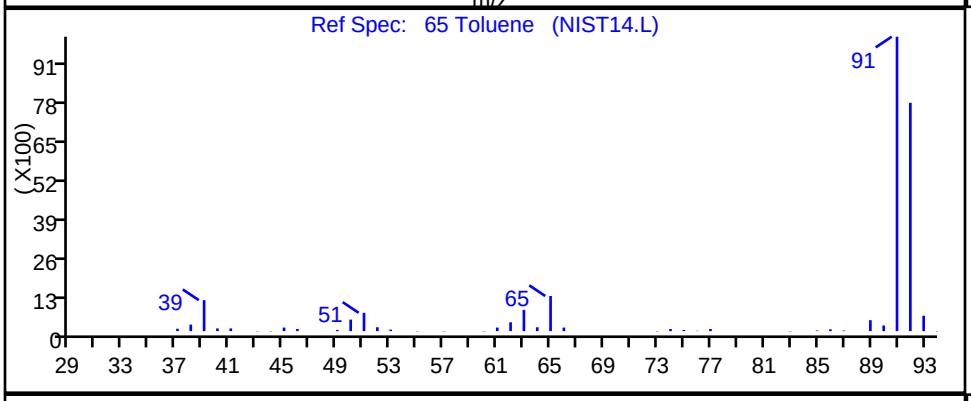
65 Toluene, CAS: 108-88-3

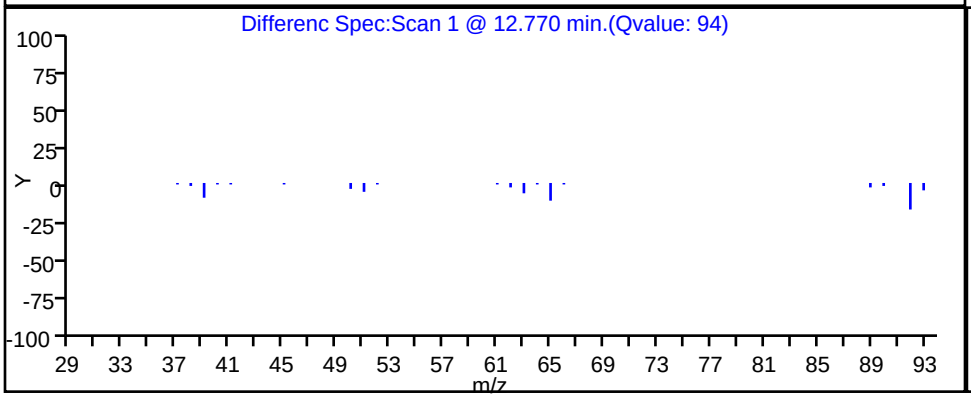


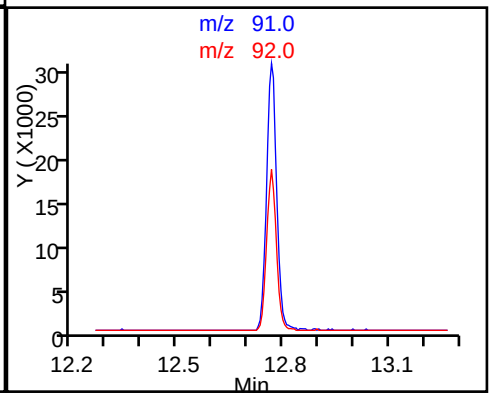












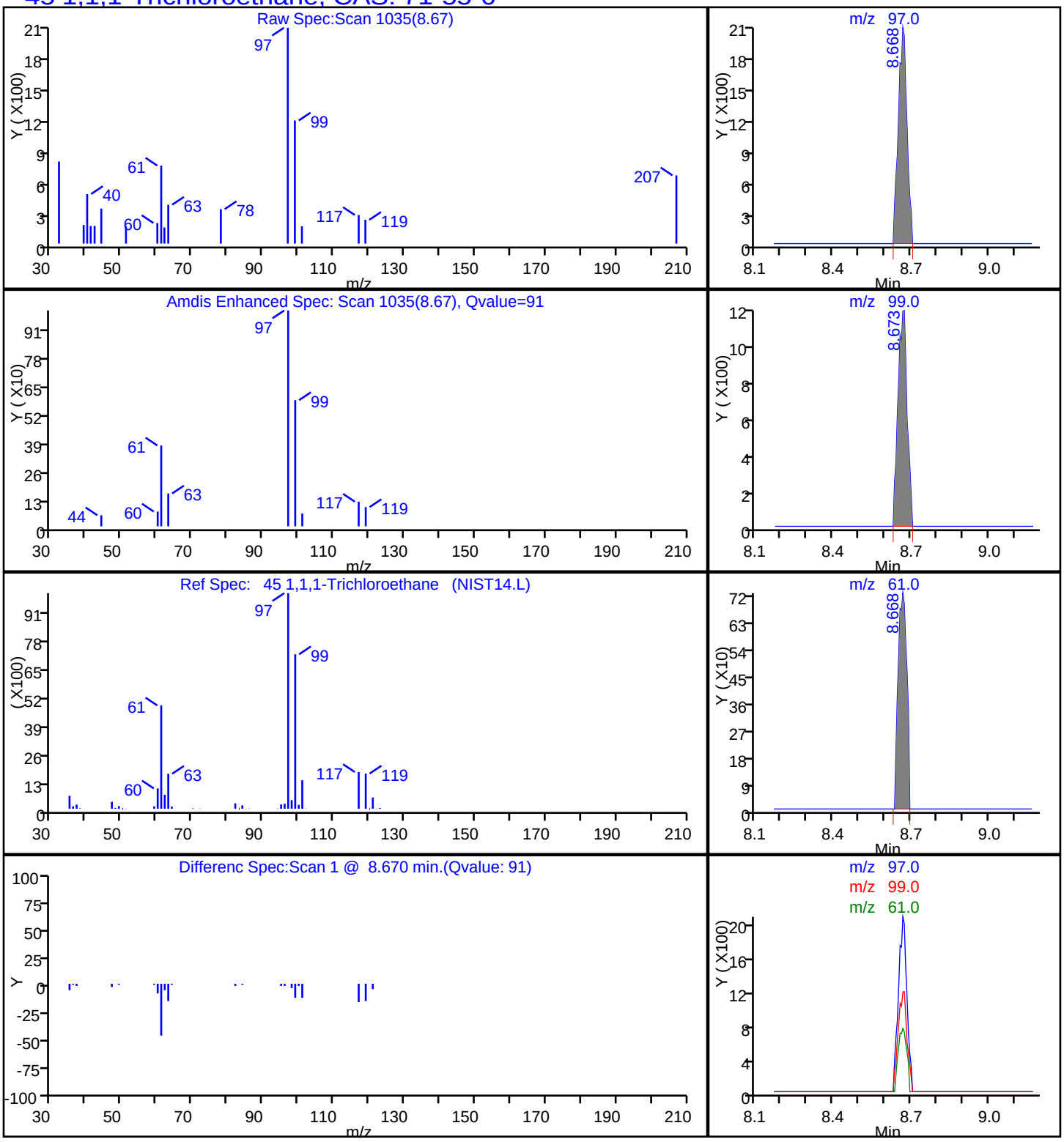
Report Date: 16-Mar-2018 10:42:45 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p109.D

Injection Date:	16-Mar-2018 00:17:30	Instrument ID:	MR		
Lims ID:	140-10921-A-6	Lab Sample ID:	140-10921-6		
Client ID:	BLDG-C INFLUENT				
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

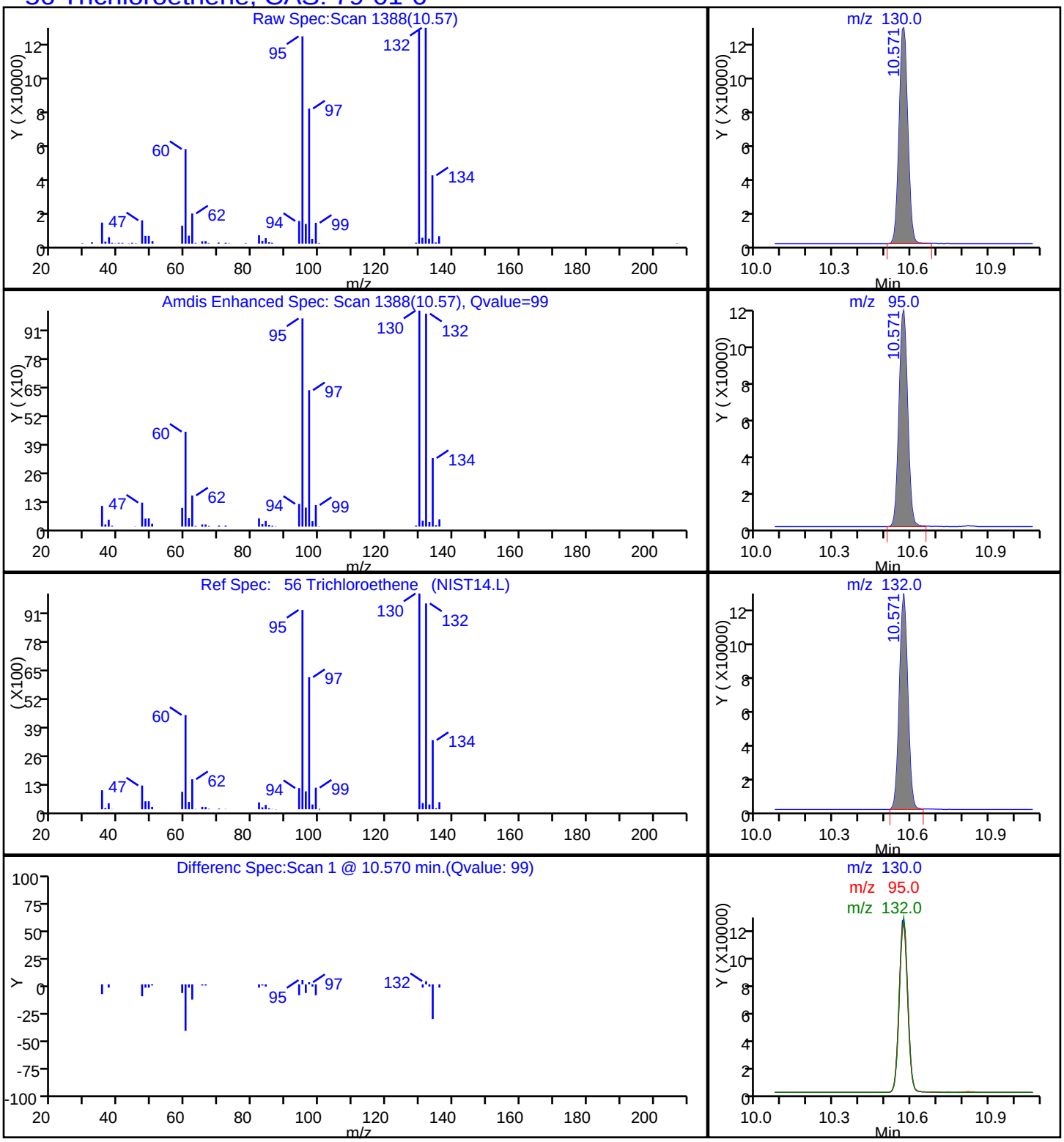
45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p109.D		
Injection Date:	16-Mar-2018 00:17:30	Instrument ID:	MR
Lims ID:	140-10921-A-6	Lab Sample ID:	140-10921-6
Client ID:	BLDG-C INFLUENT		
Operator ID:		ALS Bottle#:	9 Worklist Smp#: 14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

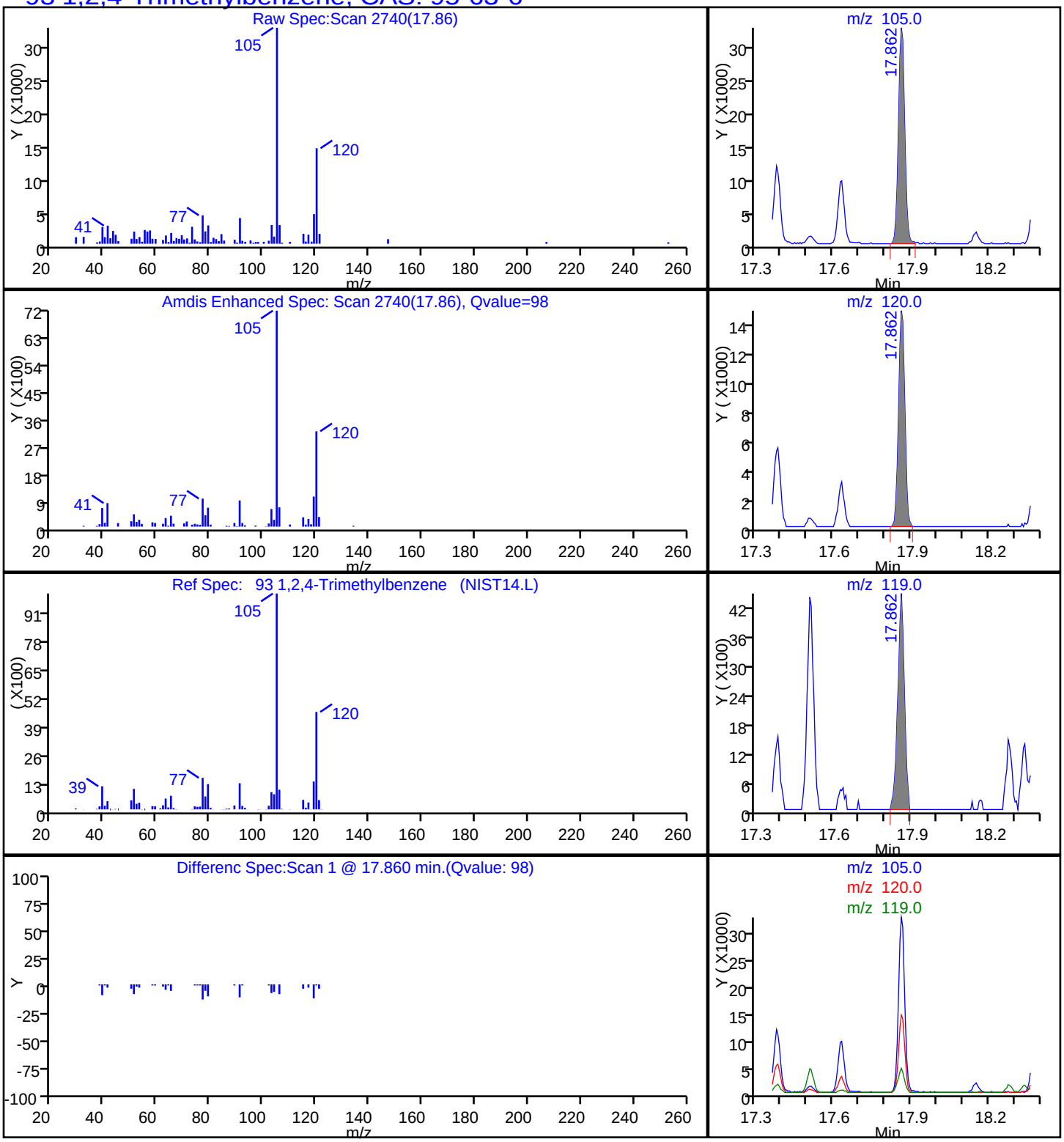
56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p109.D		
Injection Date:	16-Mar-2018 00:17:30	Instrument ID:	MR
Lims ID:	140-10921-A-6	Lab Sample ID:	140-10921-6
Client ID:	BLDG-C INFLUENT		
Operator ID:		ALS Bottle#:	9 Worklist Smp#: 14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

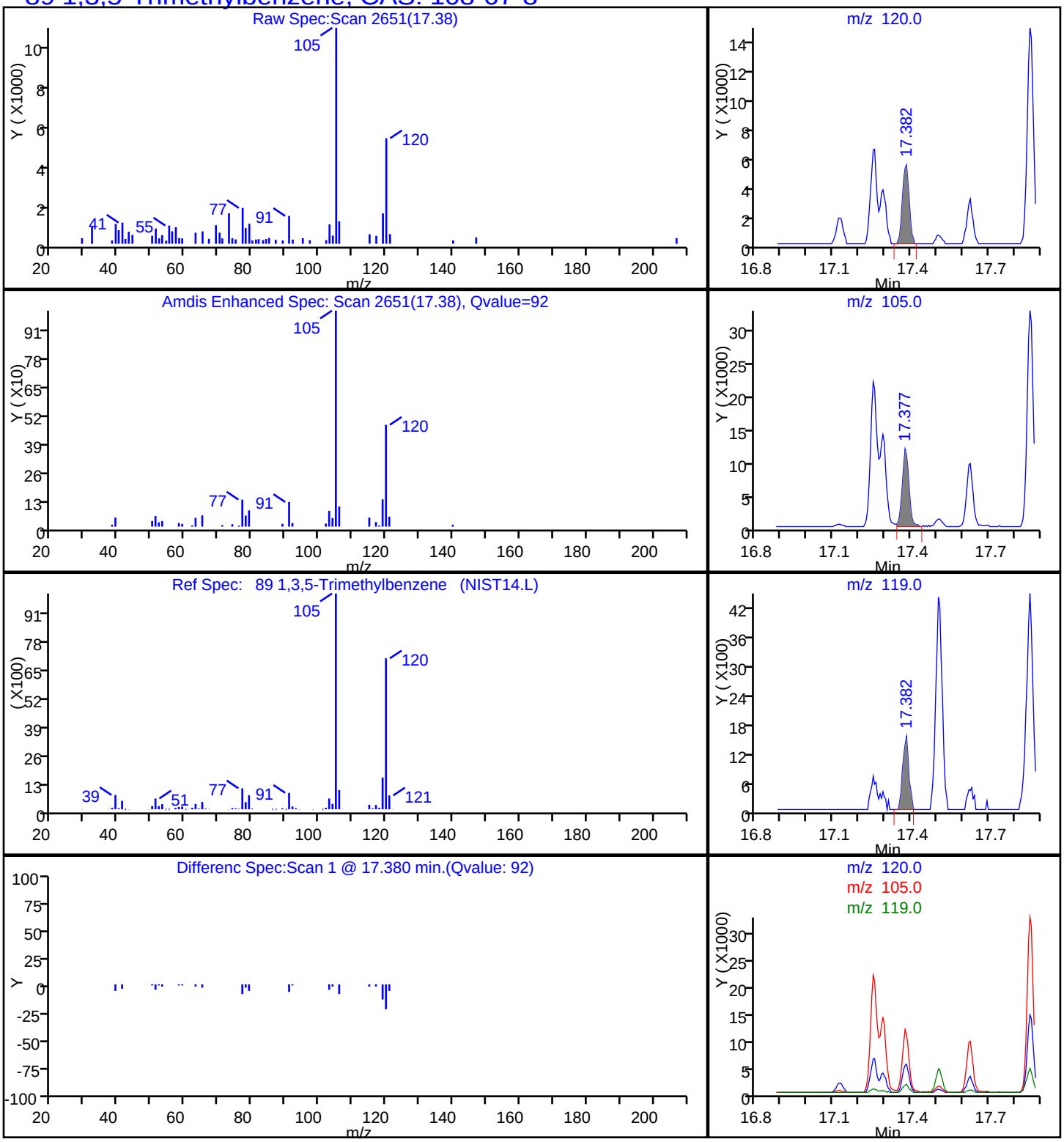
93 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

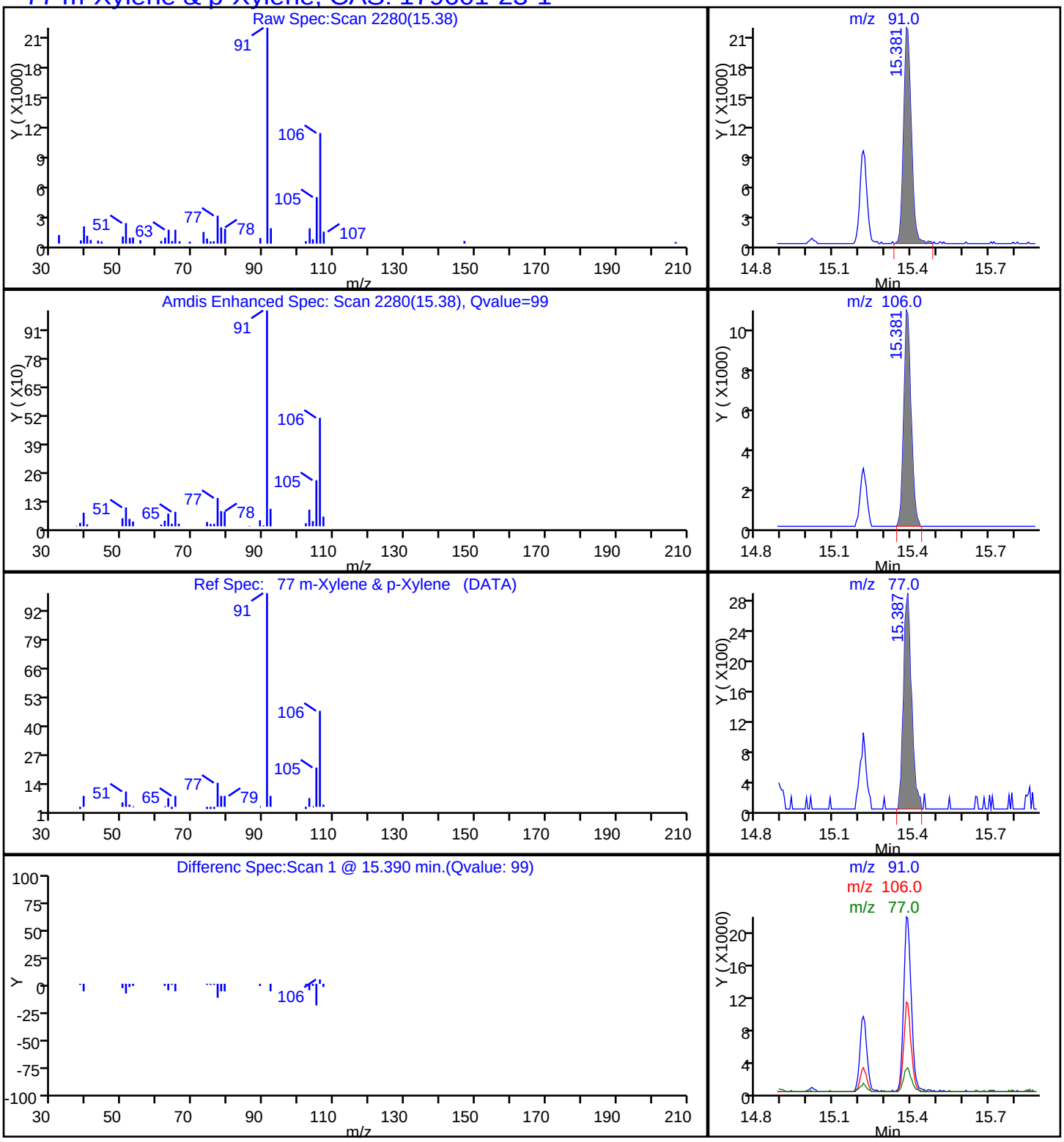
Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p109.D		
Injection Date:	16-Mar-2018 00:17:30	Instrument ID:	MR
Lims ID:	140-10921-A-6	Lab Sample ID:	140-10921-6
Client ID:	BLDG-C INFLUENT		
Operator ID:		ALS Bottle#:	9 Worklist Smp#: 14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p109.D
Injection Date: 16-Mar-2018 00:17:30 Instrument ID: MR
Lims ID: 140-10921-A-6 Lab Sample ID: 140-10921-6
Client ID: BLDG-C INFLUENT
Operator ID: ALS Bottle#: 9 Worklist Smp#: 14
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

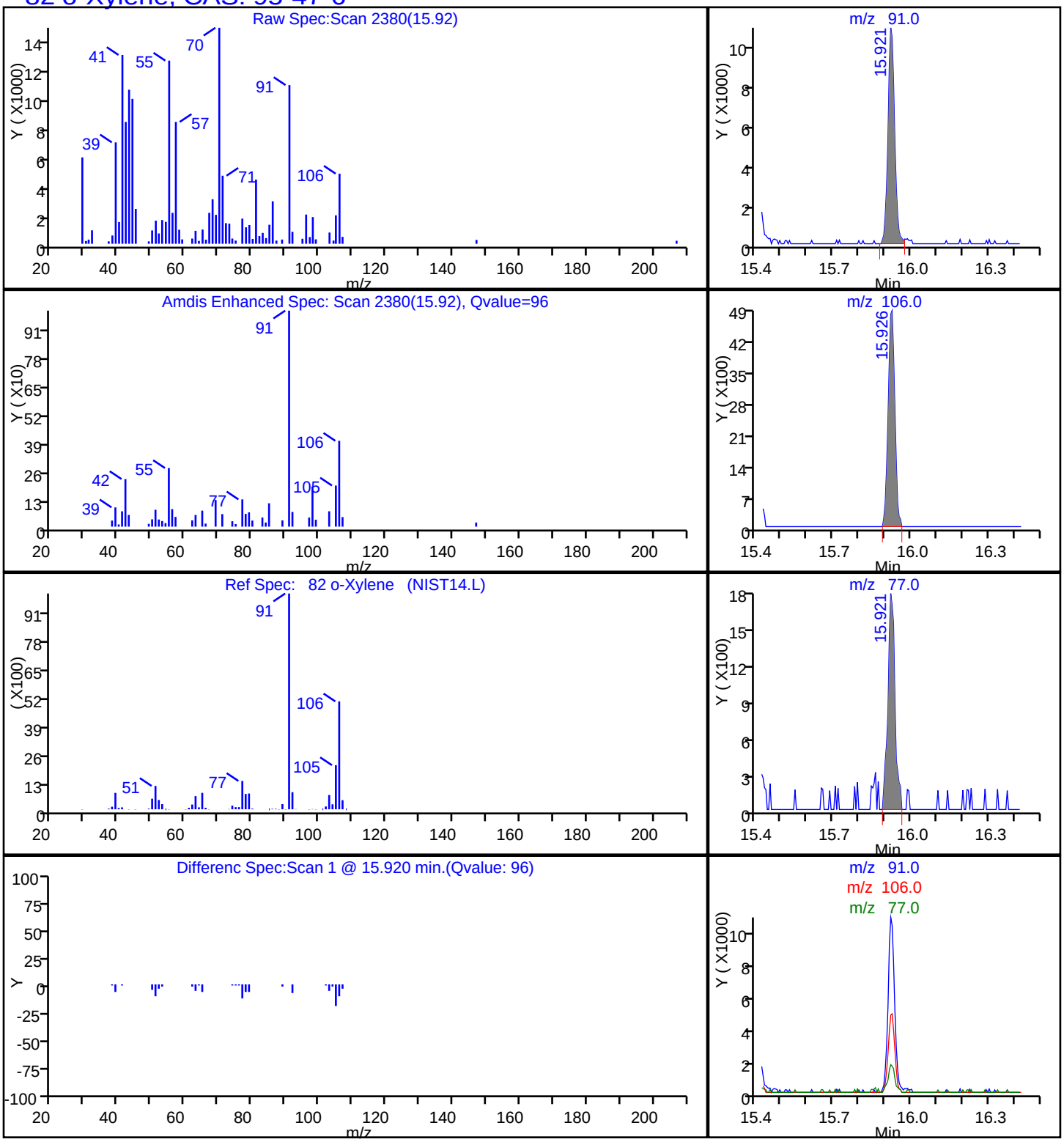
77 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RC15p109.D		
Injection Date:	16-Mar-2018 00:17:30	Instrument ID:	MR
Lims ID:	140-10921-A-6	Lab Sample ID:	140-10921-6
Client ID:	BLDG-C INFLUENT		
Operator ID:		ALS Bottle#:	9 Worklist Smp#: 14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

82 o-Xylene, CAS: 95-47-6



FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-17762/3	RA30IC01.D
Level 2	IC 140-17762/4	RA30IC02.D
Level 3	IC 140-17762/5	RA30IC03.D
Level 4	IC 140-17762/6	RA30IC04.D
Level 5	IC 140-17762/7	RA30IC05.D
Level 6	IC 140-17762/8	RA30IC06.D
Level 7	ICIS 140-17762/9	RA30IC07.D
Level 8	IC 140-17762/10	RA30IC08.D
Level 9	IC 140-17762/11	RA30IC09.D
Level 10	IC 140-17762/12	RA30IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Chlorodifluoromethane	+++++ 0.4996	+++++ 0.5018	0.5364 0.4761	0.5007 0.4556	0.4969 0.4366	Ave		0.4879				6.4		30.0			
Propene	+++++ 1.0148	+++++ 1.0127	+++++ 0.9251	1.0749 0.8535	1.0335 0.7750	Ave		0.9557				11.4		30.0			
Dichlorodifluoromethane	+++++ 3.8576	+++++ 3.8716	3.9445 3.4238	4.4278 3.3920	3.8443 3.2841	Ave		3.7557				10.0		30.0			
Chloromethane	+++++ 0.3356	+++++ 0.3504	+++++ 0.3161	0.4352 0.2922	0.3844 0.2804	Ave		0.3421				15.8		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	2.9869 2.5228	2.8020 2.5888	2.6799 2.4191	2.4834 2.2928	2.5057 2.1607	Ave		2.5442				9.4		30.0			
Vinyl chloride	1.2473 1.0050	1.2981 1.0133	1.0342 0.9733	1.0613 0.9642	1.0145 0.8783	Ave		1.0490				12.2		30.0			
1,3-Butadiene	+++++ 0.6759	+++++ 0.6901	0.7589 0.6575	0.7160 0.6429	0.6702 0.6007	Ave		0.6765				7.0		30.0			
Butane	+++++ 1.1770	+++++ 1.1571	1.1761 1.0993	1.1870 1.0664	1.1472 0.9821	Ave		1.1240				6.3		30.0			
Bromomethane	+++++ 0.9756	+++++ 0.9799	1.0961 0.9468	0.9664 0.9339	0.9805 0.8851	Ave		0.9705				6.2		30.0			
Chloroethane	+++++ 0.4798	+++++ 0.4684	0.5400 0.4543	0.5007 0.4508	0.4816 0.4272	Ave		0.4754				7.2		30.0			
Ethanol	+++++ 0.3138	+++++ 0.3115	+++++ 0.2974	0.3206 0.2839	0.3092 0.2628	Ave		0.2999				6.8		30.0			
Vinyl bromide	+++++ 0.9734	+++++ 0.9603	1.0223 0.9264	0.9931 0.9030	0.9628 0.8698	Ave		0.9514				5.2		30.0			
2-Methylbutane	+++++ 0.7927	0.8473 0.7870	0.8827 0.7573	0.8140 0.7354	0.8057 0.7063	Ave		0.7921				6.9		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Acrolein	+++++ 0.2131	+++++ 0.2023	+++++ 0.1714	0.2463 0.2369	0.2775 0.1986	Ave		0.2209				16.0		30.0			
Trichlorofluoromethane	3.8163 3.6210	3.8962 3.5670	3.7377 3.3875	3.7221 3.2631	3.6118 3.0510	Ave		3.5674				7.4		30.0			
Acetonitrile	+++++ 0.2710	+++++ 0.2792	+++++ 0.2690	+++++ 0.2590	0.3012 0.2516	Ave		0.2718				6.4		30.0			
Acetone	+++++ 0.4445	+++++ 0.4298	+++++ 0.3730	+++++ 0.3559	0.5743 0.3319	Ave		0.4182				21.0		30.0			
Isopropyl alcohol	+++++ 1.7615	+++++ 1.7262	+++++ 1.6035	1.7601 1.4471	1.7064 1.2490	Ave		1.6077				12.0		30.0			
Pentane	+++++ 0.2821	0.3253 0.2863	0.3062 0.2706	0.2848 0.2514	0.2797 0.2238	Ave		0.2789				10.5		30.0			
Ethyl ether	+++++ 1.0595	+++++ 1.0591	1.1464 0.9558	1.0861 0.8868	1.0639 0.8197	Ave		1.0097				11.0		30.0			
1,1-Dichloroethene	1.8230 1.4732	1.6952 1.5251	1.5415 1.4388	1.4628 1.3846	1.4710 1.3297	Ave		1.5145				9.6		30.0			
Acrylonitrile	+++++ 0.9755	1.0491 1.0149	0.9699 0.9431	0.9648 0.8986	0.9313 0.8597	Ave		0.9563				6.0		30.0			
tert-Butyl alcohol	+++++ 3.0919	+++++ 3.1666	3.2956 2.9405	3.0814 2.8297	3.0612 2.6483	Ave		3.0144				6.7		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	3.6835 3.3085	3.3240 3.3647	3.3270 3.1386	3.2027 2.9781	3.2883 2.7719	Ave		3.2387				7.5		30.0			
Methylene Chloride	+++++ 1.5226	+++++ 1.4846	+++++ 1.3365	2.3963 1.2627	1.7575 1.1890	Ave		1.5642				26.4		30.0			
3-Chloropropene	+++++ 1.2912	1.4624 1.2679	1.3517 1.1239	1.2960 1.1775	1.2499 1.0934	Ave		1.2571				9.1		30.0			
Carbon disulfide	+++++ 4.3010	4.5429 4.3495	4.2824 4.0908	4.2202 3.9413	4.1883 3.7920	Ave		4.1898				5.3		30.0			
trans-1,2-Dichloroethene	+++++ 1.5663	1.6529 1.6054	1.5536 1.5101	1.5451 1.4740	1.5012 1.4213	Ave		1.5366				4.5		30.0			
Methyl tert-butyl ether	+++++ 4.8878	4.9780 5.0046	4.7681 4.7335	4.6401 4.5480	4.7610 4.3260	Ave		4.7386				4.5		30.0			
1,1-Dichloroethane	3.2552 2.9583	3.2402 2.9974	3.0427 2.7728	2.9120 2.6386	2.9342 2.5185	Ave		2.9270				8.0		30.0			
Vinyl acetate	+++++ 3.0422	+++++ 3.0483	2.4722 2.8443	2.4587 3.0745	2.7400 2.9503	Ave		2.8288				8.9		30.0			
2-Butanone (MEK)	+++++ 0.7255	+++++ 0.7913	+++++ 0.7057	0.7096 0.7007	0.7825 0.6631	Ave		0.7255				6.4		30.0			
Hexane	+++++ 1.2050	1.3784 1.2187	1.2369 1.1204	1.1721 1.0624	1.1769 0.9868	Ave		1.1731				9.5		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
cis-1,2-Dichloroethene	1.9071 1.6125	1.8156 1.6678	1.6641 1.5780	1.6147 1.5302	1.6025 1.4817	Ave		1.6474				7.8		30.0			
Ethyl acetate	+++++ 2.7290	+++++ 2.8405	2.1840 2.6632	2.2813 2.5958	2.5408 2.4854	Ave		2.5400				8.7		30.0			
Chloroform	4.2863 3.7052	3.8694 3.7903	3.7705 3.5491	3.6794 3.4047	3.6984 3.2578	Ave		3.7011				7.5		30.0			
Tetrahydrofuran	+++++ 1.3407	+++++ 1.3730	1.3680 1.2688	1.3174 1.2195	1.3030 1.1665	Ave		1.2946				5.6		30.0			
1,1,1-Trichloroethane	4.1703 3.9689	4.0153 4.0994	3.8140 3.8790	3.6871 3.7835	3.8389 3.6271	Ave		3.8883				4.5		30.0			
1,2-Dichloroethane	0.4598 0.4390	0.4262 0.4435	0.4288 0.4170	0.3913 0.4087	0.4251 0.3915	Ave		0.4231				5.2		30.0			
Benzene	0.8742 0.7844	0.8183 0.7925	0.7957 0.7383	0.7735 0.6873	0.7655 0.6121	Ave		0.7642				9.5		30.0			
1-Butanol	+++++ 0.0491	+++++ 0.0535	+++++ 0.0554	+++++ 0.0549	0.0399 0.0507	Ave		0.0506				11.4		30.0			
Cyclohexane	+++++ 0.1282	0.1302 0.1319	0.1361 0.1198	0.1248 0.1109	0.1254 0.0971	Ave		0.1227				9.8		30.0			
Carbon tetrachloride	0.6377 0.6481	0.5867 0.6494	0.5971 0.6370	0.5827 0.6239	0.6061 0.5914	Ave		0.6160				4.2		30.0			
2,2,4-Trimethylpentane	+++++ 1.1700	+++++ 1.1823	1.1763 1.1037	1.1213 1.0350	1.1405 0.9359	Ave		1.1081				7.6		30.0			
1,2-Dichloropropane	0.2892 0.2749	0.2827 0.2781	0.2783 0.2608	0.2653 0.2439	0.2652 0.2201	Ave		0.2659				7.7		30.0			
Heptane	+++++ 0.2794	0.2806 0.2826	0.2727 0.2668	0.2557 0.2502	0.2719 0.2244	Ave		0.2649				7.1		30.0			
Trichloroethene	0.3941 0.3561	0.3498 0.3989	0.3569 0.4050	0.3383 0.3430	0.3431 0.3253	Ave		0.3611				7.8		30.0			
Dibromomethane	+++++ 0.3180	+++++ 0.3337	0.3335 0.3154	0.3130 0.3075	0.3081 0.2866	Ave		0.3145				4.8		30.0			
Bromodichloromethane	0.5552 0.5927	0.5165 0.6275	0.5155 0.6065	0.5215 0.5926	0.5443 0.5621	Ave		0.5634				7.1		30.0			
1,4-Dioxane	+++++ 0.1244	0.1026 0.1255	0.1107 0.1188	0.1100 0.1111	0.1114 0.0998	Ave		0.1127				7.8		30.0			
Methyl methacrylate	+++++ 0.2534	+++++ 0.2814	+++++ 0.2766	0.1921 0.2732	0.2185 0.2613	Ave		0.2509				13.3		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.4476	+++++ 0.4761	0.4073 0.4607	0.3703 0.4462	0.4067 0.4120	Ave		0.4284				8.2		30.0			
cis-1,3-Dichloropropene	0.4432 0.4616	0.4182 0.4890	0.4016 0.4666	0.4077 0.4542	0.4258 0.4244	Ave		0.4392				6.4		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
trans-1,3-Dichloropropene	0.5110 0.5036	0.4535 0.5257	0.4406 0.5134	0.4431 0.5163	0.4525 0.4903	Ave		0.4850				7.0		30.0			
Toluene	1.2824 1.1325	1.1432 1.1561	1.0870 1.0939	1.0545 1.0385	1.0799 0.9486	Ave		1.1017				7.9		30.0			
1,1,2-Trichloroethane	0.3289 0.3161	0.3191 0.3218	0.2970 0.3044	0.2890 0.2905	0.3016 0.2671	Ave		0.3035				6.1		30.0			
2-Hexanone	+++++ 0.2856	+++++ 0.3067	0.1978 0.3130	0.1839 0.2994	0.2390 0.2768	Ave		0.2628				19.0		30.0			
Dibromochloromethane	0.5478 0.6218	0.4611 0.6757	0.5045 0.6734	0.4783 0.6763	0.5239 0.6415	Ave		0.5804				14.9		30.0			
Octane	0.3713 0.3761	0.3521 0.3823	0.3634 0.3590	0.3351 0.3411	0.3561 0.3074	Ave		0.3544				6.2		30.0			
1,2-Dibromoethane (EDB)	0.5777 0.5703	0.4862 0.5934	0.5028 0.5775	0.5036 0.5627	0.5214 0.5228	Ave		0.5418				7.1		30.0			
Tetrachloroethene	0.4510 0.4222	0.4302 0.4299	0.4096 0.4116	0.3928 0.3938	0.4006 0.3646	Ave		0.4106				5.9		30.0			
Chlorobenzene	1.0111 0.8808	0.9072 0.8981	0.8780 0.8583	0.8277 0.8176	0.8488 0.7523	Ave		0.8680				7.8		30.0			
Ethylbenzene	1.6592 1.4956	1.4733 1.5265	1.4692 1.4423	1.3826 1.3480	1.4274 1.1942	Ave		1.4418				8.4		30.0			
m-Xylene & p-Xylene	1.2623 1.1995	1.1484 1.2020	1.1693 1.1112	1.0926 1.0102	1.1299 0.8551	Ave		1.1181				10.3		30.0			
Bromoform	0.4567 0.5340	0.3917 0.5876	0.3879 0.5961	0.3803 0.6243	0.4243 0.6099	Ave		0.4993				20.2		30.0			
Styrene	+++++ 0.7708	+++++ 0.8353	0.5730 0.8116	0.5596 0.7867	0.6410 0.7271	Ave		0.7131				15.2		30.0			
Nonane	0.6231 0.6749	0.6344 0.6650	0.6202 0.5965	0.5897 0.5334	0.6338 0.4526	Ave		0.6024				11.0		30.0			
o-Xylene	1.3802 1.2416	1.2323 1.2309	1.2402 1.1408	1.1662 1.0563	1.1911 0.9246	Ave		1.1804				10.4		30.0			
1,1,2,2-Tetrachloroethane	0.7571 0.7998	0.6769 0.7375	0.6943 0.6416	0.6940 0.7009	0.7398 0.6230	Ave		0.7065				7.6		30.0			
1,2,3-Trichloropropane	0.2821 0.2687	0.2608 0.2698	0.2586 0.2533	0.2448 0.2410	0.2532 0.2251	Ave		0.2557				6.4		30.0			
Isopropylbenzene	+++++ 1.6847	1.7627 1.6664	1.6980 1.5413	1.5734 1.4182	1.6200 1.2451	Ave		1.5789				10.2		30.0			
Propylbenzene	0.4393 0.4800	0.4121 0.4854	0.4266 0.4494	0.4019 0.4134	0.4353 0.3689	Ave		0.4312				8.2		30.0			
2-Chlorotoluene	0.4307 0.4308	0.4121 0.4227	0.4100 0.3945	0.3900 0.3647	0.4077 0.3250	Ave		0.3988				8.2		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
4-Ethyltoluene	1.6721 1.8578	1.5887 1.8488	1.6064 1.7062	1.5559 1.5414	1.6697 1.3406	Ave		1.6388				9.3		30.0			
1,3,5-Trimethylbenzene	0.6886 0.7368	0.6438 0.7377	0.6390 0.6854	0.6228 0.6329	0.6583 0.5712	Ave		0.6617				7.8		30.0			
Alpha Methyl Styrene	+++++ 0.5961	+++++ 0.6811	+++++ 0.6723	0.3867 0.6319	0.4651 0.5717	Ave		0.5721				19.1		30.0			
Decane	0.7782 0.9615	0.7577 0.9673	0.8036 0.8765	0.7851 0.7693	0.8536 0.6351	Ave		0.8188				12.2		30.0			
tert-Butylbenzene	1.6747 1.7037	1.5629 1.6867	1.5711 1.5356	1.5162 1.3829	1.5602 1.1822	Ave		1.5376				10.2		30.0			
1,2,4-Trimethylbenzene	1.4061 1.5971	1.3356 1.5702	1.4117 1.4079	1.3483 1.2376	1.4396 1.0385	Ave		1.3793				11.6		30.0			
1,3-Dichlorobenzene	0.9382 0.9839	0.8463 0.9937	0.8839 0.9167	0.8388 0.8391	0.8924 0.7369	Ave		0.8870				8.7		30.0			
sec-Butylbenzene	2.1386 2.2501	1.9617 2.2330	1.9986 2.0283	1.9397 1.7523	2.0522 1.4290	Ave		1.9784				12.2		30.0			
Benzyl chloride	0.9176 1.2280	0.8673 1.3521	0.8700 1.2619	0.8429 1.1005	1.0250 0.9090	Ave		1.0374				18.1		30.0			
1,4-Dichlorobenzene	0.9388 0.9885	0.8643 0.9957	0.8741 0.9128	0.8360 0.8274	0.8810 0.7278	Ave		0.8846				9.0		30.0			
4-Isopropyltoluene	1.7285 1.9959	1.5857 2.0202	1.7817 1.8554	1.6423 1.6625	1.7503 1.3675	Ave		1.7390				11.1		30.0			
1,2,3-Trimethylbenzene	1.5856 1.7943	1.5711 1.7803	1.5668 1.6018	1.4899 1.4272	1.6163 1.2294	Ave		1.5663				10.4		30.0			
1,2-Dichlorobenzene	0.8942 0.9621	0.8150 0.9678	0.8654 0.8979	0.8005 0.8158	0.8702 0.7264	Ave		0.8615				8.7		30.0			
Butylbenzene	1.4292 1.8444	1.3568 1.8896	1.4519 1.7531	1.4134 1.5467	1.5664 1.2564	Ave		1.5508				13.8		30.0			
Undecane	0.7892 1.0726	0.7390 1.1100	0.7934 1.0270	0.8096 0.9132	0.8805 0.7285	Ave		0.8863				15.8		30.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.5969	+++++ 0.6647	0.3685 0.6164	0.3739 0.6149	0.4386 0.5398	Ave		0.5267				22.2		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 0.9191	+++++ 0.9859	0.7212 0.9676	0.6936 0.9342	0.7408 0.8332	Ave		0.8495				13.9		30.0			
Dodecane	+++++ 0.9928	+++++ 1.1283	0.5865 1.0229	0.6183 0.9289	0.6706 0.6900	Ave		0.8298				25.4		30.0			
1,2,4-Trichlorobenzene	+++++ 0.7149	0.4150 0.8253	0.4838 0.8320	0.4553 0.8417	0.5017 0.7379	Ave		0.6453				27.7		30.0			
Naphthalene	1.0448 1.6712	0.9243 1.9078	1.1299 1.8929	1.1276 1.8463	1.2769 1.5182	Ave		1.4340				26.4		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Hexachlorobutadiene	0.7046 0.7752	0.6195 0.8332	0.6587 0.8074	0.6012 0.7762	0.6084 0.6733	Ave		0.7058				12.3		30.0			
1,2,3-Trichlorobenzene	+++++ 0.6757	+++++ 0.7953	0.4965 0.7779	0.4801 0.7989	0.4939 0.7046	Ave		0.6529				21.7		30.0			
2-Methylnaphthalene	+++++ 0.2487	+++++ 0.4641	+++++ 0.4569	+++++ 0.4755	0.1340 0.3372	Ave		0.3527				39.5		50.0			
1-Methylnaphthalene	+++++ 0.2715	+++++ 0.5022	+++++ 0.4656	0.2315 0.4794	0.1676 0.3359	Ave		0.3505				38.1		50.0			
4-Bromofluorobenzene (Surr)	0.7650 0.7800	0.7779 0.7658	0.7890 0.7351	0.7826 0.7176	0.7941 0.6764	Ave		0.7584				5.0		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-17762/3	RA30IC01.D
Level 2	IC 140-17762/4	RA30IC02.D
Level 3	IC 140-17762/5	RA30IC03.D
Level 4	IC 140-17762/6	RA30IC04.D
Level 5	IC 140-17762/7	RA30IC05.D
Level 6	IC 140-17762/8	RA30IC06.D
Level 7	ICIS 140-17762/9	RA30IC07.D
Level 8	IC 140-17762/10	RA30IC08.D
Level 9	IC 140-17762/11	RA30IC09.D
Level 10	IC 140-17762/12	RA30IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorodifluoromethane	CBM	Ave	+++++	+++++	4119	7784	19042	+++++	+++++	0.0784	0.160	0.400
			49960	99602	192008	373011	719553	1.00	2.00	4.00	8.00	16.0
Propene	CBM	Ave	+++++	+++++	+++++	16712	39604	+++++	+++++	+++++	0.160	0.400
			101480	201013	373101	698857	1277376	1.00	2.00	4.00	8.00	16.0
Dichlorodifluoromethane	CBM	Ave	+++++	+++++	30290	68839	147314	+++++	+++++	0.0784	0.160	0.400
			385761	768499	1380786	2777340	5412793	1.00	2.00	4.00	8.00	16.0
Chloromethane	CBM	Ave	+++++	+++++	+++++	6766	14731	+++++	+++++	+++++	0.160	0.400
			33564	69549	127494	239224	462204	1.00	2.00	4.00	8.00	16.0
1,2-Dichloro-1,1,2,2-tetrafluoroeth ane	CBM	Ave	5510	10542	20579	38610	96019	0.0196	0.0392	0.0784	0.160	0.400
			252275	513872	975595	1877362	3561275	1.00	2.00	4.00	8.00	16.0
Vinyl chloride	CBM	Ave	2301	4884	7942	16500	38877	0.0196	0.0392	0.0784	0.160	0.400
			100495	201144	392525	789520	1447608	1.00	2.00	4.00	8.00	16.0
1,3-Butadiene	CBM	Ave	+++++	+++++	5828	11132	25683	+++++	+++++	0.0784	0.160	0.400
			67588	136978	265156	526420	990068	1.00	2.00	4.00	8.00	16.0
Butane	CBM	Ave	+++++	+++++	9031	18455	43962	+++++	+++++	0.0784	0.160	0.400
			117697	229678	443357	873129	1618667	1.00	2.00	4.00	8.00	16.0
Bromomethane	CBM	Ave	+++++	+++++	8417	15024	37574	+++++	+++++	0.0784	0.160	0.400
			97562	194501	381835	764670	1458793	1.00	2.00	4.00	8.00	16.0
Chloroethane	CBM	Ave	+++++	+++++	4147	7784	18456	+++++	+++++	0.0784	0.160	0.400
			47978	92980	183236	369095	704038	1.00	2.00	4.00	8.00	16.0
Ethanol	CBM	Ave	+++++	+++++	+++++	24919	59239	+++++	+++++	+++++	0.800	2.00
			156896	309152	599728	1162228	2165410	5.01	9.99	20.0	40.0	80.0
Vinyl bromide	CBM	Ave	+++++	+++++	7850	15440	36894	+++++	+++++	0.0784	0.160	0.400
			97338	190610	373599	739337	1433559	1.00	2.00	4.00	8.00	16.0
2-Methylbutane	CBM	Ave	+++++	3188	6778	12656	30876	+++++	0.0392	0.0784	0.160	0.400
			79273	156213	305420	602150	1164068	1.00	2.00	4.00	8.00	16.0
Acrolein	CBM	Ave	+++++	+++++	+++++	3830	10635	+++++	+++++	+++++	0.160	0.400
			21312	40157	69130	193944	327310	1.00	2.00	4.00	8.00	16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Trichlorofluoromethane	CBM	Ave	7040 362096	14659 708040	28702 1366159	57868 2671794	138405 5028632	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Acetonitrile	CBM	Ave	+++++ 27104	+++++ 55420	+++++ 108488	+++++ 212047	11541 414724	+++++ 1.00	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0
Acetone	CBM	Ave	+++++ 133362	+++++ 255969	+++++ 451316	+++++ 874182	66025 1641135	+++++ 3.01	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.20 48.0
Isopropyl alcohol	CBM	Ave	+++++ 528496	+++++ 1027986	+++++ 1940134	82100 3554966	196181 6176210	+++++ 3.01	+++++ 5.99	+++++ 12.0	0.480 24.0	1.20 48.0
Pentane	CBM	Ave	+++++ 28211	1224 56821	2351 109148	4428 205846	10720 368799	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Ethyl ether	CBM	Ave	+++++ 105952	+++++ 210233	8803 385484	16886 726094	40771 1351034	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethene	CBM	Ave	3363 147316	6378 302733	11837 580273	22742 1133673	56370 2191529	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	+++++ 97550	3947 201452	7448 380336	15000 735807	35688 1416916	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
tert-Butyl alcohol	CBM	Ave	+++++ 309191	+++++ 628551	25307 1185900	47907 2316983	117307 4364855	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	6795 330843	12506 667885	25548 1265800	49793 2438487	126008 4568598	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Methylene Chloride	CBM	Ave	+++++ 152260	+++++ 294696	+++++ 539025	37255 1033868	67350 1959635	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0
3-Chloropropene	CBM	Ave	+++++ 129123	5502 251667	10380 453252	20149 964101	47897 1802055	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Carbon disulfide	CBM	Ave	+++++ 430092	17092 863361	32885 1649806	65612 3227149	160500 6249903	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	+++++ 156625	6219 318661	11930 609026	24021 1206934	57527 2342499	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	+++++ 488775	18729 993401	36615 1909019	72140 3723922	182444 7130125	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethane	CBM	Ave	6005 295826	12191 594968	23365 1118272	45273 2160451	112441 4150884	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	+++++ 304213	+++++ 605079	18984 1147099	38225 2517397	104997 4862704	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
2-Butanone (MEK)	CBM	Ave	+++++ 72547	+++++ 157076	+++++ 284611	11032 573697	29985 1092853	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0
Hexane	CBM	Ave	+++++ 120502	5186 241914	9498 451862	18222 869891	45099 1626366	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
cis-1,2-Dichloroethene	CBM	Ave	3518 161247	6831 331061	12779 636383	25103 1252882	61408 2442184	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Ethyl acetate	CBM	Ave	+++++ 272902	+++++ 563824	16771 1074075	35467 2125431	97364 4096409	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chloroform	CBM	Ave	7907 370515	14558 752364	28954 1431329	57203 2787766	141724 5369459	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	+++++ 134069	+++++ 272546	10505 511682	20481 998545	49933 1922640	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	7693 396883	15107 813727	29288 1564396	57324 3097922	147109 5978105	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	5237 266293	9999 535650	20209 1019982	37522 2013816	100014 3907140	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	9957 475845	19199 957247	37499 1805776	74171 3386082	180099 6108554	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	+++++ 29797	+++++ 64569	+++++ 135506	+++++ 270253	9384 506348	+++++ 1.00	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	+++++ 77754	3056 159306	6414 293021	11967 546616	29509 968821	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	7263 393178	13765 784365	28139 1557932	55870 3073958	142596 5902097	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	+++++ 709763	+++++ 1428084	55433 2699507	107521 5099511	268337 9340512	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	3294 166795	6633 335945	13116 637774	25436 1201630	62400 2196910	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	+++++ 169496	6584 341354	12852 652666	24522 1232469	63962 2239236	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	4489 216055	8207 481860	16817 990611	32437 1689959	80726 3246702	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	+++++ 192925	+++++ 403081	15715 771427	30017 1514919	72482 2859943	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	6323 359583	12118 757973	24293 1483398	50003 2919706	128060 5610234	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	+++++ 75444	2408 151582	5216 290497	10547 547334	26213 995848	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	+++++ 153737	+++++ 339847	+++++ 676432	18423 1346179	51419 2607373	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	+++++ 271515	+++++ 575108	19192 1126777	35511 2198186	95687 4112261	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
cis-1,3-Dichloropropene	DFBZ	Ave	5048 280020	9812 590578	18927 1141143	39090 2237825	100184 4235998	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	5113 264281	9248 552390	18004 1089547	37170 2203158	93053 4251750	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Toluene	CBZd 5	Ave	12831 594266	23313 1214847	44415 2321715	88464 4431626	222095 8226314	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	3291 165862	6507 338126	12134 646119	24240 1239731	62032 2316335	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Hexanone	CBZd 5	Ave	+++++ 149844	+++++ 322256	8080 664344	15426 1277875	49161 2400790	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Dibromochloromethane	CBZd 5	Ave	5481 326299	9403 710033	20613 1429129	40122 2886064	107735 5563126	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Octane	CBZd 5	Ave	3715 197364	7181 401741	14847 761888	28115 1455739	73235 2665696	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	5780 299269	9915 623528	20544 1225652	42246 2401387	107221 4533785	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Tetrachloroethene	CBZd 5	Ave	4512 221546	8773 451735	16736 873561	32954 1680400	82386 3162320	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Chlorobenzene	CBZd 5	Ave	10116 462209	18500 943722	35874 1821596	69433 3488920	174562 6524458	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Ethylbenzene	CBZd 5	Ave	16601 784804	30045 1604021	60028 3061101	115987 5752584	293553 10356375	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd 5	Ave	25259 1258868	46840 2526057	95548 4717005	183320 8622122	464738 14832360	0.0392 2.00	0.0784 3.99	0.157 8.00	0.320 16.0	0.800 32.0
Bromoform	CBZd 5	Ave	4569 280201	7987 617419	15850 1265260	31906 2664358	87253 5289308	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Styrene	CBZd 5	Ave	+++++ 404492	+++++ 877726	23411 1722436	46940 3357063	131824 6305273	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Nonane	CBZd 5	Ave	6234 354142	12938 698726	25340 1266112	49466 2276291	130349 3925374	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
o-Xylene	CBZd 5	Ave	13809 651529	25131 1293453	50674 2421285	97828 4507688	244961 8018750	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	7575 419698	13804 774984	28370 1361818	58220 2991028	152141 5403129	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd 5	Ave	2822 140977	5319 283509	10568 537694	20539 1028585	52066 1952171	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Isopropylbenzene	CBZd 5	Ave	+++++ 884009	35946 1751008	69379 3271189	131986 6052009	333169 10798333	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Propylbenzene	CBZd 5	Ave	4395 251895	8404 510087	17429 953864	33714 1764153	89517 3199258	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
2-Chlorotoluene	CBZd 5	Ave	4309 226074	8403 444172	16753 837183	32718 1556290	83842 2818704	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	16730 974862	32398 1942649	65633 3621190	130522 6577901	343391 11626420	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	6890 386617	13130 775132	26109 1454797	52246 2700808	135393 4953675	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	+++++ 312791	+++++ 715672	+++++ 1426907	32438 2696582	95659 4958200	+++++ 1.00	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	7786 504552	15452 1016420	32834 1860379	65857 3283161	175546 5508017	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
tert-Butylbenzene	CBZd 5	Ave	16756 894018	31873 1772333	64192 3259179	127195 5901403	320875 10252438	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	14068 838081	27236 1649904	57678 2988133	113107 5281375	296062 9006683	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	9387 516305	17259 1044130	36114 1945670	70364 3580637	183533 6390995	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	21397 1180727	40006 2346383	81660 4304932	162720 7478024	422045 12393102	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	9181 644403	17686 1420806	35545 2678333	70710 4696324	210797 7883232	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	9393 518691	17625 1046250	35715 1937249	70131 3530827	181180 6311344	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	17294 1047342	32338 2122805	72796 3937880	137773 7094422	359958 11859110	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	15864 941539	32040 1870714	64016 3399572	124983 6090386	332416 10662003	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	8947 504861	16621 1016927	35357 1905685	67149 3481297	178966 6299641	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	14299 967842	27670 1985514	59321 3720801	118568 6600625	322145 10895604	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	7896 562815	15070 1166396	32417 2179717	67912 3897040	181085 6317836	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	+++++ 313235	+++++ 698408	15056 1308310	31369 2624159	90207 4681454	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 482300	+++++ 1035933	29468 2053724	58187 3986557	152347 7226247	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Ave	+++++ 520941	+++++ 1185570	23965 2170914	51872 3963852	137913 5984092	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2,4-Trichlorobenzene	CBZd 5	Ave	+++++ 375125	8463 867227	19766 1765909	38197 3591958	103182 6399037	+++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	10453 876926	18850 2004705	46167 4017474	94589 7879181	262605 13166564	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Hexachlorobutadiene	CBZd 5	Ave	7050 406766	12634 875521	26912 1713702	50435 3312283	125133 5838950	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	+++++ 354574	+++++ 835689	20286 1650977	40272 3409456	101572 6110654	+++++ 1.00	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	+++++ 300143	+++++ 1121735	+++++ 2230513	+++++ 4666996	63395 6724954	+++++ 2.30	+++++ 4.59	+++++ 9.20	+++++ 18.4	0.920 36.8
1-Methylnaphthalene	CBZd 5	Ave	+++++ 327721	+++++ 1213833	+++++ 2273024	44657 4705374	79264 6700143	+++++ 2.30	+++++ 4.59	+++++ 9.20	0.368 18.4	0.920 36.8
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1562115 1634670	1618846 1611533	1644837 1560168	1641285 1531137	1633174 1466410	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

Curve Type Legend:
Ave = Average ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-17762/3	RA30IC01.D
Level 2	IC 140-17762/4	RA30IC02.D
Level 3	IC 140-17762/5	RA30IC03.D
Level 4	IC 140-17762/6	RA30IC04.D
Level 5	IC 140-17762/7	RA30IC05.D
Level 6	IC 140-17762/8	RA30IC06.D
Level 7	ICIS 140-17762/9	RA30IC07.D
Level 8	IC 140-17762/10	RA30IC08.D
Level 9	IC 140-17762/11	RA30IC09.D
Level 10	IC 140-17762/12	RA30IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	+++++	9.9						50			
Propene	+++++	+++++	+++++	12.5						50		
Dichlorodifluoromethane	+++++	+++++	5.0						50			
Chloromethane	+++++	+++++	+++++	27.2						50		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	17.4						50					
Vinyl chloride	18.9						50					
1,3-Butadiene	+++++	+++++	12.2						50			
Butane	+++++	+++++	4.6						50			
Bromomethane	+++++	+++++	12.9						50			
Chloroethane	+++++	+++++	13.6						50			
Ethanol	+++++	+++++	+++++	6.9						50		
Vinyl bromide	+++++	+++++	7.5						50			
2-Methylbutane	+++++	7.0						50				
Acrolein	+++++	+++++	+++++	11.5						50		

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Trichlorofluoromethane	7.0						50					
Acetonitrile	+++++	+++++	+++++	+++++	10.8						50	
Acetone	+++++	+++++	+++++	+++++	37.3						80	
Isopropyl alcohol	+++++	+++++	+++++	9.5						50		
Pentane	+++++	16.6						50				
Ethyl ether	+++++	+++++	13.5						50			
1,1-Dichloroethene	20.4						50					
Acrylonitrile	+++++	9.7						50				
tert-Butyl alcohol	+++++	+++++	9.3						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	13.7						50					
Methylene Chloride	+++++	+++++	+++++	53.2						80		
3-Chloropropene	+++++	16.3						50				
Carbon disulfide	+++++	8.4						50				
trans-1,2-Dichloroethene	+++++	7.6						50				
Methyl tert-butyl ether	+++++	5.1						50				
1,1-Dichloroethane	11.2						50					
Vinyl acetate	+++++	+++++	-12.6						50			
2-Butanone (MEK)	+++++	+++++	+++++	-2.2						50		
Hexane	+++++	17.5						50				
cis-1,2-Dichloroethene	15.8						50					
Ethyl acetate	+++++	+++++	-14.0						50			

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chloroform	15.8						50					
Tetrahydrofuran	+++++	+++++	5.7						50			
1,1,1-Trichloroethane	7.2						50					
1,2-Dichloroethane	8.7						50					
Benzene	14.4						50					
1-Butanol	+++++	+++++	+++++	+++++	-21.1						50	
Cyclohexane	+++++	6.1						50				
Carbon tetrachloride	3.5						50					
2,2,4-Trimethylpentane	+++++	+++++	6.1						50			
1,2-Dichloropropane	8.8						50					
Heptane	+++++	5.9						50				
Trichloroethene	9.2						50					
Dibromomethane	+++++	+++++	6.0						50			
Bromodichloromethane	-1.5						50					
1,4-Dioxane	+++++	-8.9						50				
Methyl methacrylate	+++++	+++++	+++++	-23.4						50		
4-Methyl-2-pentanone (MIBK)	+++++	+++++	-4.9						50			
cis-1,3-Dichloropropene	0.9						50					
trans-1,3-Dichloropropene	5.4						50					
Toluene	16.4						50					
1,1,2-Trichloroethane	8.4						50					

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
2-Hexanone	+++++	+++++	-24.7						50			
Dibromochloromethane	-5.6						50					
Octane	4.8						50					
1,2-Dibromoethane (EDB)	6.6						50					
Tetrachloroethene	9.8						50					
Chlorobenzene	16.5						50					
Ethylbenzene	15.1						50					
m-Xylene & p-Xylene	12.9						50					
Bromoform	-8.5						50					
Styrene	+++++	+++++	-19.7						50			
Nonane	3.4						50					
o-Xylene	16.9						50					
1,1,2,2-Tetrachloroethane	7.2						50					
1,2,3-Trichloropropane	10.3						50					
Isopropylbenzene	+++++	11.6						50				
Propylbenzene	1.9						50					
2-Chlorotoluene	8.0						50					
4-Ethyltoluene	2.0						50					
1,3,5-Trimethylbenzene	4.1						50					
Alpha Methyl Styrene	+++++	+++++	+++++	-32.4						50		
Decane	-5.0						50					

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1 Analy Batch No.: 17762

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
tert-Butylbenzene	8.9						50					
1,2,4-Trimethylbenzene	1.9						50					
1,3-Dichlorobenzene	5.8						50					
sec-Butylbenzene	8.1						50					
Benzyl chloride	-11.5						50					
1,4-Dichlorobenzene	6.1						50					
4-Isopropyltoluene	-0.6						50					
1,2,3-Trimethylbenzene	1.2						50					
1,2-Dichlorobenzene	3.8						50					
Butylbenzene	-7.8						50					
Undecane	-11.0						50					
1,2-Dibromo-3-Chloropropane	+++++	+++++	-30.0						50			
1,2,4,5-Tetramethylbenzene	+++++	+++++	-15.1						50			
Dodecane	+++++	+++++	-29.3						50			
1,2,4-Trichlorobenzene	+++++	-35.7						50				
Naphthalene	-27.1						80					
Hexachlorobutadiene	-0.2						50					
1,2,3-Trichlorobenzene	+++++	+++++	-24.0						50			
2-Methylnaphthalene	+++++	+++++	+++++	+++++	-62.0						80	
1-Methylnaphthalene	+++++	+++++	+++++	-34.0						80		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC01.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 30-Jan-2018 12:29:30 ALS Bottle#: 9 Worklist Smp#: 3
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-003
Misc. Info.: 134528
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:02:45 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 30-Jan-2018 13:35:00

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.692	7.710	-0.018	86	376476	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.844	9.852	-0.008	95	2324388	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.858	14.859	-0.001	89	2041864	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.568	16.570	-0.002	86	1562115	4.00	4.04	
6 Chlorodifluoromethane	67	3.475	3.471	0.004	97	1114	0.0196	0.0243	
7 Propene	41	3.481	3.477	0.004	85	2863	0.0196	0.0318	
8 Dichlorodifluoromethane	85	3.518	3.519	-0.001	100	9712	0.0196	0.0275	
9 Chloromethane	52	3.648	3.653	-0.005	98	1546	0.0196	0.0480	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.669	3.675	-0.006	90	5510	0.0196	0.0230	
12 Vinyl chloride	62	3.793	3.789	0.004	41	2301	0.0196	0.0233	
14 Butadiene	54	3.863	3.863	0.000	68	1660	0.0196	0.0261	
15 Bromomethane	94	4.095	4.098	-0.003	95	2402	0.0196	0.0263	
16 Chloroethane	64	4.203	4.208	-0.005	76	1269	0.0196	0.0284	
17 Ethanol	31	4.306	4.313	-0.007	90	4299	0.0980	0.1523	
18 Vinyl bromide	106	4.440	4.441	-0.001	97	2560	0.0196	0.0286	
19 2-Methylbutane	43	4.494	4.498	-0.004	85	1726	0.0196	0.0232	
20 Acrolein	56	4.651	4.656	-0.005	32	2244	0.0196	0.1079	
21 Trichlorofluoromethane	101	4.651	4.659	-0.008	98	7040	0.0196	0.0210	
22 Acetonitrile	40	4.829	4.719	0.110	49	52	0.0196	0.002032	
23 Acetone	58	4.748	4.748	0.000	99	8407	0.0588	0.2136	
24 Isopropyl alcohol	45	4.839	4.843	-0.004	84	11498	0.0588	0.0760	
25 Pentane	72	4.845	4.847	-0.002	79	779	0.0196	0.0297	
26 Ethyl ether	31	4.985	4.975	0.010	84	2420	0.0196	0.0255	
27 1,1-Dichloroethene	96	5.211	5.218	-0.007	95	3363	0.0196	0.0236	
28 Acrylonitrile	53	5.282	5.288	-0.006	88	3069	0.0196	0.0341	
29 2-Methyl-2-propanol	59	5.330	5.325	0.005	94	6634	0.0196	0.0234	
30 1,1,2-Trichloro-1,2,2-trif	101	5.379	5.390	-0.011	94	6795	0.0196	0.0223	
31 Methylene Chloride	84	5.481	5.492	-0.011	90	18478	0.0196	0.1255	
32 3-Chloro-1-propene	39	5.503	5.514	-0.011	93	3037	0.0196	0.0257	
33 Carbon disulfide	76	5.616	5.625	-0.009	99	9012	0.0196	0.0229	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
34 trans-1,2-Dichloroethene	96	6.177	6.192	-0.015	97	3586	0.0196	0.0248	
36 Methyl tert-butyl ether	73	6.333	6.323	0.010	94	10267	0.0196	0.0230	
37 1,1-Dichloroethane	63	6.527	6.545	-0.018	99	6005	0.0196	0.0218	
38 Vinyl acetate	43	6.667	6.662	0.005	100	4484	0.0196	0.0168	
39 2-Butanone (MEK)	72	7.056	7.036	0.020	87	850	0.0196	0.0124	
40 Hexane	56	7.110	7.119	-0.009	83	2733	0.0196	0.0248	
41 cis-1,2-Dichloroethene	96	7.412	7.426	-0.014	94	3518	0.0196	0.0227	
42 Ethyl acetate	43	7.643	7.622	0.021	98	3285	0.0196	0.0137	
43 Chloroform	83	7.719	7.743	-0.024	89	7907	0.0196	0.0227	
44 Tetrahydrofuran	42	8.134	8.108	0.026	87	3253	0.0196	0.0267	
45 1,1,1-Trichloroethane	97	8.695	8.701	-0.006	94	7693	0.0196	0.0210	
46 1,2-Dichloroethane	62	8.754	8.771	-0.017	95	5237	0.0196	0.0213	
47 Benzene	78	9.267	9.274	-0.007	98	9957	0.0196	0.0224	
49 Cyclohexane	69	9.283	9.298	-0.015	94	1690	0.0196	0.0237	
50 Carbon tetrachloride	117	9.304	9.312	-0.008	96	7263	0.0196	0.0203	
53 Isooctane	57	10.140	10.145	-0.005	97	16099	0.0196	0.0250	
54 1,2-Dichloropropane	63	10.539	10.540	-0.001	75	3294	0.0196	0.0213	
55 n-Heptane	71	10.555	10.561	-0.006	78	3571	0.0196	0.0232	
56 Trichloroethene	130	10.593	10.605	-0.012	91	4489	0.0196	0.0214	
57 Dibromomethane	93	10.642	10.648	-0.006	92	5327	0.0196	0.0292	
58 Dichlorobromomethane	83	10.814	10.825	-0.011	96	6323	0.0196	0.0193	
59 1,4-Dioxane	88	10.868	10.851	0.017	37	938	0.0196	0.0143	
60 Methyl methacrylate	41	11.014	10.990	0.024	92	568	0.0196	0.003895	
62 4-Methyl-2-pentanone (MIBK	43	11.903	11.878	0.025	58	3279	0.0196	0.0132	
63 cis-1,3-Dichloropropene	75	11.914	11.915	-0.001	95	5048	0.0196	0.0198	
64 trans-1,3-Dichloropropene	75	12.658	12.660	-0.002	95	5113	0.0196	0.0207	
65 Toluene	91	12.793	12.795	-0.002	94	12831	0.0196	0.0228	
66 1,1,2-Trichloroethane	83	12.847	12.853	-0.006	90	3291	0.0196	0.0212	
69 2-Hexanone	58	13.349	13.313	0.036	1	171	0.0196	0.001275	
70 Chlorodibromomethane	129	13.575	13.580	-0.005	97	5481	0.0196	0.0185	
71 n-Octane	85	13.618	13.618	0.000	84	3715	0.0196	0.0205	
72 Ethylene Dibromide	107	13.872	13.876	-0.004	95	5780	0.0196	0.0209	
73 Tetrachloroethene	129	14.001	14.005	-0.004	94	4512	0.0196	0.0215	
74 Chlorobenzene	112	14.907	14.910	-0.003	91	10116	0.0196	0.0228	
76 Ethylbenzene	91	15.236	15.237	-0.001	98	16601	0.0196	0.0226	
77 m-Xylene & p-Xylene	91	15.408	15.413	-0.005	99	25259	0.0392	0.0443	
79 Bromoform	173	15.807	15.812	-0.005	92	4569	0.0196	0.0179	
80 Styrene	104	15.883	15.884	-0.001	96	6414	0.0196	0.0176	
81 n-Nonane	57	15.926	15.926	0.000	80	6234	0.0196	0.0203	
82 o-Xylene	91	15.948	15.948	0.000	98	13809	0.0196	0.0229	
83 1,1,2,2-Tetrachloroethane	83	16.271	16.269	0.002	96	7575	0.0196	0.0210	
84 1,2,3-Trichloropropane	110	16.422	16.424	-0.002	97	2822	0.0196	0.0216	
85 Isopropylbenzene	105	16.562	16.566	-0.004	46	19387	0.0196	0.0241	
86 N-Propylbenzene	120	17.139	17.144	-0.005	97	4395	0.0196	0.0200	
87 2-Chlorotoluene	126	17.166	17.164	0.002	94	4309	0.0196	0.0212	
88 4-Ethyltoluene	105	17.312	17.312	0.000	99	16730	0.0196	0.0200	
89 1,3,5-Trimethylbenzene	120	17.404	17.400	0.004	92	6890	0.0196	0.0204	
90 Alpha Methyl Styrene	118	17.657	17.652	0.005	84	3968	0.0196	0.0136	
91 n-Decane	57	17.797	17.793	0.004	94	7786	0.0196	0.0186	
92 tert-Butylbenzene	119	17.867	17.868	-0.001	90	16756	0.0196	0.0213	
93 1,2,4-Trimethylbenzene	105	17.884	17.884	0.000	95	14068	0.0196	0.0200	
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	97	9387	0.0196	0.0207	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
95 sec-Butylbenzene	105	18.169	18.170	-0.001	98	21397	0.0196	0.0212	
96 Benzyl chloride	91	18.239	18.237	0.002	97	9181	0.0196	0.0173	
97 1,4-Dichlorobenzene	146	18.250	18.251	-0.001	91	9393	0.0196	0.0208	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	96	17294	0.0196	0.0195	
99 1,2,3-Trimethylbenzene	105	18.390	18.393	-0.003	98	15864	0.0196	0.0198	
101 1,2-Dichlorobenzene	146	18.638	18.638	0.000	91	8947	0.0196	0.0203	
104 n-Butylbenzene	91	18.833	18.832	0.001	98	14299	0.0196	0.0181	
105 Undecane	57	19.232	19.228	0.004	92	7896	0.0196	0.0175	
106 1,2-Dibromo-3-Chloropropan	157	19.286	19.284	0.002	86	3926	0.0196	0.0146	
108 1,2,4,5-Tetramethylbenzene	119	19.641	19.641	0.000	96	7868	0.0196	0.0181	
111 Dodecane	57	20.337	20.340	-0.003	96	3630	0.0196	0.008570	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	93	4733	0.0196	0.0144	
113 Naphthalene	128	20.574	20.574	0.000	98	10453	0.0196	0.0143	
115 Hexachlorobutadiene	225	20.822	20.827	-0.005	93	7050	0.0196	0.0196	
116 1,2,3-Trichlorobenzene	180	20.866	20.864	0.002	93	4640	0.0196	0.0139	
S 119 Xylenes, Total	100				0		0.0588	0.0672	
S 120 1,2-Dichloroethene, Total	1				0		0.0392	0.0475	

Reagents:

40L1-3DNP_00001	Amount Added: 50.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

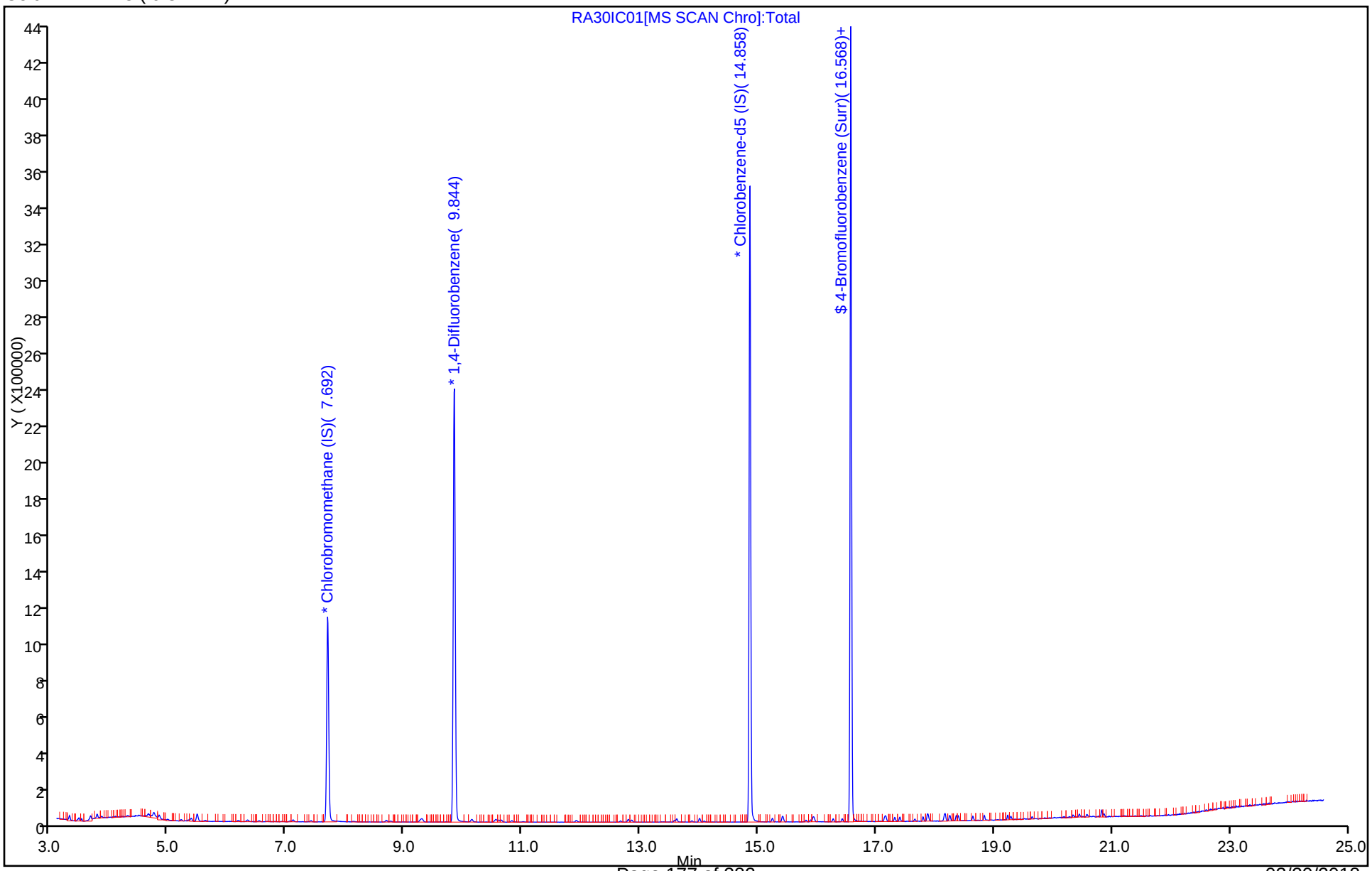
Report Date: 05-Feb-2018 13:02:46 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC01.D

Injection Date:	30-Jan-2018 12:29:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L1			Worklist Smp#:	3
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC02.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 30-Jan-2018 13:16:30 ALS Bottle#: 9 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-004
Misc. Info.: 134528
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:02:50 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 30-Jan-2018 13:52:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.703	7.710	-0.007	86	383916	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.849	9.852	-0.003	95	2394140	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.858	14.859	-0.001	89	2080924	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.568	16.570	-0.002	86	1618846	4.00	4.10	
6 Chlorodifluoromethane	67	3.486	3.471	0.015	96	2123	0.0392	0.0453	
7 Propene	41	3.486	3.477	0.009	90	5102	0.0392	0.0556	
8 Dichlorodifluoromethane	85	3.529	3.519	0.010	100	17336	0.0392	0.0481	
9 Chloromethane	52	3.664	3.653	0.011	99	2252	0.0392	0.0686	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.685	3.675	0.010	93	10542	0.0392	0.0432	
12 Vinyl chloride	62	3.799	3.789	0.010	96	4884	0.0392	0.0485	
13 Butane	43	3.869	3.863	0.006	81	5263	0.0392	0.0488	
14 Butadiene	54	3.874	3.863	0.011	68	2949	0.0392	0.0454	
15 Bromomethane	94	4.106	4.098	0.008	95	4220	0.0392	0.0453	
16 Chloroethane	64	4.208	4.208	0.000	96	2193	0.0392	0.0481	
17 Ethanol	31	4.305	4.313	-0.008	90	7445	0.1960	0.2587	
18 Vinyl bromide	106	4.440	4.441	-0.001	97	4302	0.0392	0.0471	
19 2-Methylbutane	43	4.505	4.498	0.007	78	3188	0.0392	0.0419	
20 Acrolein	56	4.667	4.656	0.011	30	3603	0.0392	0.1700	
21 Trichlorofluoromethane	101	4.667	4.659	0.008	99	14659	0.0392	0.0428	
22 Acetonitrile	40	4.694	4.716	-0.022	84	1047	0.0392	0.0401	
23 Acetone	58	4.753	4.748	0.005	99	16017	0.1176	0.3990	
24 Isopropyl alcohol	45	4.845	4.843	0.002	80	23064	0.1176	0.1495	
25 Pentane	72	4.850	4.847	0.003	75	1224	0.0392	0.0457	
26 Ethyl ether	31	4.985	4.975	0.010	81	4487	0.0392	0.0463	
27 1,1-Dichloroethene	96	5.217	5.218	-0.001	94	6378	0.0392	0.0439	
28 Acrylonitrile	53	5.287	5.288	-0.001	91	3947	0.0392	0.0430	
29 2-Methyl-2-propanol	59	5.330	5.325	0.005	93	13003	0.0392	0.0449	
30 1,1,2-Trichloro-1,2,2-trif	101	5.389	5.390	-0.001	95	12506	0.0392	0.0402	
31 Methylene Chloride	84	5.492	5.492	0.000	92	21070	0.0392	0.1403	
32 3-Chloro-1-propene	39	5.513	5.514	-0.001	97	5502	0.0392	0.0456	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.627	5.625	0.002	98	17092	0.0392	0.0425	
34 trans-1,2-Dichloroethene	96	6.187	6.192	-0.005	96	6219	0.0392	0.0422	
36 Methyl tert-butyl ether	73	6.338	6.323	0.015	95	18729	0.0392	0.0412	
37 1,1-Dichloroethane	63	6.538	6.545	-0.007	99	12191	0.0392	0.0434	
38 Vinyl acetate	43	6.667	6.662	0.005	99	8219	0.0392	0.0303	
39 2-Butanone (MEK)	72	7.050	7.036	0.014	97	3926	0.0392	0.0564	
40 Hexane	56	7.120	7.119	0.001	83	5186	0.0392	0.0461	
41 cis-1,2-Dichloroethene	96	7.422	7.426	-0.004	94	6831	0.0392	0.0432	
42 Ethyl acetate	43	7.638	7.622	0.016	97	8705	0.0392	0.0357	
43 Chloroform	83	7.740	7.743	-0.003	92	14558	0.0392	0.0410	
44 Tetrahydrofuran	42	8.129	8.108	0.021	87	6016	0.0392	0.0484	
45 1,1,1-Trichloroethane	97	8.695	8.701	-0.006	95	15107	0.0392	0.0405	
46 1,2-Dichloroethane	62	8.765	8.771	-0.006	97	9999	0.0392	0.0395	
47 Benzene	78	9.266	9.274	-0.008	96	19199	0.0392	0.0420	
49 Cyclohexane	69	9.299	9.298	0.001	93	3056	0.0392	0.0416	
50 Carbon tetrachloride	117	9.310	9.312	-0.002	92	13765	0.0392	0.0373	
53 Isooctane	57	10.145	10.145	0.000	97	29173	0.0392	0.0440	
54 1,2-Dichloropropane	63	10.539	10.540	-0.001	88	6633	0.0392	0.0417	
55 n-Heptane	71	10.561	10.561	0.000	83	6584	0.0392	0.0415	
56 Trichloroethene	130	10.604	10.605	-0.001	93	8207	0.0392	0.0380	
57 Dibromomethane	93	10.641	10.648	-0.007	93	8735	0.0392	0.0464	
58 Dichlorobromomethane	83	10.819	10.825	-0.006	98	12118	0.0392	0.0359	
59 1,4-Dioxane	88	10.868	10.851	0.017	71	2408	0.0392	0.0357	
60 Methyl methacrylate	41	10.997	10.990	0.007	93	3421	0.0392	0.0228	
62 4-Methyl-2-pentanone (MIBK	43	11.898	11.878	0.020	96	8155	0.0392	0.0318	
63 cis-1,3-Dichloropropene	75	11.914	11.915	-0.001	96	9812	0.0392	0.0373	
64 trans-1,3-Dichloropropene	75	12.658	12.660	-0.002	94	9248	0.0392	0.0367	
65 Toluene	91	12.798	12.795	0.003	95	23313	0.0392	0.0407	
66 1,1,2-Trichloroethane	83	12.852	12.853	-0.001	98	6507	0.0392	0.0412	
69 2-Hexanone	58	13.338	13.313	0.025	95	2418	0.0392	0.0177	
70 Chlorodibromomethane	129	13.575	13.580	-0.005	97	9403	0.0392	0.0311	
71 n-Octane	85	13.618	13.618	0.000	83	7181	0.0392	0.0389	
72 Ethylene Dibromide	107	13.877	13.876	0.001	99	9915	0.0392	0.0352	
73 Tetrachloroethene	129	14.006	14.005	0.001	94	8773	0.0392	0.0411	
74 Chlorobenzene	112	14.907	14.910	-0.003	94	18500	0.0392	0.0410	
76 Ethylbenzene	91	15.241	15.237	0.004	99	30045	0.0392	0.0401	
77 m-Xylene & p-Xylene	91	15.414	15.413	0.001	99	46840	0.0784	0.0805	
79 Bromoform	173	15.813	15.812	0.001	94	7987	0.0392	0.0307	
80 Styrene	104	15.883	15.884	-0.001	97	11145	0.0392	0.0300	
81 n-Nonane	57	15.926	15.926	0.000	84	12938	0.0392	0.0413	
82 o-Xylene	91	15.948	15.948	0.000	98	25131	0.0392	0.0409	
83 1,1,2,2-Tetrachloroethane	83	16.271	16.269	0.002	96	13804	0.0392	0.0376	
84 1,2,3-Trichloropropane	110	16.427	16.424	0.003	97	5319	0.0392	0.0400	
85 Isopropylbenzene	105	16.568	16.566	0.002	61	35946	0.0392	0.0438	
86 N-Propylbenzene	120	17.145	17.144	0.001	97	8404	0.0392	0.0375	
87 2-Chlorotoluene	126	17.166	17.164	0.002	95	8403	0.0392	0.0405	
88 4-Ethyltoluene	105	17.312	17.312	0.000	99	32398	0.0392	0.0380	
89 1,3,5-Trimethylbenzene	120	17.398	17.400	-0.002	92	13130	0.0392	0.0381	
90 Alpha Methyl Styrene	118	17.652	17.652	0.000	80	7239	0.0392	0.0243	
91 n-Decane	57	17.792	17.793	-0.001	93	15452	0.0392	0.0363	
92 tert-Butylbenzene	119	17.873	17.868	0.005	90	31873	0.0392	0.0398	
93 1,2,4-Trimethylbenzene	105	17.883	17.884	-0.001	96	27236	0.0392	0.0380	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	96	17259	0.0392	0.0374	
95 sec-Butylbenzene	105	18.169	18.170	-0.001	99	40006	0.0392	0.0389	
96 Benzyl chloride	91	18.239	18.237	0.002	98	17686	0.0392	0.0328	
97 1,4-Dichlorobenzene	146	18.250	18.251	-0.001	91	17625	0.0392	0.0383	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	96	32338	0.0392	0.0357	
99 1,2,3-Trimethylbenzene	105	18.396	18.393	0.003	98	32040	0.0392	0.0393	
101 1,2-Dichlorobenzene	146	18.638	18.638	0.000	90	16621	0.0392	0.0371	
104 n-Butylbenzene	91	18.832	18.832	0.000	97	27670	0.0392	0.0343	
105 Undecane	57	19.232	19.228	0.004	93	15070	0.0392	0.0327	
106 1,2-Dibromo-3-Chloropropan	157	19.285	19.284	0.001	88	7054	0.0392	0.0257	
108 1,2,4,5-Tetramethylbenzene	119	19.641	19.641	0.000	95	14005	0.0392	0.0317	
111 Dodecane	57	20.342	20.340	0.002	97	8120	0.0392	0.0188	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	91	8463	0.0392	0.0252	
113 Naphthalene	128	20.574	20.574	0.000	98	18850	0.0392	0.0253	
115 Hexachlorobutadiene	225	20.828	20.827	0.001	93	12634	0.0392	0.0344	
116 1,2,3-Trichlorobenzene	180	20.865	20.864	0.001	92	8967	0.0392	0.0264	
S 119 Xylenes, Total	100				0		0.1176	0.1215	
S 120 1,2-Dichloroethene, Total	1				0		0.0784	0.0854	

Reagents:

40L1-3DNP_00001	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

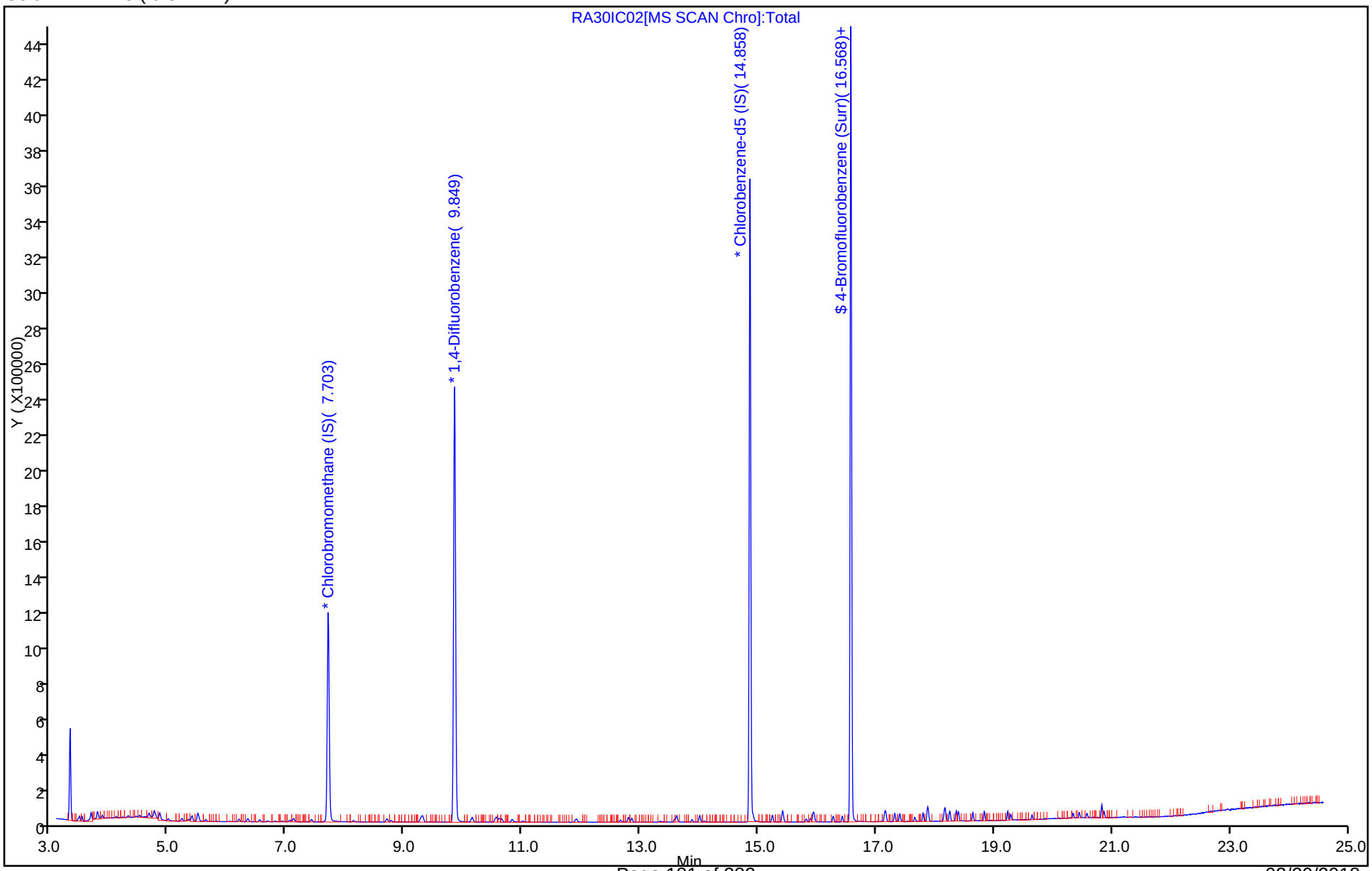
Report Date: 05-Feb-2018 13:02:51 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC02.D

Injection Date:	30-Jan-2018 13:16:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L2			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC03.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 30-Jan-2018 14:04:30 ALS Bottle#: 9 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-005
Misc. Info.: 134528
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:02:54 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 30-Jan-2018 15:38:38

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.697	7.710	-0.013	85	391790	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.844	9.852	-0.008	95	2404366	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.858	14.859	-0.001	89	2084615	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.568	16.570	-0.002	86	1644837	4.00	4.16	
6 Chlorodifluoromethane	67	3.470	3.471	-0.001	95	4119	0.0784	0.0862	
7 Propene	41	3.470	3.477	-0.007	62	9912	0.0784	0.1059	
8 Dichlorodifluoromethane	85	3.513	3.519	-0.006	100	30290	0.0784	0.0823	
9 Chloromethane	52	3.642	3.653	-0.011	99	3537	0.0784	0.1056	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.669	3.675	-0.006	93	20579	0.0784	0.0826	
12 Vinyl chloride	62	3.783	3.789	-0.006	99	7942	0.0784	0.0773	
13 Butane	43	3.858	3.863	-0.005	78	9031	0.0784	0.0820	
14 Butadiene	54	3.853	3.863	-0.010	79	5828	0.0784	0.0880	
15 Bromomethane	94	4.090	4.098	-0.008	97	8417	0.0784	0.0885	
16 Chloroethane	64	4.198	4.208	-0.010	96	4147	0.0784	0.0891	
17 Ethanol	31	4.300	4.313	-0.013	90	14354	0.3920	0.4887	
18 Vinyl bromide	106	4.430	4.441	-0.011	98	7850	0.0784	0.0842	
19 2-Methylbutane	43	4.489	4.498	-0.009	81	6778	0.0784	0.0874	
20 Acrolein	56	4.645	4.656	-0.011	31	5394	0.0784	0.2493	
21 Trichlorofluoromethane	101	4.651	4.659	-0.008	98	28702	0.0784	0.0821	
22 Acetonitrile	40	4.688	4.713	-0.025	97	1986	0.0784	0.0746	
23 Acetone	58	4.742	4.748	-0.006	99	28281	0.2352	0.6904	
24 Isopropyl alcohol	45	4.834	4.843	-0.009	92	44345	0.2352	0.2816	
25 Pentane	72	4.834	4.847	-0.013	82	2351	0.0784	0.0861	
26 Ethyl ether	31	4.974	4.975	-0.001	84	8803	0.0784	0.0890	
27 1,1-Dichloroethene	96	5.206	5.218	-0.012	96	11837	0.0784	0.0798	
28 Acrylonitrile	53	5.276	5.288	-0.012	94	7448	0.0784	0.0795	
29 2-Methyl-2-propanol	59	5.325	5.325	0.000	93	25307	0.0784	0.0857	
30 1,1,2-Trichloro-1,2,2-trif	101	5.384	5.390	-0.006	95	25548	0.0784	0.0805	
31 Methylene Chloride	84	5.476	5.492	-0.016	93	26512	0.0784	0.1730	
32 3-Chloro-1-propene	39	5.503	5.514	-0.011	96	10380	0.0784	0.0843	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.611	5.625	-0.014	98	32885	0.0784	0.0801	
34 trans-1,2-Dichloroethene	96	6.182	6.192	-0.010	96	11930	0.0784	0.0793	
36 Methyl tert-butyl ether	73	6.322	6.323	-0.001	95	36615	0.0784	0.0789	
37 1,1-Dichloroethane	63	6.533	6.545	-0.012	99	23365	0.0784	0.0815	
38 Vinyl acetate	43	6.657	6.662	-0.005	99	18984	0.0784	0.0685	
39 2-Butanone (MEK)	72	7.034	7.036	-0.002	97	9098	0.0784	0.1280	
40 Hexane	56	7.110	7.119	-0.009	83	9498	0.0784	0.0827	
41 cis-1,2-Dichloroethene	96	7.417	7.426	-0.009	96	12779	0.0784	0.0792	
42 Ethyl acetate	43	7.627	7.622	0.005	99	16771	0.0784	0.0674	
43 Chloroform	83	7.730	7.743	-0.013	94	28954	0.0784	0.0799	
44 Tetrahydrofuran	42	8.118	8.108	0.010	86	10505	0.0784	0.0828	
45 1,1,1-Trichloroethane	97	8.690	8.701	-0.011	95	29288	0.0784	0.0769	
46 1,2-Dichloroethane	62	8.765	8.771	-0.006	99	20209	0.0784	0.0795	
47 Benzene	78	9.267	9.274	-0.007	98	37499	0.0784	0.0816	
48 n-Butanol	31	9.358	9.296	0.062	2	490	0.0784	0.0161	
49 Cyclohexane	69	9.288	9.298	-0.010	97	6414	0.0784	0.0870	
50 Carbon tetrachloride	117	9.299	9.312	-0.013	98	28139	0.0784	0.0760	
53 Isooctane	57	10.146	10.145	0.001	98	55433	0.0784	0.0832	
54 1,2-Dichloropropane	63	10.534	10.540	-0.006	87	13116	0.0784	0.0821	
55 n-Heptane	71	10.555	10.561	-0.006	83	12852	0.0784	0.0807	
56 Trichloroethene	130	10.598	10.605	-0.007	92	16817	0.0784	0.0775	
57 Dibromomethane	93	10.642	10.648	-0.006	96	15715	0.0784	0.0831	
58 Dichlorobromomethane	83	10.820	10.825	-0.005	99	24293	0.0784	0.0717	
59 1,4-Dioxane	88	10.868	10.851	0.017	68	5216	0.0784	0.0770	
60 Methyl methacrylate	41	10.998	10.990	0.008	95	9269	0.0784	0.0615	
62 4-Methyl-2-pentanone (MIBK	43	11.882	11.878	0.004	92	19192	0.0784	0.0745	
63 cis-1,3-Dichloropropene	75	11.909	11.915	-0.006	96	18927	0.0784	0.0717	
64 trans-1,3-Dichloropropene	75	12.658	12.660	-0.002	96	18004	0.0784	0.0712	
65 Toluene	91	12.793	12.795	-0.002	92	44415	0.0784	0.0774	
66 1,1,2-Trichloroethane	83	12.853	12.853	-0.001	98	12134	0.0784	0.0767	
69 2-Hexanone	58	13.322	13.313	0.009	97	8080	0.0784	0.0590	
70 Chlorodibromomethane	129	13.580	13.580	0.000	97	20613	0.0784	0.0681	
71 n-Octane	85	13.618	13.618	0.000	83	14847	0.0784	0.0804	
72 Ethylene Dibromide	107	13.872	13.876	-0.004	96	20544	0.0784	0.0728	
73 Tetrachloroethene	129	14.001	14.005	-0.004	95	16736	0.0784	0.0782	
74 Chlorobenzene	112	14.907	14.910	-0.003	93	35874	0.0784	0.0793	
76 Ethylbenzene	91	15.236	15.237	-0.001	99	60028	0.0784	0.0799	
77 m-Xylene & p-Xylene	91	15.414	15.413	0.001	100	95548	0.1568	0.1640	
79 Bromoform	173	15.808	15.812	-0.004	93	15850	0.0784	0.0609	
80 Styrene	104	15.883	15.884	-0.001	99	23411	0.0784	0.0630	
81 n-Nonane	57	15.926	15.926	0.000	83	25340	0.0784	0.0807	
82 o-Xylene	91	15.948	15.948	0.000	97	50674	0.0784	0.0824	
83 1,1,2,2-Tetrachloroethane	83	16.266	16.269	-0.003	97	28370	0.0784	0.0771	
84 1,2,3-Trichloropropane	110	16.422	16.424	-0.002	98	10568	0.0784	0.0793	
85 Isopropylbenzene	105	16.562	16.566	-0.004	89	69379	0.0784	0.0843	
86 N-Propylbenzene	120	17.145	17.144	0.001	99	17429	0.0784	0.0776	
87 2-Chlorotoluene	126	17.161	17.164	-0.003	97	16753	0.0784	0.0806	
88 4-Ethyltoluene	105	17.312	17.312	0.000	99	65633	0.0784	0.0768	
89 1,3,5-Trimethylbenzene	120	17.398	17.400	-0.002	91	26109	0.0784	0.0757	
90 Alpha Methyl Styrene	118	17.652	17.652	0.000	86	15742	0.0784	0.0528	
91 n-Decane	57	17.792	17.793	-0.001	93	32834	0.0784	0.0769	
92 tert-Butylbenzene	119	17.867	17.868	-0.001	95	64192	0.0784	0.0801	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.884	17.884	0.000	96	57678	0.0784	0.0802	
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	98	36114	0.0784	0.0781	
95 sec-Butylbenzene	105	18.169	18.170	-0.001	98	81660	0.0784	0.0792	
96 Benzyl chloride	91	18.239	18.237	0.002	98	35545	0.0784	0.0657	
97 1,4-Dichlorobenzene	146	18.250	18.251	-0.001	92	35715	0.0784	0.0775	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	96	72796	0.0784	0.0803	
99 1,2,3-Trimethylbenzene	105	18.390	18.393	-0.003	98	64016	0.0784	0.0784	
101 1,2-Dichlorobenzene	146	18.639	18.638	0.001	93	35357	0.0784	0.0787	
104 n-Butylbenzene	91	18.833	18.832	0.001	98	59321	0.0784	0.0734	
105 Undecane	57	19.226	19.228	-0.002	93	32417	0.0784	0.0702	
106 1,2-Dibromo-3-Chloropropan	157	19.286	19.284	0.002	89	15056	0.0784	0.0548	
108 1,2,4,5-Tetramethylbenzene	119	19.642	19.641	0.001	96	29468	0.0784	0.0666	
111 Dodecane	57	20.343	20.340	0.002	98	23965	0.0784	0.0554	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	94	19766	0.0784	0.0588	
113 Naphthalene	128	20.574	20.574	0.000	99	46167	0.0784	0.0618	
115 Hexachlorobutadiene	225	20.828	20.827	0.001	95	26912	0.0784	0.0732	
116 1,2,3-Trichlorobenzene	180	20.860	20.864	-0.004	93	20286	0.0784	0.0596	
117 2-Methylnaphthalene	142	21.680	21.680	0.000	98	3036	0.1803	0.0165	
118 1-Methylnaphthalene	142	21.825	21.823	0.002	99	5988	0.1803	0.0328	
S 119 Xylenes, Total	100				0		0.2352	0.2464	
S 120 1,2-Dichloroethene, Total	1				0		0.1568	0.1585	

Reagents:

40L1-3DNP_00001	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

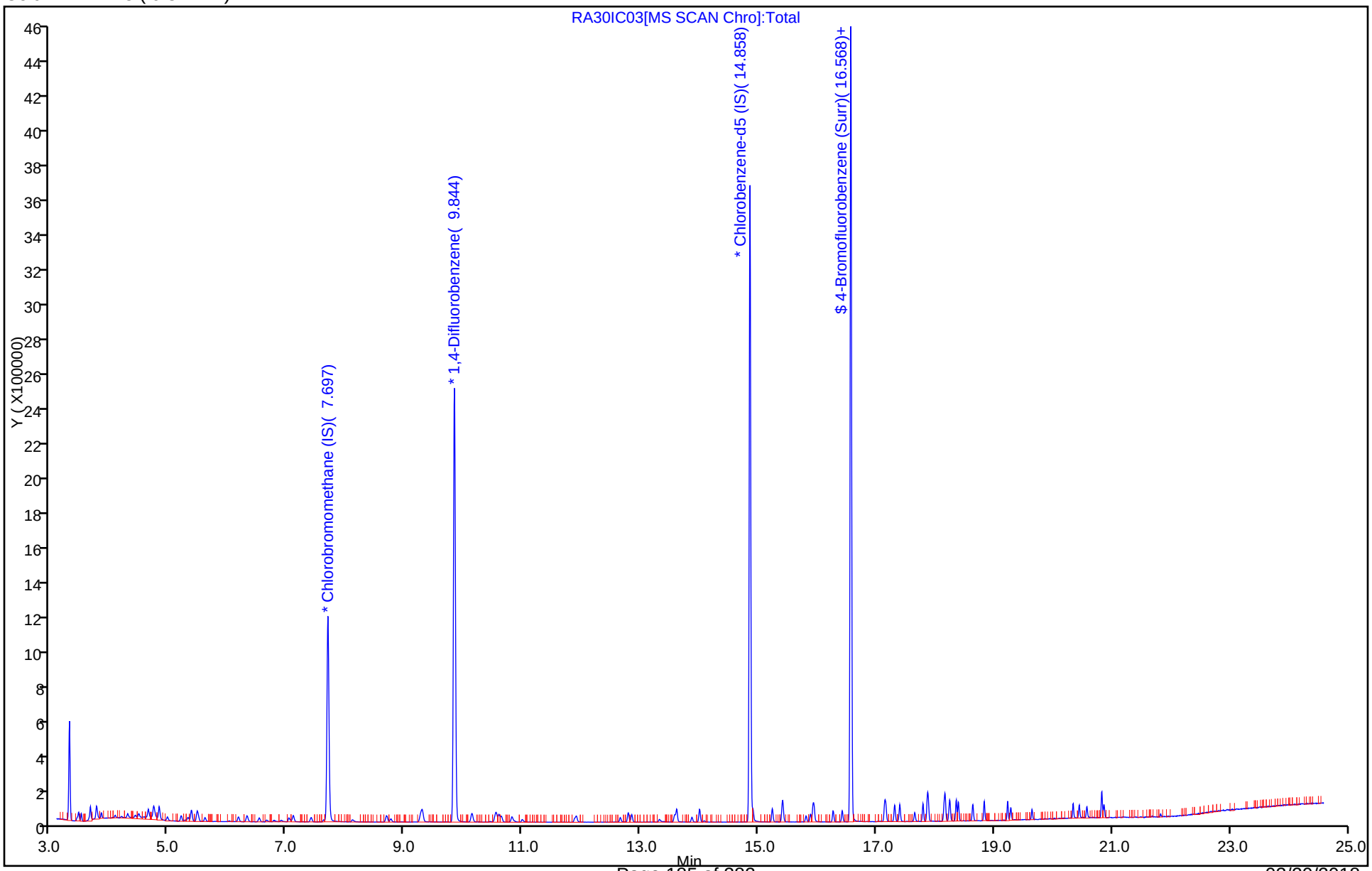
Report Date: 05-Feb-2018 13:02:55 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC03.D

Injection Date:	30-Jan-2018 14:04:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L3			Worklist Smp#:	5
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC04.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 30-Jan-2018 14:50:30 ALS Bottle#: 10 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-006
Misc. Info.: 134526
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:03:00 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: tajh Date: 30-Jan-2018 15:38:15

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.708	7.710	-0.002	85	388675	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.854	9.852	0.002	95	2397193	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.858	14.859	-0.001	89	2097206	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.568	16.570	-0.002	89	1641285	4.00	4.13	
6 Chlorodifluoromethane	67	3.481	3.471	0.010	96	7784	0.1600	0.1642	
7 Propene	41	3.486	3.477	0.009	97	16712	0.1600	0.1800	
8 Dichlorodifluoromethane	85	3.529	3.519	0.010	100	68839	0.1600	0.1886	
9 Chloromethane	52	3.659	3.653	0.006	99	6766	0.1600	0.2036	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.680	3.675	0.005	93	38610	0.1600	0.1562	
12 Vinyl chloride	62	3.799	3.789	0.010	99	16500	0.1600	0.1619	
13 Butane	43	3.869	3.863	0.006	79	18455	0.1600	0.1690	
14 Butadiene	54	3.869	3.863	0.006	71	11132	0.1600	0.1693	
15 Bromomethane	94	4.101	4.098	0.003	98	15024	0.1600	0.1593	
16 Chloroethane	64	4.214	4.208	0.006	98	7784	0.1600	0.1685	
17 Ethanol	31	4.306	4.313	-0.007	91	24919	0.8000	0.8552	
18 Vinyl bromide	106	4.440	4.441	-0.001	97	15440	0.1600	0.1670	
19 2-Methylbutane	43	4.500	4.498	0.002	81	12656	0.1600	0.1644	
20 Acrolein	56	4.661	4.656	0.005	29	3830	0.1600	0.1784	
21 Trichlorofluoromethane	101	4.661	4.659	0.002	100	57868	0.1600	0.1669	
22 Acetonitrile	40	4.699	4.713	-0.014	98	3781	0.1600	0.1431	
23 Acetone	58	4.753	4.748	0.005	99	28378	0.4800	0.6983	
24 Isopropyl alcohol	45	4.834	4.843	-0.009	96	82100	0.4800	0.5256	
25 Pentane	72	4.850	4.847	0.003	98	4428	0.1600	0.1634	
26 Ethyl ether	31	4.985	4.975	0.010	81	16886	0.1600	0.1721	
27 1,1-Dichloroethene	96	5.217	5.218	-0.001	95	22742	0.1600	0.1545	
28 Acrylonitrile	53	5.287	5.288	-0.001	91	15000	0.1600	0.1614	
29 2-Methyl-2-propanol	59	5.325	5.325	0.000	93	47907	0.1600	0.1636	
30 1,1,2-Trichloro-1,2,2-trif	101	5.395	5.390	0.005	95	49793	0.1600	0.1582	
31 Methylene Chloride	84	5.492	5.492	0.000	92	37255	0.1600	0.2451	
32 3-Chloro-1-propene	39	5.513	5.514	-0.001	95	20149	0.1600	0.1650	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.627	5.625	0.002	98	65612	0.1600	0.1612	
34 trans-1,2-Dichloroethene	96	6.188	6.192	-0.004	97	24021	0.1600	0.1609	
36 Methyl tert-butyl ether	73	6.328	6.323	0.005	95	72140	0.1600	0.1567	
37 1,1-Dichloroethane	63	6.543	6.545	-0.002	100	45273	0.1600	0.1592	
38 Vinyl acetate	43	6.662	6.662	0.000	99	38225	0.1600	0.1391	
39 2-Butanone (MEK)	72	7.040	7.036	0.004	97	11032	0.1600	0.1565	
40 Hexane	56	7.126	7.119	0.007	85	18222	0.1600	0.1599	
41 cis-1,2-Dichloroethene	96	7.422	7.426	-0.004	96	25103	0.1600	0.1568	
42 Ethyl acetate	43	7.627	7.622	0.005	99	35467	0.1600	0.1437	
43 Chloroform	83	7.746	7.743	0.003	88	57203	0.1600	0.1591	
44 Tetrahydrofuran	42	8.118	8.108	0.010	87	20481	0.1600	0.1628	
45 1,1,1-Trichloroethane	97	8.700	8.701	-0.001	96	57324	0.1600	0.1517	
46 1,2-Dichloroethane	62	8.770	8.771	-0.001	99	37522	0.1600	0.1480	
47 Benzene	78	9.272	9.274	-0.002	97	74171	0.1600	0.1620	
48 n-Butanol	31	9.337	9.296	0.041	56	2654	0.1600	0.0876	
49 Cyclohexane	69	9.304	9.298	0.006	95	11967	0.1600	0.1627	
50 Carbon tetrachloride	117	9.315	9.312	0.003	98	55870	0.1600	0.1513	
53 Isooctane	57	10.146	10.145	0.001	98	107521	0.1600	0.1619	
54 1,2-Dichloropropane	63	10.539	10.540	-0.001	87	25436	0.1600	0.1596	
55 n-Heptane	71	10.566	10.561	0.005	85	24522	0.1600	0.1545	
56 Trichloroethene	130	10.604	10.605	-0.001	95	32437	0.1600	0.1499	
57 Dibromomethane	93	10.647	10.648	-0.001	95	30017	0.1600	0.1593	
58 Dichlorobromomethane	83	10.825	10.825	0.000	99	50003	0.1600	0.1481	
59 1,4-Dioxane	88	10.852	10.851	0.001	86	10547	0.1600	0.1562	
60 Methyl methacrylate	41	10.992	10.990	0.002	97	18423	0.1600	0.1225	
62 4-Methyl-2-pentanone (MIBK	43	11.882	11.878	0.004	93	35511	0.1600	0.1383	
63 cis-1,3-Dichloropropene	75	11.914	11.915	-0.001	96	39090	0.1600	0.1485	
64 trans-1,3-Dichloropropene	75	12.664	12.660	0.004	96	37170	0.1600	0.1462	
65 Toluene	91	12.793	12.795	-0.002	94	88464	0.1600	0.1532	
66 1,1,2-Trichloroethane	83	12.853	12.853	-0.001	98	24240	0.1600	0.1523	
69 2-Hexanone	58	13.322	13.313	0.009	98	15426	0.1600	0.1120	
70 Chlorodibromomethane	129	13.580	13.580	0.000	98	40122	0.1600	0.1318	
71 n-Octane	85	13.618	13.618	0.000	85	28115	0.1600	0.1513	
72 Ethylene Dibromide	107	13.877	13.876	0.001	97	42246	0.1600	0.1487	
73 Tetrachloroethene	129	14.006	14.005	0.001	94	32954	0.1600	0.1531	
74 Chlorobenzene	112	14.912	14.910	0.002	93	69433	0.1600	0.1526	
76 Ethylbenzene	91	15.236	15.237	-0.001	99	115987	0.1600	0.1534	
77 m-Xylene & p-Xylene	91	15.414	15.413	0.001	100	183320	0.3200	0.3127	
79 Bromoform	173	15.813	15.812	0.001	94	31906	0.1600	0.1219	
80 Styrene	104	15.888	15.884	0.004	98	46940	0.1600	0.1255	
81 n-Nonane	57	15.926	15.926	0.000	86	49466	0.1600	0.1566	
82 o-Xylene	91	15.948	15.948	0.000	97	97828	0.1600	0.1581	
83 1,1,2,2-Tetrachloroethane	83	16.271	16.269	0.002	97	58220	0.1600	0.1572	
84 1,2,3-Trichloropropane	110	16.428	16.424	0.004	98	20539	0.1600	0.1532	
85 Isopropylbenzene	105	16.568	16.566	0.002	90	131986	0.1600	0.1594	
86 N-Propylbenzene	120	17.145	17.144	0.001	98	33714	0.1600	0.1491	
87 2-Chlorotoluene	126	17.166	17.164	0.002	93	32718	0.1600	0.1565	
88 4-Ethyltoluene	105	17.312	17.312	0.000	99	130522	0.1600	0.1519	
89 1,3,5-Trimethylbenzene	120	17.398	17.400	-0.002	91	52246	0.1600	0.1506	
90 Alpha Methyl Styrene	118	17.652	17.652	0.000	87	32438	0.1600	0.1081	
91 n-Decane	57	17.792	17.793	-0.001	93	65857	0.1600	0.1534	
92 tert-Butylbenzene	119	17.867	17.868	-0.001	91	127195	0.1600	0.1578	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.884	17.884	0.000	96	113107	0.1600	0.1564	
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	98	70364	0.1600	0.1513	
95 sec-Butylbenzene	105	18.169	18.170	-0.001	98	162720	0.1600	0.1569	
96 Benzyl chloride	91	18.234	18.237	-0.003	97	70710	0.1600	0.1300	
97 1,4-Dichlorobenzene	146	18.250	18.251	-0.001	92	70131	0.1600	0.1512	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	97	137773	0.1600	0.1511	
99 1,2,3-Trimethylbenzene	105	18.396	18.393	0.003	97	124983	0.1600	0.1522	
101 1,2-Dichlorobenzene	146	18.639	18.638	0.001	93	67149	0.1600	0.1487	
104 n-Butylbenzene	91	18.833	18.832	0.001	97	118568	0.1600	0.1458	
105 Undecane	57	19.232	19.228	0.004	92	67912	0.1600	0.1461	
106 1,2-Dibromo-3-Chloropropan	157	19.286	19.284	0.002	90	31369	0.1600	0.1136	
108 1,2,4,5-Tetramethylbenzene	119	19.642	19.641	0.001	96	58187	0.1600	0.1306	
111 Dodecane	57	20.343	20.340	0.002	98	51872	0.1600	0.1192	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	94	38197	0.1600	0.1129	
113 Naphthalene	128	20.574	20.574	0.000	99	94589	0.1600	0.1258	
115 Hexachlorobutadiene	225	20.828	20.827	0.001	94	50435	0.1600	0.1363	
116 1,2,3-Trichlorobenzene	180	20.866	20.864	0.002	95	40272	0.1600	0.1177	
117 2-Methylnaphthalene	142	21.680	21.680	0.000	99	25770	0.3680	0.1393	
118 1-Methylnaphthalene	142	21.825	21.823	0.002	99	44657	0.3680	0.2430	
S 119 Xylenes, Total	100				0		0.4800	0.4708	
S 120 1,2-Dichloroethene, Total	1				0		0.3200	0.3177	

Reagents:

40L5DNP_00016	Amount Added: 80.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

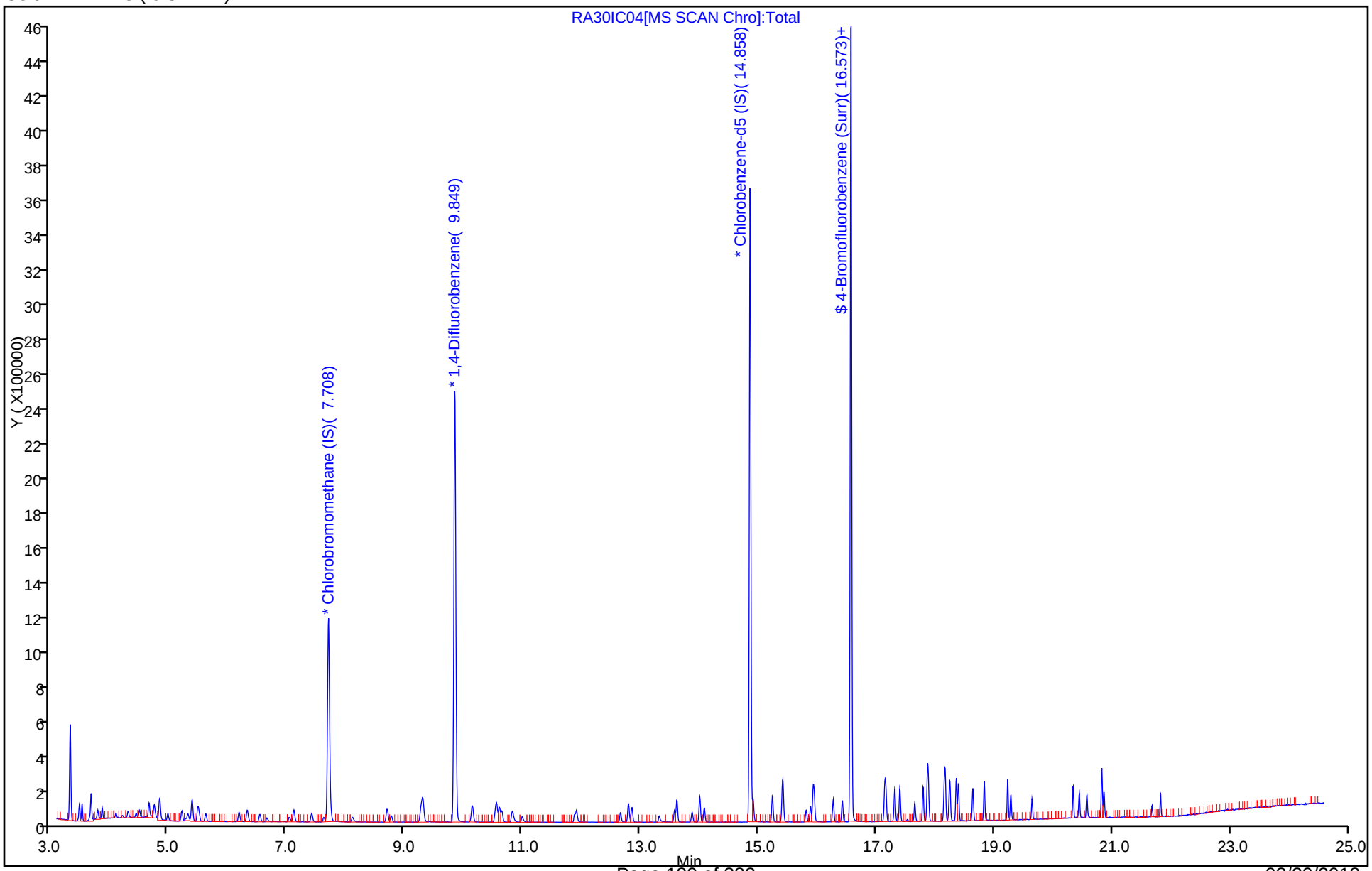
Report Date: 05-Feb-2018 13:03:01 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC04.D

Injection Date:	30-Jan-2018 14:50:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L4			Worklist Smp#:	6
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC05.D
Lims ID: IC L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 30-Jan-2018 15:39:30 ALS Bottle#: 10 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-007
Misc. Info.: 134526
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:03:09 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 30-Jan-2018 17:18:19

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.708	7.710	-0.002	85	383206	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.849	9.852	-0.003	95	2352829	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.858	14.859	-0.001	89	2056588	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.573	16.570	0.003	88	1633174	4.00	4.19	
6 Chlorodifluoromethane	67	3.475	3.471	0.004	96	19042	0.4000	0.4073	
7 Propene	41	3.481	3.477	0.004	98	39604	0.4000	0.4326	
8 Dichlorodifluoromethane	85	3.524	3.519	0.005	100	147314	0.4000	0.4094	
9 Chloromethane	52	3.653	3.653	0.000	99	14731	0.4000	0.4495	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.675	3.675	0.000	97	96019	0.4000	0.3939	
12 Vinyl chloride	62	3.788	3.789	-0.001	99	38877	0.4000	0.3869	
13 Butane	43	3.863	3.863	0.000	90	43962	0.4000	0.4083	
14 Butadiene	54	3.863	3.863	0.000	95	25683	0.4000	0.3963	
15 Bromomethane	94	4.095	4.098	-0.003	98	37574	0.4000	0.4041	
16 Chloroethane	64	4.209	4.208	0.000	97	18456	0.4000	0.4053	
17 Ethanol	31	4.306	4.313	-0.007	91	59239	2.00	2.06	
18 Vinyl bromide	106	4.440	4.441	-0.001	97	36894	0.4000	0.4048	
19 2-Methylbutane	43	4.494	4.498	-0.004	83	30876	0.4000	0.4069	
20 Acrolein	56	4.651	4.656	-0.005	29	10635	0.4000	0.5026	
21 Trichlorofluoromethane	101	4.656	4.659	-0.003	99	138405	0.4000	0.4050	
22 Acetonitrile	40	4.694	4.713	-0.019	98	11541	0.4000	0.4432	
23 Acetone	58	4.748	4.748	0.000	100	66025	1.20	1.65	
24 Isopropyl alcohol	45	4.834	4.843	-0.009	97	196181	1.20	1.27	
25 Pentane	72	4.845	4.847	-0.002	98	10720	0.4000	0.4012	
26 Ethyl ether	31	4.974	4.975	-0.001	81	40771	0.4000	0.4215	
27 1,1-Dichloroethene	96	5.217	5.218	-0.001	95	56370	0.4000	0.3885	
28 Acrylonitrile	53	5.287	5.288	-0.001	93	35688	0.4000	0.3895	
29 2-Methyl-2-propanol	59	5.319	5.325	-0.006	93	117307	0.4000	0.4062	
30 1,1,2-Trichloro-1,2,2-trif	101	5.389	5.390	-0.001	95	126008	0.4000	0.4061	
31 Methylene Chloride	84	5.486	5.492	-0.006	92	67350	0.4000	0.4494	
32 3-Chloro-1-propene	39	5.513	5.514	-0.001	98	47897	0.4000	0.3977	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.621	5.625	-0.004	98	160500	0.4000	0.3999	
34 trans-1,2-Dichloroethene	96	6.188	6.192	-0.004	96	57527	0.4000	0.3908	
36 Methyl tert-butyl ether	73	6.322	6.323	-0.001	95	182444	0.4000	0.4019	
37 1,1-Dichloroethane	63	6.543	6.545	-0.002	100	112441	0.4000	0.4010	
38 Vinyl acetate	43	6.657	6.662	-0.005	99	104997	0.4000	0.3874	
39 2-Butanone (MEK)	72	7.034	7.036	-0.002	98	29985	0.4000	0.4314	
40 Hexane	56	7.120	7.119	0.001	85	45099	0.4000	0.4013	
41 cis-1,2-Dichloroethene	96	7.422	7.426	-0.004	96	61408	0.4000	0.3891	
42 Ethyl acetate	43	7.622	7.622	0.000	99	97364	0.4000	0.4001	
43 Chloroform	83	7.741	7.743	-0.003	96	141724	0.4000	0.3997	
44 Tetrahydrofuran	42	8.107	8.108	-0.001	85	49933	0.4000	0.4026	
45 1,1,1-Trichloroethane	97	8.700	8.701	-0.001	95	147109	0.4000	0.3949	
46 1,2-Dichloroethane	62	8.776	8.771	0.005	98	100014	0.4000	0.4019	
47 Benzene	78	9.272	9.274	-0.002	98	180099	0.4000	0.4007	
48 n-Butanol	31	9.299	9.296	0.003	61	9384	0.4000	0.3154	
49 Cyclohexane	69	9.299	9.298	0.001	95	29509	0.4000	0.4088	
50 Carbon tetrachloride	117	9.310	9.312	-0.002	99	142596	0.4000	0.3935	
53 Isooctane	57	10.146	10.145	0.001	98	268337	0.4000	0.4117	
54 1,2-Dichloropropane	63	10.539	10.540	-0.001	85	62400	0.4000	0.3990	
55 n-Heptane	71	10.561	10.561	0.000	83	63962	0.4000	0.4105	
56 Trichloroethene	130	10.604	10.605	-0.001	93	80726	0.4000	0.3801	
57 Dibromomethane	93	10.647	10.648	-0.001	95	72482	0.4000	0.3918	
58 Dichlorobromomethane	83	10.825	10.825	0.000	99	128060	0.4000	0.3864	
59 1,4-Dioxane	88	10.852	10.851	0.001	85	26213	0.4000	0.3955	
60 Methyl methacrylate	41	10.987	10.990	-0.003	97	51419	0.4000	0.3484	
62 4-Methyl-2-pentanone (MIBK	43	11.876	11.878	-0.002	93	95687	0.4000	0.3798	
63 cis-1,3-Dichloropropene	75	11.914	11.915	-0.001	92	100184	0.4000	0.3878	
64 trans-1,3-Dichloropropene	75	12.658	12.660	-0.002	96	93053	0.4000	0.3732	
65 Toluene	91	12.793	12.795	-0.002	93	222095	0.4000	0.3921	
66 1,1,2-Trichloroethane	83	12.852	12.853	-0.001	99	62032	0.4000	0.3975	
69 2-Hexanone	58	13.305	13.313	-0.008	97	49161	0.4000	0.3639	
70 Chlorodibromomethane	129	13.580	13.580	0.000	98	107735	0.4000	0.3610	
71 n-Octane	85	13.618	13.618	0.000	85	73235	0.4000	0.4019	
72 Ethylene Dibromide	107	13.877	13.876	0.001	98	107221	0.4000	0.3849	
73 Tetrachloroethene	129	14.006	14.005	0.001	95	82386	0.4000	0.3902	
74 Chlorobenzene	112	14.912	14.910	0.002	93	174562	0.4000	0.3912	
76 Ethylbenzene	91	15.236	15.237	-0.001	99	293553	0.4000	0.3960	
77 m-Xylene & p-Xylene	91	15.414	15.413	0.001	100	464738	0.8000	0.8085	
79 Bromoform	173	15.813	15.812	0.001	95	87253	0.4000	0.3399	
80 Styrene	104	15.883	15.884	-0.001	98	131824	0.4000	0.3595	
81 n-Nonane	57	15.926	15.926	0.000	84	130349	0.4000	0.4209	
82 o-Xylene	91	15.948	15.948	0.000	98	244961	0.4000	0.4036	
83 1,1,2,2-Tetrachloroethane	83	16.271	16.269	0.002	98	152141	0.4000	0.4188	
84 1,2,3-Trichloropropane	110	16.422	16.424	-0.002	98	52066	0.4000	0.3960	
85 Isopropylbenzene	105	16.568	16.566	0.002	97	333169	0.4000	0.4104	
86 N-Propylbenzene	120	17.145	17.144	0.001	99	89517	0.4000	0.4037	
87 2-Chlorotoluene	126	17.161	17.164	-0.003	93	83842	0.4000	0.4089	
88 4-Ethyltoluene	105	17.312	17.312	0.000	99	343391	0.4000	0.4076	
89 1,3,5-Trimethylbenzene	120	17.398	17.400	-0.002	92	135393	0.4000	0.3980	
90 Alpha Methyl Styrene	118	17.652	17.652	0.000	86	95659	0.4000	0.3252	
91 n-Decane	57	17.792	17.793	-0.001	93	175546	0.4000	0.4170	
92 tert-Butylbenzene	119	17.867	17.868	-0.001	91	320875	0.4000	0.4059	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.884	17.884	0.000	96	296062	0.4000	0.4175	
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	98	183533	0.4000	0.4024	
95 sec-Butylbenzene	105	18.169	18.170	-0.001	98	422045	0.4000	0.4149	
96 Benzyl chloride	91	18.239	18.237	0.002	97	210797	0.4000	0.3952	
97 1,4-Dichlorobenzene	146	18.250	18.251	-0.001	92	181180	0.4000	0.3983	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	96	359958	0.4000	0.4026	
99 1,2,3-Trimethylbenzene	105	18.390	18.393	-0.003	98	332416	0.4000	0.4128	
101 1,2-Dichlorobenzene	146	18.638	18.638	0.000	93	178966	0.4000	0.4040	
104 n-Butylbenzene	91	18.833	18.832	0.001	98	322145	0.4000	0.4040	
105 Undecane	57	19.226	19.228	-0.002	93	181085	0.4000	0.3974	
106 1,2-Dibromo-3-Chloropropan	157	19.286	19.284	0.002	94	90207	0.4000	0.3331	
108 1,2,4,5-Tetramethylbenzene	119	19.641	19.641	0.000	96	152347	0.4000	0.3488	
111 Dodecane	57	20.337	20.340	-0.003	98	137913	0.4000	0.3233	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	93	103182	0.4000	0.3110	
113 Naphthalene	128	20.574	20.574	0.000	99	262605	0.4000	0.3562	
115 Hexachlorobutadiene	225	20.828	20.827	0.001	95	125133	0.4000	0.3448	
116 1,2,3-Trichlorobenzene	180	20.866	20.864	0.002	94	101572	0.4000	0.3026	
117 2-Methylnaphthalene	142	21.680	21.680	0.000	100	63395	0.9200	0.3496	
118 1-Methylnaphthalene	142	21.825	21.823	0.002	100	79264	0.9200	0.4398	
S 119 Xylenes, Total	100				0		1.20	1.21	
S 120 1,2-Dichloroethene, Total	1				0		0.8000	0.7799	

Reagents:

40L5DNP_00016	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

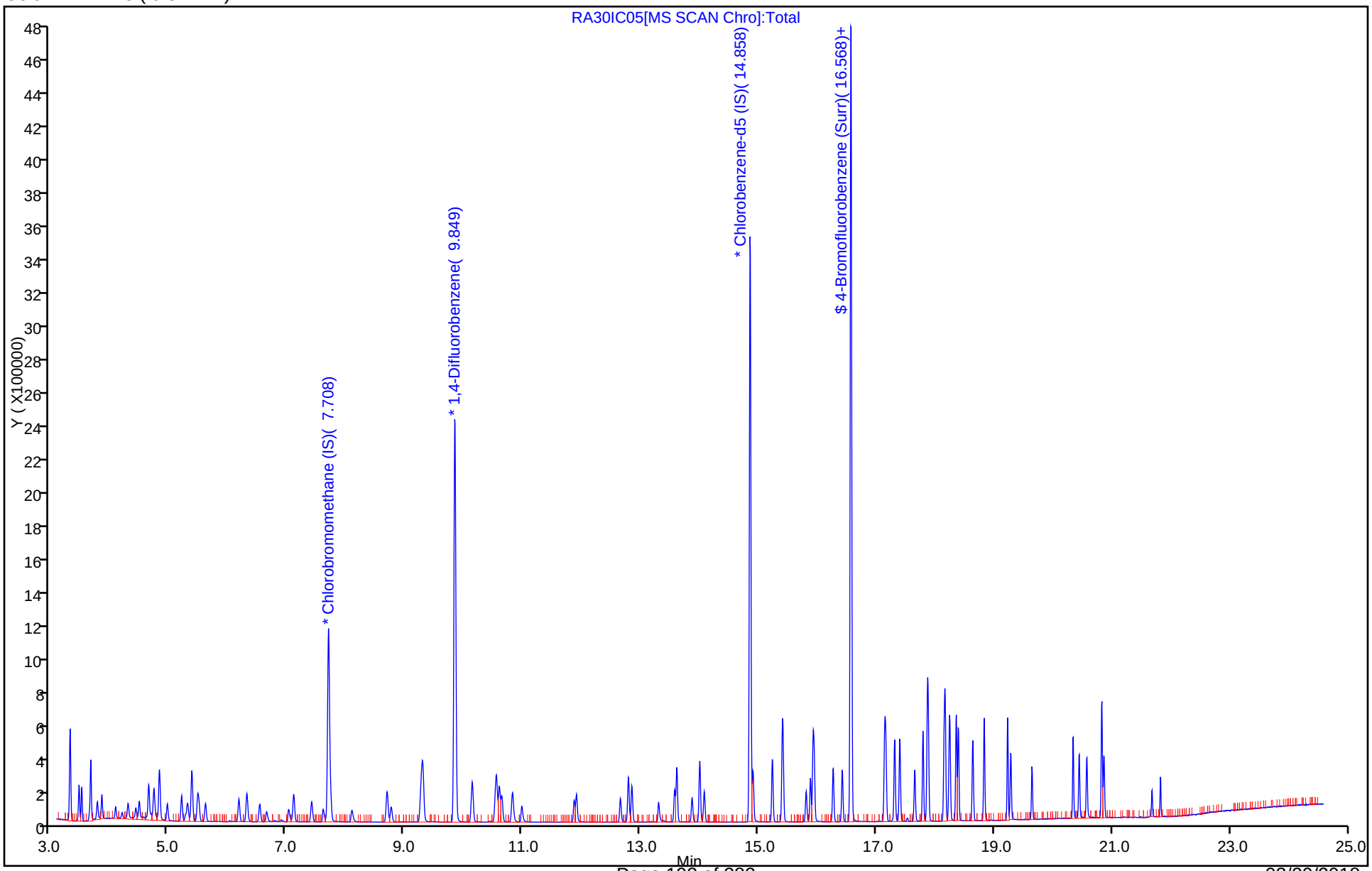
Report Date: 05-Feb-2018 13:03:10 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC05.D

Injection Date:	30-Jan-2018 15:39:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L5			Worklist Smp#:	7
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC06.D
Lims ID: IC L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 30-Jan-2018 16:27:30 ALS Bottle#: 11 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-008
Misc. Info.: 134525
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:03:16 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 30-Jan-2018 17:22:47

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.714	7.710	0.004	84	399358	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.854	9.852	0.002	95	2422753	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.858	14.859	-0.001	89	2095606	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.573	16.570	0.003	89	1634670	4.00	4.11	
6 Chlorodifluoromethane	67	3.470	3.471	-0.001	96	49960	1.00	1.03	
7 Propene	41	3.475	3.477	-0.002	97	101480	1.00	1.06	
8 Dichlorodifluoromethane	85	3.518	3.519	-0.001	100	385761	1.00	1.03	
9 Chloromethane	52	3.653	3.653	0.000	100	33564	1.00	0.9828	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.675	3.675	0.000	93	252275	1.00	0.99	
12 Vinyl chloride	62	3.788	3.789	-0.001	99	100495	1.00	0.9596	
13 Butane	43	3.863	3.863	0.000	89	117697	1.00	1.05	
14 Butadiene	54	3.863	3.863	0.000	93	67588	1.00	1.00	
15 Bromomethane	94	4.095	4.098	-0.003	98	97562	1.00	1.01	
16 Chloroethane	64	4.208	4.208	0.000	98	47978	1.00	1.01	
17 Ethanol	31	4.311	4.313	-0.002	91	156896	5.01	5.24	
18 Vinyl bromide	106	4.440	4.441	-0.001	97	97338	1.00	1.02	
19 2-Methylbutane	43	4.500	4.498	0.002	81	79273	1.00	1.00	
20 Acrolein	56	4.651	4.656	-0.005	95	21312	1.00	0.9664	
21 Trichlorofluoromethane	101	4.661	4.659	0.002	99	362096	1.00	1.02	
22 Acetonitrile	40	4.699	4.713	-0.014	97	27104	1.00	1.00	
23 Acetone	58	4.742	4.748	-0.006	99	133362	3.01	3.19	
24 Isopropyl alcohol	45	4.839	4.843	-0.004	97	528496	3.01	3.29	
25 Pentane	72	4.845	4.847	-0.002	97	28211	1.00	1.01	
26 Ethyl ether	31	4.969	4.975	-0.006	79	105952	1.00	1.05	
27 1,1-Dichloroethene	96	5.217	5.218	-0.001	95	147316	1.00	0.9743	
28 Acrylonitrile	53	5.287	5.288	-0.001	94	97550	1.00	1.02	
29 2-Methyl-2-propanol	59	5.319	5.325	-0.006	93	309191	1.00	1.03	
30 1,1,2-Trichloro-1,2,2-trif	101	5.389	5.390	-0.001	95	330843	1.00	1.02	
31 Methylene Chloride	84	5.492	5.492	0.000	92	152260	1.00	0.9750	
32 3-Chloro-1-propene	39	5.513	5.514	-0.001	97	129123	1.00	1.03	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.621	5.625	-0.004	98	430092	1.00	1.03	
34 trans-1,2-Dichloroethene	96	6.193	6.192	0.001	97	156625	1.00	1.02	
36 Methyl tert-butyl ether	73	6.317	6.323	-0.006	95	488775	1.00	1.03	
37 1,1-Dichloroethane	63	6.549	6.545	0.004	100	295826	1.00	1.01	
38 Vinyl acetate	43	6.657	6.662	-0.005	99	304213	1.00	1.08	
39 2-Butanone (MEK)	72	7.029	7.036	-0.007	98	72547	1.00	1.00	
40 Hexane	56	7.120	7.119	0.001	85	120502	1.00	1.03	
41 cis-1,2-Dichloroethene	96	7.428	7.426	0.002	96	161247	1.00	0.9804	
42 Ethyl acetate	43	7.611	7.622	-0.011	99	272902	1.00	1.08	
43 Chloroform	83	7.746	7.743	0.003	96	370515	1.00	1.00	
44 Tetrahydrofuran	42	8.096	8.108	-0.012	87	134069	1.00	1.04	
45 1,1,1-Trichloroethane	97	8.706	8.701	0.005	95	396883	1.00	1.02	
46 1,2-Dichloroethane	62	8.770	8.771	-0.001	98	266293	1.00	1.04	
47 Benzene	78	9.277	9.274	0.003	97	475845	1.00	1.03	
48 n-Butanol	31	9.283	9.296	-0.013	62	29797	1.00	0.9727	
49 Cyclohexane	69	9.299	9.298	0.001	96	77754	1.00	1.05	
50 Carbon tetrachloride	117	9.315	9.312	0.003	97	393178	1.00	1.05	
53 Isooctane	57	10.145	10.145	0.000	98	709763	1.00	1.06	
54 1,2-Dichloropropane	63	10.539	10.540	-0.001	90	166795	1.00	1.04	
55 n-Heptane	71	10.561	10.561	0.000	83	169496	1.00	1.06	
56 Trichloroethene	130	10.604	10.605	-0.001	94	216055	1.00	0.9880	
57 Dibromomethane	93	10.647	10.648	-0.001	95	192925	1.00	1.01	
58 Dichlorobromomethane	83	10.825	10.825	0.000	98	359583	1.00	1.05	
59 1,4-Dioxane	88	10.841	10.851	-0.010	83	75444	1.00	1.11	
60 Methyl methacrylate	41	10.981	10.990	-0.009	97	153737	1.00	1.01	
62 4-Methyl-2-pentanone (MIBK	43	11.871	11.878	-0.007	94	271515	1.00	1.05	
63 cis-1,3-Dichloropropene	75	11.914	11.915	-0.001	92	280020	1.00	1.05	
64 trans-1,3-Dichloropropene	75	12.658	12.660	-0.002	96	264281	1.00	1.04	
65 Toluene	91	12.793	12.795	-0.002	94	594266	1.00	1.03	
66 1,1,2-Trichloroethane	83	12.852	12.853	-0.001	99	165862	1.00	1.04	
69 2-Hexanone	58	13.300	13.313	-0.013	98	149844	1.00	1.09	
70 Chlorodibromomethane	129	13.580	13.580	0.000	97	326299	1.00	1.07	
71 n-Octane	85	13.618	13.618	0.000	85	197364	1.00	1.06	
72 Ethylene Dibromide	107	13.877	13.876	0.001	98	299269	1.00	1.05	
73 Tetrachloroethene	129	14.006	14.005	0.001	95	221546	1.00	1.03	
74 Chlorobenzene	112	14.912	14.910	0.002	92	462209	1.00	1.02	
76 Ethylbenzene	91	15.236	15.237	-0.001	99	784804	1.00	1.04	
77 m-Xylene & p-Xylene	91	15.414	15.413	0.001	100	1258868	2.00	2.15	
79 Bromoform	173	15.813	15.812	0.001	95	280201	1.00	1.07	
80 Styrene	104	15.883	15.884	-0.001	99	404492	1.00	1.08	
81 n-Nonane	57	15.926	15.926	0.000	83	354142	1.00	1.12	
82 o-Xylene	91	15.948	15.948	0.000	98	651529	1.00	1.05	
83 1,1,2,2-Tetrachloroethane	83	16.266	16.269	-0.003	99	419698	1.00	1.13	
84 1,2,3-Trichloropropane	110	16.422	16.424	-0.002	98	140977	1.00	1.05	
85 Isopropylbenzene	105	16.568	16.566	0.002	98	884009	1.00	1.07	
86 N-Propylbenzene	120	17.145	17.144	0.001	99	251895	1.00	1.11	
87 2-Chlorotoluene	126	17.161	17.164	-0.003	93	226074	1.00	1.08	
88 4-Ethyltoluene	105	17.312	17.312	0.000	99	974862	1.00	1.14	
89 1,3,5-Trimethylbenzene	120	17.398	17.400	-0.002	92	386617	1.00	1.12	
90 Alpha Methyl Styrene	118	17.652	17.652	0.000	87	312791	1.00	1.04	
91 n-Decane	57	17.792	17.793	-0.001	93	504552	1.00	1.18	
92 tert-Butylbenzene	119	17.867	17.868	-0.001	90	894018	1.00	1.11	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.884	17.884	0.000	96	838081	1.00	1.16	
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	99	516305	1.00	1.11	
95 sec-Butylbenzene	105	18.169	18.170	-0.001	98	1180727	1.00	1.14	
96 Benzyl chloride	91	18.234	18.237	-0.003	98	644403	1.00	1.19	
97 1,4-Dichlorobenzene	146	18.250	18.251	-0.001	93	518691	1.00	1.12	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	96	1047342	1.00	1.15	
99 1,2,3-Trimethylbenzene	105	18.390	18.393	-0.003	97	941539	1.00	1.15	
101 1,2-Dichlorobenzene	146	18.638	18.638	0.000	93	504861	1.00	1.12	
104 n-Butylbenzene	91	18.833	18.832	0.001	98	967842	1.00	1.19	
105 Undecane	57	19.226	19.228	-0.002	93	562815	1.00	1.21	
106 1,2-Dibromo-3-Chloropropan	157	19.286	19.284	0.002	97	313235	1.00	1.14	
108 1,2,4,5-Tetramethylbenzene	119	19.641	19.641	0.000	96	482300	1.00	1.08	
111 Dodecane	57	20.342	20.340	0.002	99	520941	1.00	1.20	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	94	375125	1.00	1.11	
113 Naphthalene	128	20.574	20.574	0.000	99	876926	1.00	1.17	
115 Hexachlorobutadiene	225	20.828	20.827	0.001	95	406766	1.00	1.10	
116 1,2,3-Trichlorobenzene	180	20.866	20.864	0.002	94	354574	1.00	1.04	
117 2-Methylnaphthalene	142	21.680	21.680	0.000	99	300143	2.30	1.62	
118 1-Methylnaphthalene	142	21.820	21.823	-0.003	99	327721	2.30	1.78	
S 119 Xylenes, Total	100				0		3.00	3.20	
S 120 1,2-Dichloroethene, Total	1				0		2.00	2.00	

Reagents:

40L6DNP_00017	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

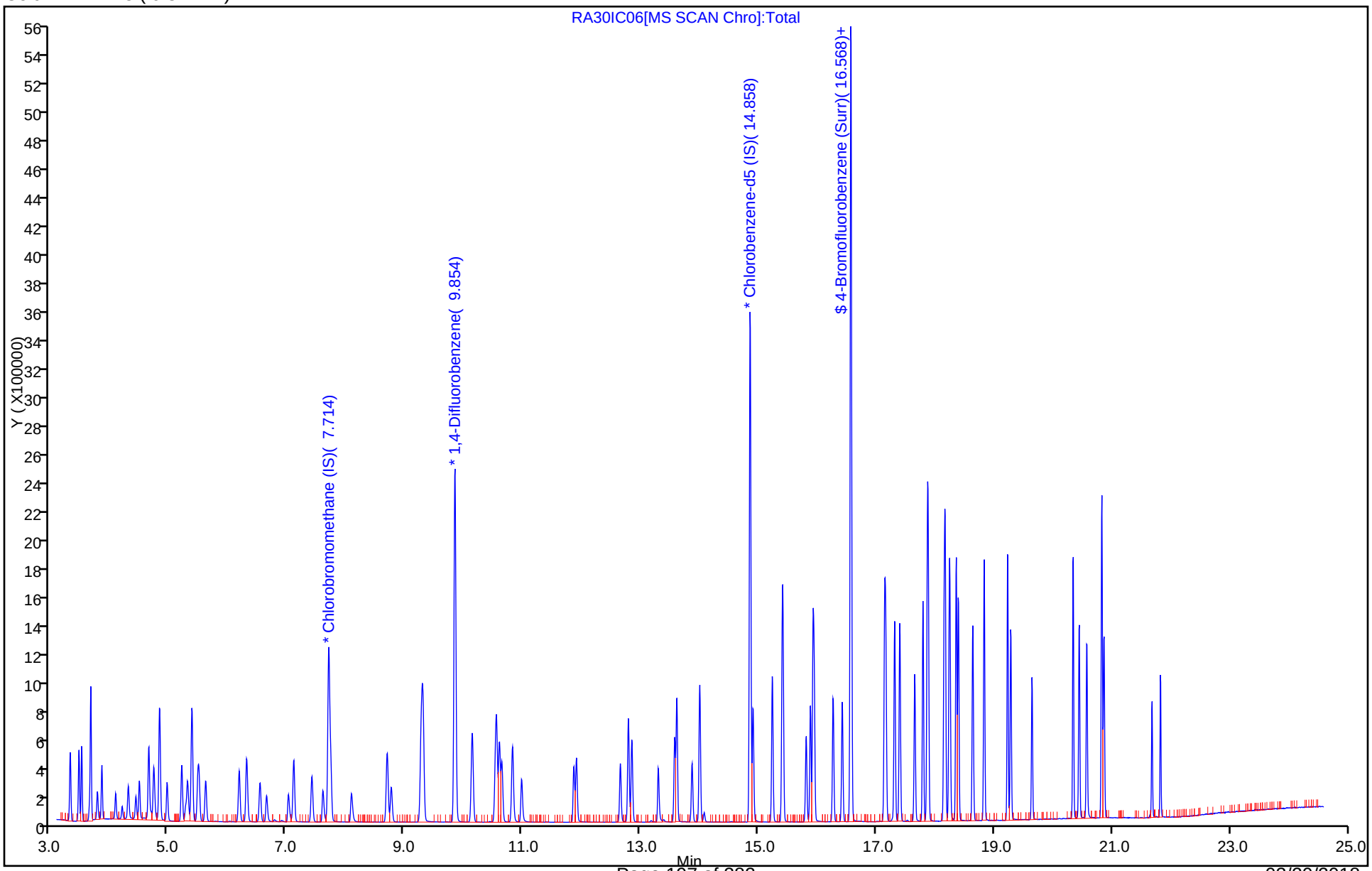
Report Date: 05-Feb-2018 13:03:18 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC06.D

Injection Date:	30-Jan-2018 16:27:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L6			Worklist Smp#:	8
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC07.D
Lims ID: ICIS L7
Client ID:
Sample Type: ICIS Calib Level: 7
Inject. Date: 30-Jan-2018 17:15:30 ALS Bottle#: 12 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-009
Misc. Info.: 134523
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:03:23 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 30-Jan-2018 18:02:14

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.714	7.710	0.004	85	397524	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.849	9.852	-0.003	95	2418900	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.859	14.859	-0.001	88	2104378	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.568	16.570	-0.002	90	1611533	4.00	4.04	
6 Chlorodifluoromethane	67	3.464	3.471	-0.007	96	99602	2.00	2.05	
7 Propene	41	3.475	3.477	-0.002	97	201013	2.00	2.12	
8 Dichlorodifluoromethane	85	3.513	3.519	-0.006	100	768499	2.00	2.06	
9 Chloromethane	52	3.648	3.653	-0.005	99	69549	2.00	2.05	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.669	3.675	-0.006	93	513872	2.00	2.03	
12 Vinyl chloride	62	3.783	3.789	-0.006	99	201144	2.00	1.93	
13 Butane	43	3.858	3.863	-0.005	89	229678	2.00	2.06	
14 Butadiene	54	3.858	3.863	-0.005	94	136978	2.00	2.04	
15 Bromomethane	94	4.095	4.098	-0.003	97	194501	2.00	2.02	
16 Chloroethane	64	4.203	4.208	-0.005	99	92980	2.00	1.97	
17 Ethanol	31	4.311	4.313	-0.002	91	309152	9.99	10.4	
18 Vinyl bromide	106	4.435	4.441	-0.006	97	190610	2.00	2.02	
19 2-Methylbutane	43	4.494	4.498	-0.004	82	156213	2.00	1.98	
20 Acrolein	56	4.651	4.656	-0.005	93	40157	2.00	1.83	
21 Trichlorofluoromethane	101	4.656	4.659	-0.003	99	708040	2.00	2.00	
22 Acetonitrile	40	4.699	4.713	-0.014	98	55420	2.00	2.05	
23 Acetone	58	4.742	4.748	-0.006	99	255969	5.99	6.16	
24 Isopropyl alcohol	45	4.839	4.843	-0.004	94	1027986	5.99	6.43	
25 Pentane	72	4.845	4.847	-0.002	96	56821	2.00	2.05	
26 Ethyl ether	31	4.964	4.975	-0.011	78	210233	2.00	2.10	
27 1,1-Dichloroethene	96	5.217	5.218	-0.001	96	302733	2.00	2.01	
28 Acrylonitrile	53	5.287	5.288	-0.001	93	201452	2.00	2.12	
29 2-Methyl-2-propanol	59	5.319	5.325	-0.006	93	628551	2.00	2.10	
30 1,1,2-Trichloro-1,2,2-trif	101	5.390	5.390	0.000	96	667885	2.00	2.08	
31 Methylene Chloride	84	5.492	5.492	0.000	90	294696	2.00	1.90	
32 3-Chloro-1-propene	39	5.514	5.514	0.000	97	251667	2.00	2.01	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.621	5.625	-0.004	98	863361	2.00	2.07	
34 trans-1,2-Dichloroethene	96	6.193	6.192	0.001	97	318661	2.00	2.09	
36 Methyl tert-butyl ether	73	6.312	6.323	-0.011	95	993401	2.00	2.11	
37 1,1-Dichloroethane	63	6.543	6.545	-0.002	100	594968	2.00	2.05	
38 Vinyl acetate	43	6.657	6.662	-0.005	99	605079	2.00	2.15	
39 2-Butanone (MEK)	72	7.023	7.036	-0.013	97	157076	2.00	2.18	
40 Hexane	56	7.115	7.119	-0.004	85	241914	2.00	2.08	
41 cis-1,2-Dichloroethene	96	7.422	7.426	-0.004	95	331061	2.00	2.02	
42 Ethyl acetate	43	7.606	7.622	-0.016	99	563824	2.00	2.23	
43 Chloroform	83	7.746	7.743	0.003	97	752364	2.00	2.05	
44 Tetrahydrofuran	42	8.091	8.108	-0.017	85	272546	2.00	2.12	
45 1,1,1-Trichloroethane	97	8.700	8.701	-0.001	96	813727	2.00	2.11	
46 1,2-Dichloroethane	62	8.771	8.771	0.000	99	535650	2.00	2.09	
47 Benzene	78	9.272	9.274	-0.002	97	957247	2.00	2.07	
48 n-Butanol	31	9.272	9.296	-0.024	60	64569	2.00	2.11	
49 Cyclohexane	69	9.299	9.298	0.001	96	159306	2.00	2.15	
50 Carbon tetrachloride	117	9.310	9.312	-0.002	98	784365	2.00	2.11	
53 Isooctane	57	10.140	10.145	-0.005	97	1428084	2.00	2.13	
54 1,2-Dichloropropane	63	10.539	10.540	-0.001	86	335945	2.00	2.09	
55 n-Heptane	71	10.561	10.561	0.000	83	341354	2.00	2.13	
56 Trichloroethene	130	10.604	10.605	-0.001	94	481860	2.00	2.21	
57 Dibromomethane	93	10.647	10.648	-0.001	95	403081	2.00	2.12	
58 Dichlorobromomethane	83	10.825	10.825	0.000	98	757973	2.00	2.22	
59 1,4-Dioxane	88	10.836	10.851	-0.015	83	151582	2.00	2.22	
60 Methyl methacrylate	41	10.981	10.990	-0.009	97	339847	2.00	2.24	
62 4-Methyl-2-pentanone (MIBK	43	11.866	11.878	-0.012	93	575108	2.00	2.22	
63 cis-1,3-Dichloropropene	75	11.914	11.915	-0.001	92	590578	2.00	2.22	
64 trans-1,3-Dichloropropene	75	12.658	12.660	-0.002	96	552390	2.00	2.16	
65 Toluene	91	12.793	12.795	-0.002	93	1214847	2.00	2.10	
66 1,1,2-Trichloroethane	83	12.853	12.853	0.000	99	338126	2.00	2.12	
69 2-Hexanone	58	13.300	13.313	-0.013	98	322256	2.00	2.33	
70 Chlorodibromomethane	129	13.581	13.580	0.001	98	710033	2.00	2.33	
71 n-Octane	85	13.613	13.618	-0.005	85	401741	2.00	2.15	
72 Ethylene Dibromide	107	13.872	13.876	-0.004	99	623528	2.00	2.19	
73 Tetrachloroethene	129	14.001	14.005	-0.004	95	451735	2.00	2.09	
74 Chlorobenzene	112	14.907	14.910	-0.003	93	943722	2.00	2.07	
76 Ethylbenzene	91	15.236	15.237	-0.001	99	1604021	2.00	2.11	
77 m-Xylene & p-Xylene	91	15.409	15.413	-0.004	100	2526057	3.99	4.29	
79 Bromoform	173	15.813	15.812	0.001	96	617419	2.00	2.35	
80 Styrene	104	15.883	15.884	-0.001	99	877726	2.00	2.34	
81 n-Nonane	57	15.926	15.926	0.000	83	698726	2.00	2.20	
82 o-Xylene	91	15.942	15.948	-0.006	98	1293453	2.00	2.08	
83 1,1,2,2-Tetrachloroethane	83	16.266	16.269	-0.003	99	774984	2.00	2.09	
84 1,2,3-Trichloropropane	110	16.422	16.424	-0.002	98	283509	2.00	2.11	
85 Isopropylbenzene	105	16.562	16.566	-0.004	97	1751008	2.00	2.11	
86 N-Propylbenzene	120	17.139	17.144	-0.005	99	510087	2.00	2.25	
87 2-Chlorotoluene	126	17.161	17.164	-0.003	94	444172	2.00	2.12	
88 4-Ethyltoluene	105	17.312	17.312	0.000	99	1942649	2.00	2.25	
89 1,3,5-Trimethylbenzene	120	17.398	17.400	-0.002	92	775132	2.00	2.23	
90 Alpha Methyl Styrene	118	17.652	17.652	0.000	87	715672	2.00	2.38	
91 n-Decane	57	17.792	17.793	-0.001	93	1016420	2.00	2.36	
92 tert-Butylbenzene	119	17.867	17.868	-0.001	91	1772333	2.00	2.19	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.884	17.884	0.000	96	1649904	2.00	2.27	
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	99	1044130	2.00	2.24	
95 sec-Butylbenzene	105	18.169	18.170	-0.001	98	2346383	2.00	2.25	
96 Benzyl chloride	91	18.234	18.237	-0.003	98	1420806	2.00	2.60	
97 1,4-Dichlorobenzene	146	18.250	18.251	-0.001	93	1046250	2.00	2.25	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	97	2122805	2.00	2.32	
99 1,2,3-Trimethylbenzene	105	18.391	18.393	-0.003	98	1870714	2.00	2.27	
101 1,2-Dichlorobenzene	146	18.639	18.638	0.001	94	1016927	2.00	2.24	
104 n-Butylbenzene	91	18.827	18.832	-0.005	99	1985514	2.00	2.43	
105 Undecane	57	19.226	19.228	-0.002	92	1166396	2.00	2.50	
106 1,2-Dibromo-3-Chloropropan	157	19.280	19.284	-0.004	97	698408	2.00	2.52	
108 1,2,4,5-Tetramethylbenzene	119	19.642	19.641	0.001	96	1035933	2.00	2.32	
111 Dodecane	57	20.337	20.340	-0.003	98	1185570	2.00	2.72	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	94	867227	2.00	2.55	
113 Naphthalene	128	20.569	20.574	-0.005	99	2004705	2.00	2.66	
115 Hexachlorobutadiene	225	20.828	20.827	0.001	96	875521	2.00	2.36	
116 1,2,3-Trichlorobenzene	180	20.860	20.864	-0.004	94	835689	2.00	2.43	
117 2-Methylnaphthalene	142	21.680	21.680	0.000	100	1121735	4.59	6.04	
118 1-Methylnaphthalene	142	21.820	21.823	-0.003	99	1213833	4.59	6.58	
S 119 Xylenes, Total	100				0		5.99	6.38	
S 120 1,2-Dichloroethene, Total	1				0		3.99	4.11	

Reagents:

40L7DNP_00016	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

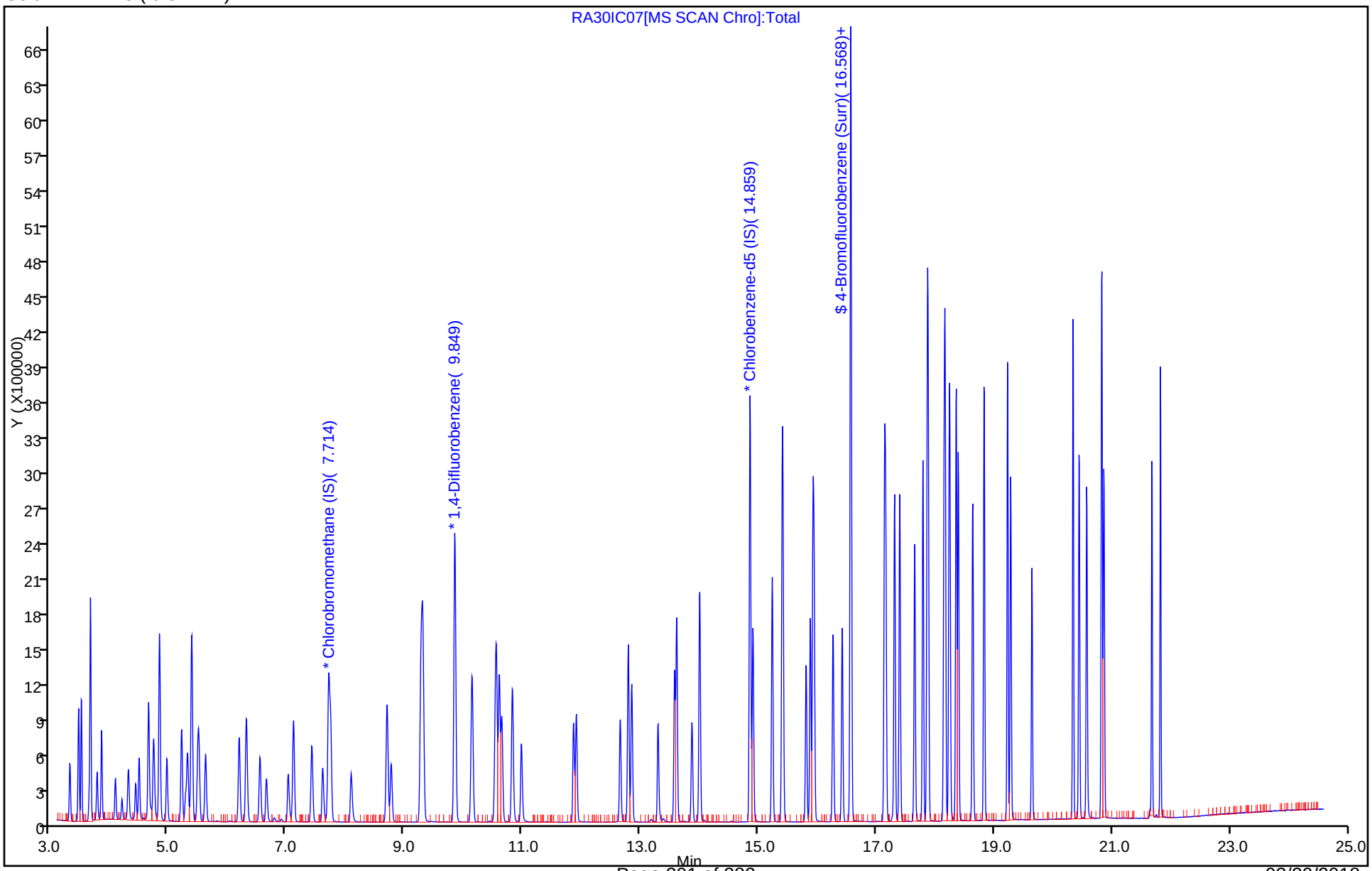
Report Date: 05-Feb-2018 13:03:25 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC07.D

Injection Date:	30-Jan-2018 17:15:30	Instrument ID:	MR	Operator ID:	
Lims ID:	ICIS L7			Worklist Smp#:	9
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC08.D
Lims ID: IC L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 30-Jan-2018 18:03:30 ALS Bottle#: 13 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-010
Misc. Info.: 134524
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:03:29 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 30-Jan-2018 18:45:29

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.713	7.710	0.003	83	403296	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.854	9.852	0.002	95	2445825	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.858	14.859	-0.001	88	2122398	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.573	16.570	0.003	90	1560168	4.00	3.88	
6 Chlorodifluoromethane	67	3.470	3.471	-0.001	95	192008	4.00	3.90	
7 Propene	41	3.475	3.477	-0.002	97	373101	4.00	3.87	
8 Dichlorodifluoromethane	85	3.518	3.519	-0.001	100	1380786	4.00	3.65	
9 Chloromethane	52	3.653	3.653	0.000	99	127494	4.00	3.70	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.675	3.675	0.000	92	975595	4.00	3.80	
12 Vinyl chloride	62	3.788	3.789	-0.001	99	392525	4.00	3.71	
13 Butane	43	3.863	3.863	0.000	90	443357	4.00	3.91	
14 Butadiene	54	3.863	3.863	0.000	95	265156	4.00	3.89	
15 Bromomethane	94	4.101	4.098	0.003	98	381835	4.00	3.90	
16 Chloroethane	64	4.208	4.208	0.000	99	183236	4.00	3.82	
17 Ethanol	31	4.322	4.313	0.009	90	599728	20.0	19.8	
18 Vinyl bromide	106	4.446	4.441	0.005	97	373599	4.00	3.89	
19 2-Methylbutane	43	4.500	4.498	0.002	82	305420	4.00	3.82	
20 Acrolein	56	4.656	4.656	0.000	95	69130	4.00	3.10	
21 Trichlorofluoromethane	101	4.661	4.659	0.002	100	1366159	4.00	3.80	
22 Acetonitrile	40	4.705	4.713	-0.008	97	108488	4.00	3.96	
23 Acetone	58	4.748	4.748	0.000	99	451316	12.0	10.7	
24 Isopropyl alcohol	45	4.845	4.843	0.002	94	1940134	12.0	12.0	
25 Pentane	72	4.850	4.847	0.003	97	109148	4.00	3.88	
26 Ethyl ether	31	4.969	4.975	-0.006	76	385484	4.00	3.79	
27 1,1-Dichloroethene	96	5.222	5.218	0.004	96	580273	4.00	3.80	
28 Acrylonitrile	53	5.292	5.288	0.004	93	380336	4.00	3.94	
29 2-Methyl-2-propanol	59	5.319	5.325	-0.006	93	1185900	4.00	3.90	
30 1,1,2-Trichloro-1,2,2-trif	101	5.395	5.390	0.005	97	1265800	4.00	3.88	
31 Methylene Chloride	84	5.497	5.492	0.005	90	539025	4.00	3.42	
32 3-Chloro-1-propene	39	5.519	5.514	0.005	96	453252	4.00	3.58	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.632	5.625	0.007	98	1649806	4.00	3.91	
34 trans-1,2-Dichloroethene	96	6.198	6.192	0.006	98	609026	4.00	3.93	
36 Methyl tert-butyl ether	73	6.317	6.323	-0.006	94	1909019	4.00	4.00	
37 1,1-Dichloroethane	63	6.554	6.545	0.009	100	1118272	4.00	3.79	
38 Vinyl acetate	43	6.662	6.662	0.000	99	1147099	4.00	4.02	
39 2-Butanone (MEK)	72	7.029	7.036	-0.007	97	284611	4.00	3.89	
40 Hexane	56	7.120	7.119	0.001	85	451862	4.00	3.82	
41 cis-1,2-Dichloroethene	96	7.433	7.426	0.007	95	636383	4.00	3.83	
42 Ethyl acetate	43	7.611	7.622	-0.011	99	1074075	4.00	4.19	
43 Chloroform	83	7.751	7.743	0.008	97	1431329	4.00	3.84	
44 Tetrahydrofuran	42	8.096	8.108	-0.012	85	511682	4.00	3.92	
45 1,1,1-Trichloroethane	97	8.706	8.701	0.005	95	1564396	4.00	3.99	
46 1,2-Dichloroethane	62	8.776	8.771	0.005	99	1019982	4.00	3.94	
47 Benzene	78	9.277	9.274	0.003	97	1805776	4.00	3.86	
48 n-Butanol	31	9.272	9.296	-0.024	61	135506	4.00	4.38	
49 Cyclohexane	69	9.304	9.298	0.006	95	293021	4.00	3.91	
50 Carbon tetrachloride	117	9.315	9.312	0.003	97	1557932	4.00	4.14	
53 Isooctane	57	10.145	10.145	0.000	97	2699507	4.00	3.98	
54 1,2-Dichloropropane	63	10.539	10.540	-0.001	87	637774	4.00	3.92	
55 n-Heptane	71	10.561	10.561	0.000	81	652666	4.00	4.03	
56 Trichloroethene	130	10.609	10.605	0.004	95	990611	4.00	4.49	
57 Dibromomethane	93	10.652	10.648	0.004	95	771427	4.00	4.01	
58 Dichlorobromomethane	83	10.830	10.825	0.005	98	1483398	4.00	4.31	
59 1,4-Dioxane	88	10.836	10.851	-0.015	82	290497	4.00	4.22	
60 Methyl methacrylate	41	10.981	10.990	-0.009	97	676432	4.00	4.41	
62 4-Methyl-2-pentanone (MIBK	43	11.866	11.878	-0.012	93	1126777	4.00	4.30	
63 cis-1,3-Dichloropropene	75	11.914	11.915	-0.001	92	1141143	4.00	4.25	
64 trans-1,3-Dichloropropene	75	12.658	12.660	-0.002	96	1089547	4.00	4.23	
65 Toluene	91	12.798	12.795	0.003	93	2321715	4.00	3.97	
66 1,1,2-Trichloroethane	83	12.852	12.853	-0.001	99	646119	4.00	4.01	
69 2-Hexanone	58	13.300	13.313	-0.013	98	664344	4.00	4.76	
70 Chlorodibromomethane	129	13.580	13.580	0.000	98	1429129	4.00	4.64	
71 n-Octane	85	13.618	13.618	0.000	84	761888	4.00	4.05	
72 Ethylene Dibromide	107	13.877	13.876	0.001	98	1225652	4.00	4.26	
73 Tetrachloroethene	129	14.006	14.005	0.001	96	873561	4.00	4.01	
74 Chlorobenzene	112	14.912	14.910	0.002	93	1821596	4.00	3.96	
76 Ethylbenzene	91	15.236	15.237	-0.001	99	3061101	4.00	4.00	
77 m-Xylene & p-Xylene	91	15.414	15.413	0.001	99	4717005	8.00	7.95	
79 Bromoform	173	15.813	15.812	0.001	96	1265260	4.00	4.78	
80 Styrene	104	15.883	15.884	-0.001	98	1722436	4.00	4.55	
81 n-Nonane	57	15.926	15.926	0.000	82	1266112	4.00	3.96	
82 o-Xylene	91	15.948	15.948	0.000	98	2421285	4.00	3.87	
83 1,1,2,2-Tetrachloroethane	83	16.266	16.269	-0.003	99	1361818	4.00	3.63	
84 1,2,3-Trichloropropane	110	16.422	16.424	-0.002	98	537694	4.00	3.96	
85 Isopropylbenzene	105	16.568	16.566	0.002	97	3271189	4.00	3.90	
86 N-Propylbenzene	120	17.145	17.144	0.001	99	953864	4.00	4.17	
87 2-Chlorotoluene	126	17.161	17.164	-0.003	93	837183	4.00	3.96	
88 4-Ethyltoluene	105	17.312	17.312	0.000	99	3621190	4.00	4.16	
89 1,3,5-Trimethylbenzene	120	17.398	17.400	-0.002	92	1454797	4.00	4.14	
90 Alpha Methyl Styrene	118	17.652	17.652	0.000	87	1426907	4.00	4.70	
91 n-Decane	57	17.792	17.793	-0.001	94	1860379	4.00	4.28	
92 tert-Butylbenzene	119	17.867	17.868	-0.001	91	3259179	4.00	3.99	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.883	17.884	-0.001	96	2988133	4.00	4.08	
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	99	1945670	4.00	4.13	
95 sec-Butylbenzene	105	18.169	18.170	-0.001	98	4304932	4.00	4.10	
96 Benzyl chloride	91	18.234	18.237	-0.003	98	2678333	4.00	4.87	
97 1,4-Dichlorobenzene	146	18.250	18.251	-0.001	92	1937249	4.00	4.13	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	96	3937880	4.00	4.27	
99 1,2,3-Trimethylbenzene	105	18.396	18.393	0.003	97	3399572	4.00	4.09	
101 1,2-Dichlorobenzene	146	18.638	18.638	0.000	94	1905685	4.00	4.17	
104 n-Butylbenzene	91	18.833	18.832	0.001	99	3720801	4.00	4.52	
105 Undecane	57	19.226	19.228	-0.002	92	2179717	4.00	4.64	
106 1,2-Dibromo-3-Chloropropan	157	19.280	19.284	-0.004	98	1308310	4.00	4.68	
108 1,2,4,5-Tetramethylbenzene	119	19.641	19.641	0.000	96	2053724	4.00	4.56	
111 Dodecane	57	20.337	20.340	-0.003	98	2170914	4.00	4.93	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	94	1765909	4.00	5.16	
113 Naphthalene	128	20.574	20.574	0.000	99	4017474	4.00	5.28	
115 Hexachlorobutadiene	225	20.828	20.827	0.001	96	1713702	4.00	4.58	
116 1,2,3-Trichlorobenzene	180	20.865	20.864	0.001	94	1650977	4.00	4.77	
117 2-Methylnaphthalene	142	21.680	21.680	0.000	99	2230513	9.20	11.9	
118 1-Methylnaphthalene	142	21.820	21.823	-0.003	99	2273024	9.20	12.2	
S 119 Xylenes, Total	100				0		12.0	11.8	
S 120 1,2-Dichloroethene, Total	1				0		8.00	7.76	

Reagents:

40L8DNP_00016	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

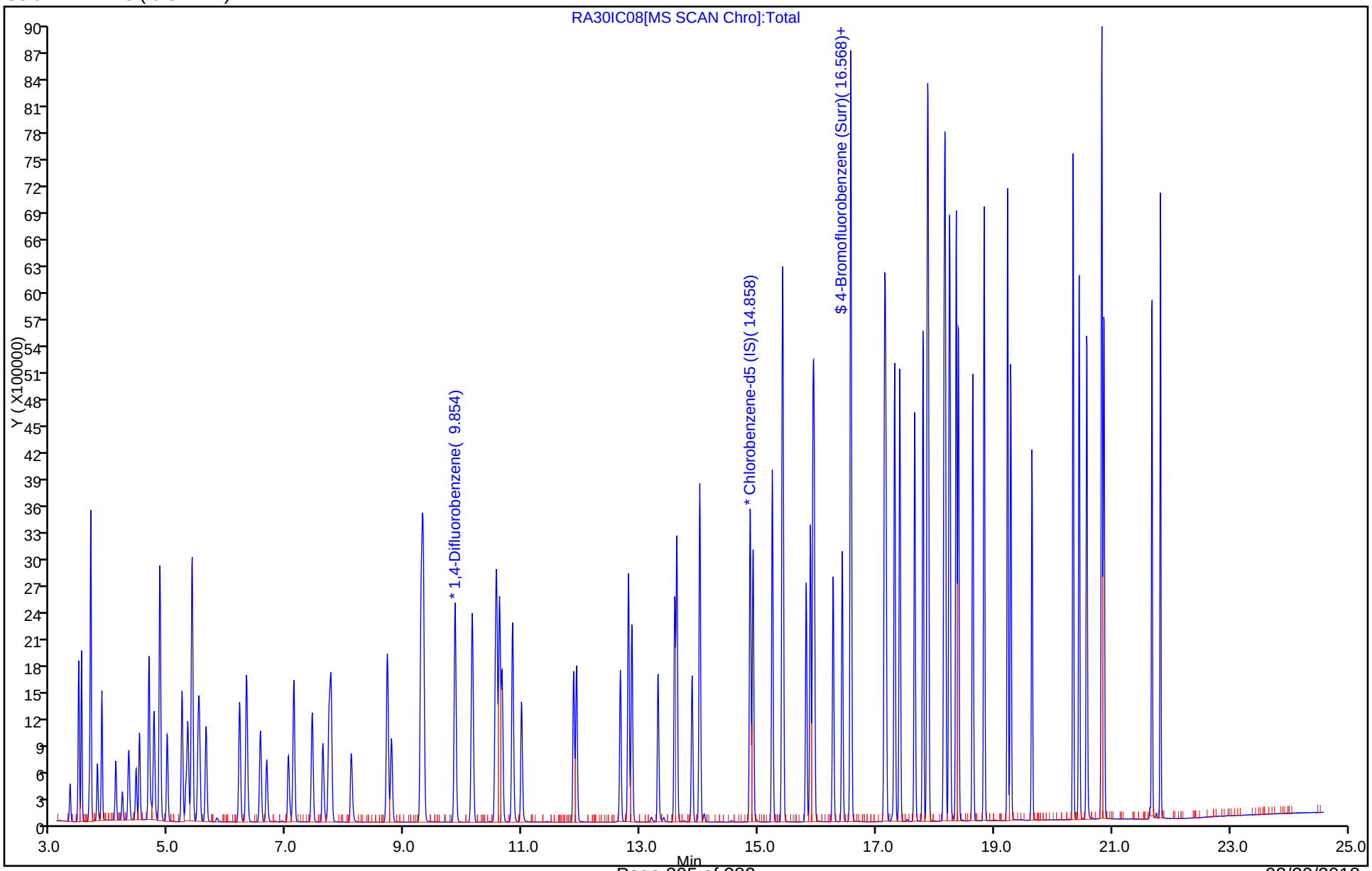
Report Date: 05-Feb-2018 13:03:30 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC08.D

Injection Date:	30-Jan-2018 18:03:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L8			Worklist Smp#:	10
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC09.D
Lims ID: IC L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 30-Jan-2018 18:50:30 ALS Bottle#: 14 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-011
Misc. Info.: 134508
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:03:33 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 30-Jan-2018 19:34:59

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.724	7.710	0.014	81	409398	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.860	9.852	0.008	95	2463428	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.864	14.859	0.005	88	2133724	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.573	16.570	0.003	88	1531137	4.00	3.78	
6 Chlorodifluoromethane	67	3.470	3.471	-0.001	95	373011	8.00	7.47	
7 Propene	41	3.475	3.477	-0.002	97	698857	8.00	7.14	
8 Dichlorodifluoromethane	85	3.518	3.519	-0.001	100	2777340	8.00	7.23	
9 Chloromethane	52	3.658	3.653	0.005	99	239224	8.00	6.83	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.680	3.675	0.005	92	1877362	8.00	7.21	
12 Vinyl chloride	62	3.793	3.789	0.004	99	789520	8.00	7.35	
13 Butane	43	3.869	3.863	0.006	90	873129	8.00	7.59	
14 Butadiene	54	3.869	3.863	0.006	93	526420	8.00	7.60	
15 Bromomethane	94	4.106	4.098	0.008	98	764670	8.00	7.70	
16 Chloroethane	64	4.219	4.208	0.011	98	369095	8.00	7.59	
17 Ethanol	31	4.327	4.313	0.014	91	1162228	40.0	37.9	
18 Vinyl bromide	106	4.451	4.441	0.010	97	739337	8.00	7.59	
19 2-Methylbutane	43	4.505	4.498	0.007	82	602150	8.00	7.43	
20 Acrolein	56	4.661	4.656	0.005	96	193944	8.00	8.58	
21 Trichlorofluoromethane	101	4.667	4.659	0.008	99	2671794	8.00	7.32	
22 Acetonitrile	40	4.710	4.713	-0.003	97	212047	8.00	7.62	
23 Acetone	58	4.753	4.748	0.005	99	874182	24.0	20.4	
24 Isopropyl alcohol	45	4.856	4.843	0.013	81	3554966	24.0	21.6	
25 Pentane	72	4.856	4.847	0.009	75	205846	8.00	7.21	
26 Ethyl ether	31	4.974	4.975	-0.001	76	726094	8.00	7.03	
27 1,1-Dichloroethene	96	5.233	5.218	0.015	97	1133673	8.00	7.31	
28 Acrylonitrile	53	5.298	5.288	0.010	94	735807	8.00	7.52	
29 2-Methyl-2-propanol	59	5.330	5.325	0.005	93	2316983	8.00	7.51	
30 1,1,2-Trichloro-1,2,2-trif	101	5.400	5.390	0.010	97	2438487	8.00	7.36	
31 Methylene Chloride	84	5.508	5.492	0.016	89	1033868	8.00	6.46	
32 3-Chloro-1-propene	39	5.524	5.514	0.010	95	964101	8.00	7.49	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.637	5.625	0.012	98	3227149	8.00	7.53	
34 trans-1,2-Dichloroethene	96	6.209	6.192	0.017	98	1206934	8.00	7.67	
36 Methyl tert-butyl ether	73	6.322	6.323	-0.001	94	3723922	8.00	7.68	
37 1,1-Dichloroethane	63	6.560	6.545	0.015	100	2160451	8.00	7.21	
38 Vinyl acetate	43	6.667	6.662	0.005	99	2517397	8.00	8.69	
39 2-Butanone (MEK)	72	7.029	7.036	-0.007	97	573697	8.00	7.73	
40 Hexane	56	7.126	7.119	0.007	84	869891	8.00	7.25	
41 cis-1,2-Dichloroethene	96	7.439	7.426	0.013	95	1252882	8.00	7.43	
42 Ethyl acetate	43	7.616	7.622	-0.006	99	2125431	8.00	8.18	
43 Chloroform	83	7.757	7.743	0.014	96	2787766	8.00	7.36	
44 Tetrahydrofuran	42	8.096	8.108	-0.012	84	998545	8.00	7.54	
45 1,1,1-Trichloroethane	97	8.711	8.701	0.010	95	3097922	8.00	7.78	
46 1,2-Dichloroethane	62	8.781	8.771	0.010	99	2013816	8.00	7.73	
47 Benzene	78	9.283	9.274	0.009	97	3386082	8.00	7.19	
48 n-Butanol	31	9.272	9.296	-0.024	56	270253	8.00	8.68	
49 Cyclohexane	69	9.304	9.298	0.006	94	546616	8.00	7.23	
50 Carbon tetrachloride	117	9.320	9.312	0.008	97	3073958	8.00	8.10	
53 Isooctane	57	10.151	10.145	0.006	97	5099511	8.00	7.47	
54 1,2-Dichloropropane	63	10.545	10.540	0.005	86	1201630	8.00	7.34	
55 n-Heptane	71	10.566	10.561	0.005	81	1232469	8.00	7.55	
56 Trichloroethene	130	10.615	10.605	0.010	94	1689959	8.00	7.60	
57 Dibromomethane	93	10.658	10.648	0.010	94	1514919	8.00	7.82	
58 Dichlorobromomethane	83	10.836	10.825	0.011	99	2919706	8.00	8.41	
59 1,4-Dioxane	88	10.841	10.851	-0.010	81	547334	8.00	7.89	
60 Methyl methacrylate	41	10.987	10.990	-0.003	96	1346179	8.00	8.71	
62 4-Methyl-2-pentanone (MIBK	43	11.866	11.878	-0.012	93	2198186	8.00	8.33	
63 cis-1,3-Dichloropropene	75	11.920	11.915	0.005	92	2237825	8.00	8.27	
64 trans-1,3-Dichloropropene	75	12.664	12.660	0.004	96	2203158	8.00	8.52	
65 Toluene	91	12.799	12.795	0.004	94	4431626	8.00	7.54	
66 1,1,2-Trichloroethane	83	12.858	12.853	0.005	98	1239731	8.00	7.66	
69 2-Hexanone	58	13.300	13.313	-0.013	98	1277875	8.00	9.12	
70 Chlorodibromomethane	129	13.586	13.580	0.006	97	2886064	8.00	9.32	
71 n-Octane	85	13.618	13.618	0.000	83	1455739	8.00	7.70	
72 Ethylene Dibromide	107	13.877	13.876	0.001	98	2401387	8.00	8.31	
73 Tetrachloroethene	129	14.006	14.005	0.001	96	1680400	8.00	7.67	
74 Chlorobenzene	112	14.912	14.910	0.002	93	3488920	8.00	7.54	
76 Ethylbenzene	91	15.241	15.237	0.004	99	5752584	8.00	7.48	
77 m-Xylene & p-Xylene	91	15.414	15.413	0.001	99	8622122	16.0	14.5	
79 Bromoform	173	15.813	15.812	0.001	96	2664358	8.00	10.0	
80 Styrene	104	15.883	15.884	-0.001	98	3357063	8.00	8.83	
81 n-Nonane	57	15.926	15.926	0.000	83	2276291	8.00	7.08	
82 o-Xylene	91	15.948	15.948	0.000	98	4507688	8.00	7.16	
83 1,1,2,2-Tetrachloroethane	83	16.271	16.269	0.002	99	2991028	8.00	7.94	
84 1,2,3-Trichloropropane	110	16.428	16.424	0.004	98	1028585	8.00	7.54	
85 Isopropylbenzene	105	16.568	16.566	0.002	98	6052009	8.00	7.19	
86 N-Propylbenzene	120	17.145	17.144	0.001	98	1764153	8.00	7.67	
87 2-Chlorotoluene	126	17.166	17.164	0.002	95	1556290	8.00	7.32	
88 4-Ethyltoluene	105	17.312	17.312	0.000	98	6577901	8.00	7.52	
89 1,3,5-Trimethylbenzene	120	17.404	17.400	0.004	92	2700808	8.00	7.65	
90 Alpha Methyl Styrene	118	17.652	17.652	0.000	87	2696582	8.00	8.84	
91 n-Decane	57	17.797	17.793	0.004	94	3283161	8.00	7.52	
92 tert-Butylbenzene	119	17.867	17.868	-0.001	91	5901403	8.00	7.19	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.884	17.884	0.000	96	5281375	8.00	7.18	
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	99	3580637	8.00	7.57	
95 sec-Butylbenzene	105	18.175	18.170	0.005	97	7478024	8.00	7.09	
96 Benzyl chloride	91	18.239	18.237	0.002	98	4696324	8.00	8.49	
97 1,4-Dichlorobenzene	146	18.250	18.251	-0.001	95	3530827	8.00	7.48	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	96	7094422	8.00	7.65	
99 1,2,3-Trimethylbenzene	105	18.396	18.393	0.003	98	6090386	8.00	7.29	
101 1,2-Dichlorobenzene	146	18.638	18.638	0.000	94	3481297	8.00	7.58	
104 n-Butylbenzene	91	18.833	18.832	0.001	98	6600625	8.00	7.98	
105 Undecane	57	19.226	19.228	-0.002	91	3897040	8.00	8.24	
106 1,2-Dibromo-3-Chloropropan	157	19.286	19.284	0.002	98	2624159	8.00	9.34	
108 1,2,4,5-Tetramethylbenzene	119	19.641	19.641	0.000	97	3986557	8.00	8.80	
111 Dodecane	57	20.342	20.340	0.002	97	3963852	8.00	8.96	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	94	3591958	8.00	10.4	
113 Naphthalene	128	20.574	20.574	0.000	98	7879181	8.00	10.3	
115 Hexachlorobutadiene	225	20.828	20.827	0.001	96	3312283	8.00	8.80	
116 1,2,3-Trichlorobenzene	180	20.866	20.864	0.002	95	3409456	8.00	9.79	
117 2-Methylnaphthalene	142	21.680	21.680	0.000	99	4666996	18.4	24.8	
118 1-Methylnaphthalene	142	21.825	21.823	0.002	99	4705374	18.4	25.2	
S 119 Xylenes, Total	100				0		24.0	21.6	
S 120 1,2-Dichloroethene, Total	1				0		16.0	15.1	

Reagents:

40L9DNP_00019	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

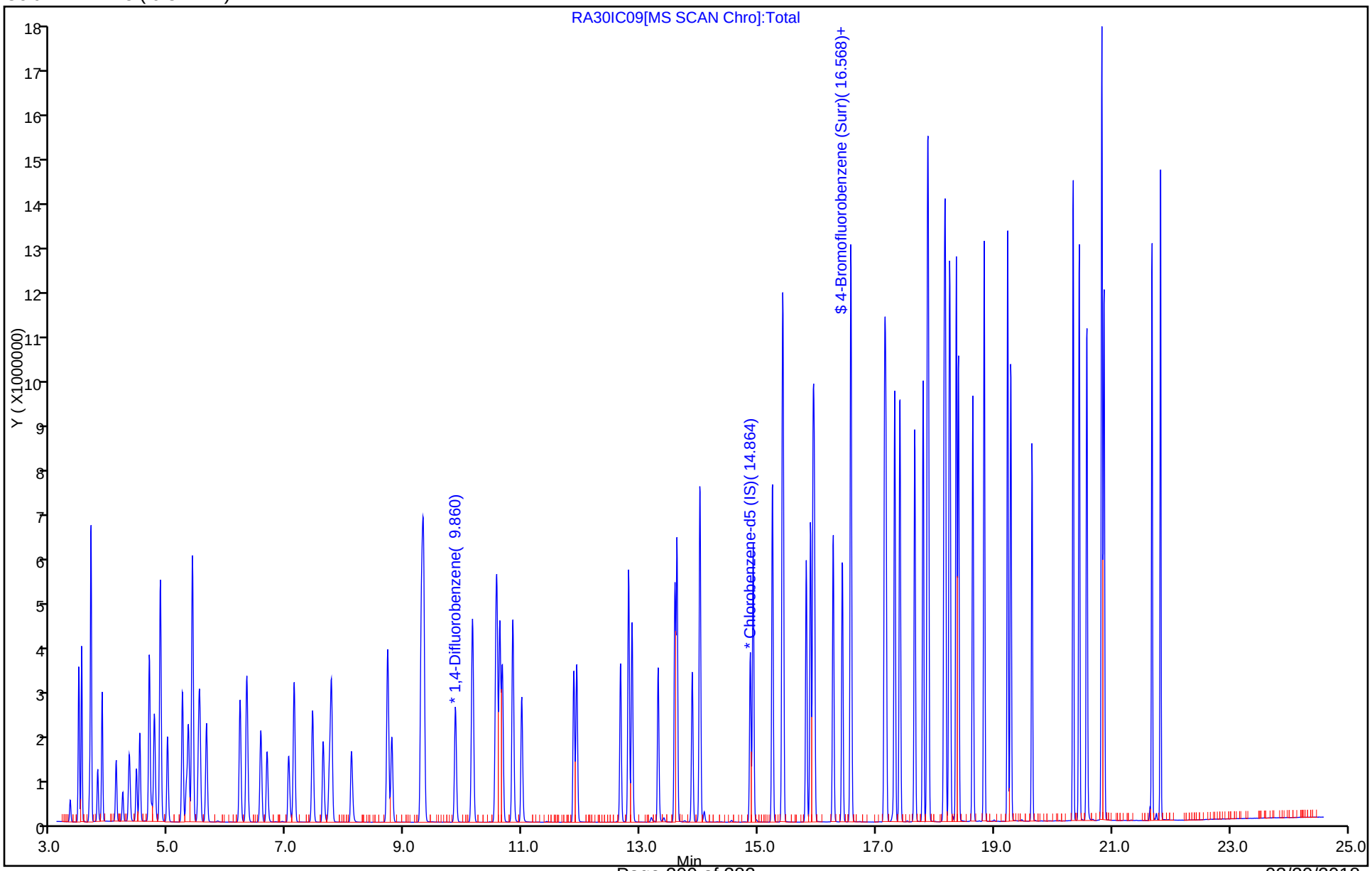
Report Date: 05-Feb-2018 13:03:34 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC09.D

Injection Date:	30-Jan-2018 18:50:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L9			Worklist Smp#:	11
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
Lims ID: IC L10
Client ID:
Sample Type: IC Calib Level: 10
Inject. Date: 30-Jan-2018 19:38:30 ALS Bottle#: 15 Worklist Smp#: 12
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-012
Misc. Info.: 134507
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub13

Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:03:37 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 31-Jan-2018 16:10:49

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.724	7.710	0.014	91	412046	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.860	9.852	0.008	94	2495007	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.864	14.859	0.005	87	2168094	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.573	16.570	0.003	93	1466410	4.00	3.57	
6 Chlorodifluoromethane	67	3.453	3.471	-0.018	97	719553	16.0	14.3	
7 Propene	41	3.464	3.477	-0.013	96	1277376	16.0	13.0	
8 Dichlorodifluoromethane	85	3.507	3.519	-0.012	100	5412793	16.0	14.0	
9 Chloromethane	52	3.648	3.653	-0.005	99	462204	16.0	13.1	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.669	3.675	-0.006	91	3561275	16.0	13.6	
12 Vinyl chloride	62	3.782	3.789	-0.007	99	1447608	16.0	13.4	
13 Butane	43	3.858	3.863	-0.005	78	1618667	16.0	14.0	
14 Butadiene	54	3.858	3.863	-0.005	79	990068	16.0	14.2	
15 Bromomethane	94	4.095	4.098	-0.003	98	1458793	16.0	14.6	
16 Chloroethane	64	4.214	4.208	0.006	99	704038	16.0	14.4	
17 Ethanol	31	4.332	4.313	0.019	91	2165410	80.0	70.1	
18 Vinyl bromide	106	4.446	4.441	0.005	97	1433559	16.0	14.6	
19 2-Methylbutane	43	4.500	4.498	0.002	81	1164068	16.0	14.3	
20 Acrolein	56	4.661	4.656	0.005	96	327310	16.0	14.4	
21 Trichlorofluoromethane	101	4.661	4.659	0.002	99	5028632	16.0	13.7	
22 Acetonitrile	40	4.710	4.713	-0.003	96	414724	16.0	14.8	
23 Acetone	58	4.753	4.748	0.005	99	1641135	48.0	38.1	
24 Isopropyl alcohol	45	4.861	4.843	0.018	93	6176210	48.0	37.3	
25 Pentane	72	4.850	4.847	0.003	96	368799	16.0	12.8	
26 Ethyl ether	31	4.974	4.975	-0.001	75	1351034	16.0	13.0	
27 1,1-Dichloroethene	96	5.228	5.218	0.010	97	2191529	16.0	14.0	
28 Acrylonitrile	53	5.298	5.288	0.010	93	1416916	16.0	14.4	
29 2-Methyl-2-propanol	59	5.335	5.325	0.010	92	4364855	16.0	14.1	
30 1,1,2-Trichloro-1,2,2-trif	101	5.395	5.390	0.005	96	4568598	16.0	13.7	
31 Methylene Chloride	84	5.503	5.492	0.011	89	1959635	16.0	12.2	
32 3-Chloro-1-propene	39	5.524	5.514	0.010	95	1802055	16.0	13.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.632	5.625	0.007	98	6249903	16.0	14.5	
34 trans-1,2-Dichloroethene	96	6.209	6.192	0.017	99	2342499	16.0	14.8	
36 Methyl tert-butyl ether	73	6.317	6.323	-0.006	94	7130125	16.0	14.6	
37 1,1-Dichloroethane	63	6.560	6.545	0.015	100	4150884	16.0	13.8	
38 Vinyl acetate	43	6.667	6.662	0.005	99	4862704	16.0	16.7	
39 2-Butanone (MEK)	72	7.034	7.036	-0.002	97	1092853	16.0	14.6	
40 Hexane	56	7.126	7.119	0.007	84	1626366	16.0	13.5	
41 cis-1,2-Dichloroethene	96	7.438	7.426	0.012	94	2442184	16.0	14.4	
42 Ethyl acetate	43	7.616	7.622	-0.006	99	4096409	16.0	15.7	
43 Chloroform	83	7.757	7.743	0.014	97	5369459	16.0	14.1	
44 Tetrahydrofuran	42	8.096	8.108	-0.012	83	1922640	16.0	14.4	
45 1,1,1-Trichloroethane	97	8.711	8.701	0.010	96	5978105	16.0	14.9	
46 1,2-Dichloroethane	62	8.781	8.771	0.010	99	3907140	16.0	14.8	
47 Benzene	78	9.283	9.274	0.009	97	6108554	16.0	12.8	
48 n-Butanol	31	9.272	9.296	-0.024	65	506348	16.0	16.1	
49 Cyclohexane	69	9.304	9.298	0.006	92	968821	16.0	12.7	
50 Carbon tetrachloride	117	9.320	9.312	0.008	98	5902097	16.0	15.4	
53 Isooctane	57	10.151	10.145	0.006	97	9340512	16.0	13.5	
54 1,2-Dichloropropane	63	10.544	10.540	0.004	85	2196910	16.0	13.2	
55 n-Heptane	71	10.566	10.561	0.005	79	2239236	16.0	13.6	
56 Trichloroethene	130	10.615	10.605	0.010	96	3246702	16.0	14.4	
57 Dibromomethane	93	10.658	10.648	0.010	94	2859943	16.0	14.6	
58 Dichlorobromomethane	83	10.836	10.825	0.011	99	5610234	16.0	16.0	
59 1,4-Dioxane	88	10.846	10.851	-0.005	81	995848	16.0	14.2	
60 Methyl methacrylate	41	10.987	10.990	-0.003	96	2607373	16.0	16.7	
62 4-Methyl-2-pentanone (MIBK	43	11.871	11.878	-0.007	92	4112261	16.0	15.4	
63 cis-1,3-Dichloropropene	75	11.920	11.915	0.005	92	4235998	16.0	15.5	
64 trans-1,3-Dichloropropene	75	12.664	12.660	0.004	97	4251750	16.0	16.2	
65 Toluene	91	12.798	12.795	0.003	94	8226314	16.0	13.8	
66 1,1,2-Trichloroethane	83	12.858	12.853	0.005	98	2316335	16.0	14.1	
69 2-Hexanone	58	13.300	13.313	-0.013	98	2400790	16.0	16.9	
70 Chlorodibromomethane	129	13.586	13.580	0.006	97	5563126	16.0	17.7	
71 n-Octane	85	13.624	13.618	0.006	81	2665696	16.0	13.9	
72 Ethylene Dibromide	107	13.882	13.876	0.006	98	4533785	16.0	15.4	
73 Tetrachloroethene	129	14.012	14.005	0.007	96	3162320	16.0	14.2	
74 Chlorobenzene	112	14.912	14.910	0.002	92	6524458	16.0	13.9	
76 Ethylbenzene	91	15.241	15.237	0.004	98	10356375	16.0	13.3	
77 m-Xylene & p-Xylene	91	15.419	15.413	0.006	97	14832360	32.0	24.5	
79 Bromoform	173	15.813	15.812	0.001	96	5289308	16.0	19.5	
80 Styrene	104	15.888	15.884	0.004	98	6305273	16.0	16.3	
81 n-Nonane	57	15.926	15.926	0.000	81	3925374	16.0	12.0	
82 o-Xylene	91	15.953	15.948	0.005	98	8018750	16.0	12.5	
83 1,1,2,2-Tetrachloroethane	83	16.271	16.269	0.002	98	5403129	16.0	14.1	
84 1,2,3-Trichloropropane	110	16.428	16.424	0.004	97	1952171	16.0	14.1	
85 Isopropylbenzene	105	16.568	16.566	0.002	98	10798333	16.0	12.6	
86 N-Propylbenzene	120	17.145	17.144	0.001	98	3199258	16.0	13.7	
87 2-Chlorotoluene	126	17.166	17.164	0.002	95	2818704	16.0	13.0	
88 4-Ethyltoluene	105	17.312	17.312	0.000	97	11626420	16.0	13.1	
89 1,3,5-Trimethylbenzene	120	17.404	17.400	0.004	93	4953675	16.0	13.8	
90 Alpha Methyl Styrene	118	17.652	17.652	0.000	89	4958200	16.0	16.0	
91 n-Decane	57	17.797	17.793	0.004	95	5508017	16.0	12.4	
92 tert-Butylbenzene	119	17.873	17.868	0.005	89	10252438	16.0	12.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.889	17.884	0.005	96	9006683	16.0	12.0	
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	98	6390995	16.0	13.3	
95 sec-Butylbenzene	105	18.175	18.170	0.005	98	12393102	16.0	11.6	
96 Benzyl chloride	91	18.239	18.237	0.002	98	7883232	16.0	14.0	
97 1,4-Dichlorobenzene	146	18.256	18.251	0.005	93	6311344	16.0	13.2	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	95	11859110	16.0	12.6	
99 1,2,3-Trimethylbenzene	105	18.396	18.393	0.003	97	10662003	16.0	12.6	
101 1,2-Dichlorobenzene	146	18.638	18.638	0.000	93	6299641	16.0	13.5	
104 n-Butylbenzene	91	18.833	18.832	0.001	98	10895604	16.0	13.0	
105 Undecane	57	19.232	19.228	0.004	88	6317836	16.0	13.2	
106 1,2-Dibromo-3-Chloropropan	157	19.285	19.284	0.001	98	4681454	16.0	16.4	
108 1,2,4,5-Tetramethylbenzene	119	19.641	19.641	0.000	97	7226247	16.0	15.7	
111 Dodecane	57	20.342	20.340	0.002	94	5984092	16.0	13.3	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	94	6399037	16.0	18.3	
113 Naphthalene	128	20.574	20.574	0.000	97	13166564	16.0	16.9	
115 Hexachlorobutadiene	225	20.828	20.827	0.001	96	5838950	16.0	15.3	
116 1,2,3-Trichlorobenzene	180	20.865	20.864	0.001	94	6110654	16.0	17.3	
117 2-Methylnaphthalene	142	21.680	21.680	0.000	99	6724954	36.8	35.2	
118 1-Methylnaphthalene	142	21.825	21.823	0.002	98	6700143	36.8	35.3	
S 119 Xylenes, Total	100				0		48.0	37.0	
S 120 1,2-Dichloroethene, Total	1				0		32.0	29.2	

Reagents:

40L10DNP_00001	Amount Added: 200.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

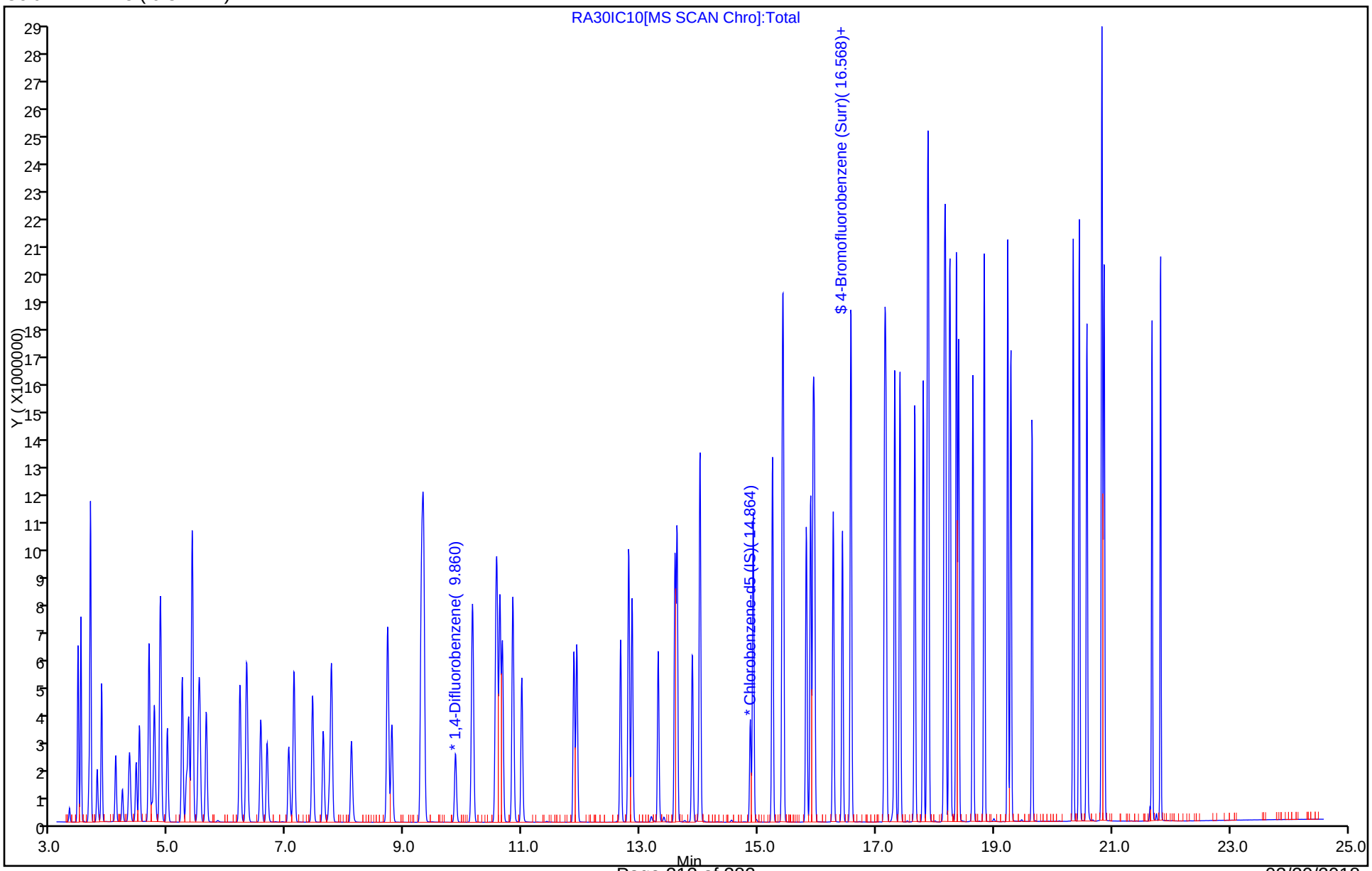
Report Date: 05-Feb-2018 13:03:38 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Injection Date:	30-Jan-2018 19:38:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L10			Worklist Smp#:	12
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Lab Sample ID: ICV 140-17762/14 Calibration Date: 01/30/2018 21:11

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RA30ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4879	0.5051		2.56	2.47	3.5	35.0
Propene	Ave	0.9557	0.9570		2.47	2.47	0.1	35.0
Dichlorodifluoromethane	Ave	3.756	4.377		2.88	2.47	16.6	35.0
Chloromethane	Ave	0.3421	0.3220		2.32	2.47	-5.9	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.544	2.591		2.52	2.47	1.9	35.0
Vinyl chloride	Ave	1.049	1.041		2.45	2.47	-0.8	35.0
1,3-Butadiene	Ave	0.6765	0.6768		2.47	2.47	0.0	35.0
Butane	Ave	1.124	1.183		2.60	2.47	5.2	35.0
Bromomethane	Ave	0.9705	0.9841		2.50	2.47	1.4	35.0
Chloroethane	Ave	0.4754	0.4775		2.48	2.47	0.5	35.0
Ethanol	Ave	0.2999	0.2849		11.7	12.3	-5.0	35.0
Vinyl bromide	Ave	0.9514	1.041		2.70	2.47	9.4	35.0
2-Methylbutane	Ave	0.7921	0.8138		2.54	2.47	2.8	35.0
Acrolein	Ave	0.2209	0.2275		2.54	2.47	3.0	35.0
Trichlorofluoromethane	Ave	3.567	3.678		2.55	2.47	3.1	35.0
Acetonitrile	Ave	0.2718	0.2877		2.61	2.47	5.8	35.0
Acetone	Ave	0.4182	0.3903		6.91	7.41	-6.7	35.0
Isopropyl alcohol	Ave	1.608	1.805		8.32	7.41	12.3	35.0
Pentane	Ave	0.2789	0.2842		2.52	2.47	1.9	35.0
Ethyl ether	Ave	1.010	1.023		2.50	2.47	1.4	35.0
1,1-Dichloroethene	Ave	1.514	1.434		2.34	2.47	-5.3	35.0
Acrylonitrile	Ave	0.9563	0.9635		2.49	2.47	0.8	35.0
tert-Butyl alcohol	Ave	3.014	3.014		2.47	2.47	0.0	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.239	3.252		2.48	2.47	0.4	35.0
Methylene Chloride	Ave	1.564	1.381		2.18	2.47	-11.7	35.0
3-Chloropropene	Ave	1.257	1.307		2.57	2.47	4.0	35.0
Carbon disulfide	Ave	4.190	4.077		2.40	2.47	-2.7	35.0
trans-1,2-Dichloroethene	Ave	1.537	1.515		2.44	2.47	-1.4	35.0
Methyl tert-butyl ether	Ave	4.739	4.873		2.54	2.47	2.8	35.0
1,1-Dichloroethane	Ave	2.927	2.890		2.44	2.47	-1.2	35.0
Vinyl acetate	Ave	2.829	3.271		2.85	2.47	15.6	35.0
2-Butanone (MEK)	Ave	0.7255	0.7119		2.42	2.47	-1.9	35.0
Hexane	Ave	1.173	1.154		2.43	2.47	-1.7	35.0
cis-1,2-Dichloroethene	Ave	1.647	1.637		2.45	2.47	-0.6	35.0
Ethyl acetate	Ave	2.540	2.598		2.53	2.47	2.3	35.0
Chloroform	Ave	3.701	3.702		2.47	2.47	0.0	35.0
Tetrahydrofuran	Ave	1.295	1.329		2.54	2.47	2.7	35.0
1,1,1-Trichloroethane	Ave	3.888	4.070		2.58	2.47	4.7	35.0
1,2-Dichloroethane	Ave	0.4231	0.4407		2.57	2.47	4.2	35.0
1-Butanol	Ave	0.0506	0.0556		2.72	2.47	10.0	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Lab Sample ID: ICV 140-17762/14 Calibration Date: 01/30/2018 21:11

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RA30ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzene	Ave	0.7642	0.7746		2.50	2.47	1.4	35.0
Cyclohexane	Ave	0.1227	0.1250		2.51	2.47	1.8	35.0
Carbon tetrachloride	Ave	0.6160	0.6889		2.76	2.47	11.8	35.0
2,2,4-Trimethylpentane	Ave	1.108	1.146		2.55	2.47	3.4	35.0
1,2-Dichloropropane	Ave	0.2659	0.2696		2.50	2.47	1.4	35.0
Heptane	Ave	0.2649	0.2721		2.54	2.47	2.7	35.0
Trichloroethene	Ave	0.3611	0.3691		2.52	2.47	2.2	35.0
Dibromomethane	Ave	0.3145	0.3283		2.58	2.47	4.4	35.0
Bromodichloromethane	Ave	0.5634	0.6271		2.75	2.47	11.3	35.0
1,4-Dioxane	Ave	0.1127	0.1179		2.58	2.47	4.7	35.0
Methyl methacrylate	Ave	0.2509	0.2746		2.70	2.47	9.4	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4284	0.4624		2.67	2.47	7.9	35.0
cis-1,3-Dichloropropene	Ave	0.4392	0.4887		2.75	2.47	11.3	35.0
trans-1,3-Dichloropropene	Ave	0.4850	0.5351		2.72	2.47	10.3	35.0
Toluene	Ave	1.102	1.122		2.52	2.47	1.9	35.0
1,1,2-Trichloroethane	Ave	0.3035	0.3092		2.52	2.47	1.9	35.0
2-Hexanone	Ave	0.2628	0.2981		2.80	2.47	13.5	35.0
Dibromochloromethane	Ave	0.5804	0.6993		2.98	2.47	20.5	35.0
Octane	Ave	0.3544	0.3754		2.62	2.47	5.9	35.0
1,2-Dibromoethane (EDB)	Ave	0.5418	0.5896		2.69	2.47	8.8	35.0
Tetrachloroethene	Ave	0.4106	0.4276		2.57	2.47	4.1	35.0
Chlorobenzene	Ave	0.8680	0.8977		2.55	2.47	3.4	35.0
Ethylbenzene	Ave	1.442	1.497		2.56	2.47	3.8	35.0
m-Xylene & p-Xylene	Ave	1.118	1.183		5.23	4.94	5.8	35.0
Bromoform	Ave	0.4993	0.6381		3.16	2.47	27.8	35.0
Styrene	Ave	0.7131	0.8370		2.90	2.47	17.4	35.0
Nonane	Ave	0.6024	0.6373		2.61	2.47	5.8	35.0
o-Xylene	Ave	1.180	1.193		2.49	2.47	1.0	35.0
1,1,2,2-Tetrachloroethane	Ave	0.7065	0.7765		2.71	2.47	9.9	35.0
1,2,3-Trichloropropane	Ave	0.2557	0.2673		2.58	2.47	4.5	35.0
Isopropylbenzene	Ave	1.579	1.681		2.63	2.47	6.5	35.0
Propylbenzene	Ave	0.4312	0.4920		2.82	2.47	14.1	35.0
2-Chlorotoluene	Ave	0.3988	0.4292		2.66	2.47	7.6	35.0
4-Ethyltoluene	Ave	1.639	1.745		2.63	2.47	6.5	35.0
1,3,5-Trimethylbenzene	Ave	0.6617	0.7303		2.73	2.47	10.4	35.0
Alpha Methyl Styrene	Ave	0.5721	0.6952		3.00	2.47	21.5	35.0
Decane	Ave	0.8188	0.9370		2.83	2.47	14.4	35.0
tert-Butylbenzene	Ave	1.538	1.672		2.69	2.47	8.8	35.0
1,2,4-Trimethylbenzene	Ave	1.379	1.533		2.74	2.47	11.1	35.0
1,3-Dichlorobenzene	Ave	0.8870	0.9882		2.75	2.47	11.4	35.0
sec-Butylbenzene	Ave	1.978	2.196		2.74	2.47	11.0	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Lab Sample ID: ICV 140-17762/14 Calibration Date: 01/30/2018 21:11

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RA30ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzyl chloride	Ave	1.037	1.335		3.18	2.47	28.7	35.0
1,4-Dichlorobenzene	Ave	0.8846	0.9798		2.74	2.47	10.8	35.0
4-Isopropyltoluene	Ave	1.739	1.961		2.78	2.47	12.7	35.0
1,2,3-Trimethylbenzene	Ave	1.566	1.539		2.43	2.47	-1.7	35.0
1,2-Dichlorobenzene	Ave	0.8615	0.9599		2.75	2.47	11.4	35.0
Butylbenzene	Ave	1.551	1.840		2.93	2.47	18.7	35.0
Undecane	Ave	0.8863	1.046		2.91	2.47	18.0	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.5267	0.4263		2.00	2.47	-19.1	35.0
1,2,4,5-Tetramethylbenzene	Ave	0.8495	1.694		4.92	2.47	99.4*	35.0
Dodecane	Ave	0.8298	0.9946		2.96	2.47	19.9	35.0
1,2,4-Trichlorobenzene	Ave	0.6453	0.7696		2.94	2.47	19.3	35.0
Naphthalene	Ave	1.434	1.710		2.95	2.47	19.3	35.0
Hexachlorobutadiene	Ave	0.7058	0.7878		2.76	2.47	11.6	35.0
1,2,3-Trichlorobenzene	Ave	0.6529	0.7394		2.80	2.47	13.3	35.0
2-Methylnaphthalene	Ave	0.3527	0.1484		2.38	5.67	-57.9*	50.0
1-Methylnaphthalene	Ave	0.3505	0.1569		2.54	5.68	-55.3*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7584	0.7641		4.03	4.00	0.8	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30ICV.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 30-Jan-2018 21:11:30 ALS Bottle#: 1 Worklist Smp#: 14
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-014
Misc. Info.: 134531
Operator ID: Instrument ID: MR
Sublist:

Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:03:43 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 31-Jan-2018 09:35:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.719	7.710	0.009	84	374886	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.854	9.852	0.002	95	2292324	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.864	14.859	0.005	88	1999070	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.573	16.570	0.003	89	1527412	4.00	4.03	
6 Chlorodifluoromethane	67	3.470	3.471	-0.001	96	116900	2.47	2.56	
7 Propene	41	3.475	3.477	-0.002	97	221466	2.47	2.47	
8 Dichlorodifluoromethane	85	3.518	3.519	-0.001	100	1013033	2.47	2.88	
9 Chloromethane	52	3.653	3.653	0.000	99	74517	2.47	2.32	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.675	3.675	0.000	92	599700	2.47	2.52	
12 Vinyl chloride	62	3.788	3.789	-0.001	99	240822	2.47	2.45	
13 Butane	43	3.863	3.863	0.000	89	273678	2.47	2.60	
14 Butadiene	54	3.863	3.863	0.000	93	156627	2.47	2.47	
15 Bromomethane	94	4.101	4.098	0.003	98	227760	2.47	2.50	
16 Chloroethane	64	4.208	4.208	0.000	99	110511	2.47	2.48	
17 Ethanol	31	4.316	4.313	0.003	91	329645	12.3	11.7	
18 Vinyl bromide	106	4.440	4.441	-0.001	97	240966	2.47	2.70	
19 2-Methylbutane	43	4.500	4.498	0.002	81	188346	2.47	2.54	
20 Acrolein	56	4.656	4.656	0.000	93	52652	2.47	2.54	
21 Trichlorofluoromethane	101	4.661	4.659	0.002	99	851270	2.47	2.55	
22 Acetonitrile	40	4.699	4.713	-0.014	97	66575	2.47	2.61	
23 Acetone	58	4.748	4.748	0.000	99	270975	7.41	6.91	
24 Isopropyl alcohol	45	4.845	4.843	0.002	96	1253124	7.41	8.32	
25 Pentane	72	4.850	4.847	0.003	98	65775	2.47	2.52	
26 Ethyl ether	31	4.969	4.975	-0.006	78	236830	2.47	2.50	
27 1,1-Dichloroethene	96	5.222	5.218	0.004	95	331896	2.47	2.34	
28 Acrylonitrile	53	5.292	5.288	0.004	93	222987	2.47	2.49	
29 2-Methyl-2-propanol	59	5.319	5.325	-0.006	93	697625	2.47	2.47	
30 1,1,2-Trichloro-1,2,2-trif	101	5.395	5.390	0.005	97	752517	2.47	2.48	
31 Methylene Chloride	84	5.497	5.492	0.005	90	319538	2.47	2.18	
32 3-Chloro-1-propene	39	5.519	5.514	0.005	96	302572	2.47	2.57	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.632	5.625	0.007	98	943446	2.47	2.40	
34 trans-1,2-Dichloroethene	96	6.198	6.192	0.006	97	350688	2.47	2.44	
36 Methyl tert-butyl ether	73	6.317	6.323	-0.006	95	1127699	2.47	2.54	
37 1,1-Dichloroethane	63	6.549	6.545	0.004	100	668941	2.47	2.44	
38 Vinyl acetate	43	6.662	6.662	0.000	99	756912	2.47	2.85	
39 2-Butanone (MEK)	72	7.029	7.036	-0.007	98	164762	2.47	2.42	
40 Hexane	56	7.120	7.119	0.001	85	266984	2.47	2.43	
41 cis-1,2-Dichloroethene	96	7.433	7.426	0.007	95	378841	2.47	2.45	
42 Ethyl acetate	43	7.616	7.622	-0.006	99	601349	2.47	2.53	
43 Chloroform	83	7.751	7.743	0.008	97	856696	2.47	2.47	
44 Tetrahydrofuran	42	8.096	8.108	-0.012	85	307649	2.47	2.54	
45 1,1,1-Trichloroethane	97	8.706	8.701	0.005	95	941934	2.47	2.58	
46 1,2-Dichloroethane	62	8.776	8.771	0.005	99	623694	2.47	2.57	
47 Benzene	78	9.277	9.274	0.003	97	1096164	2.47	2.50	
48 n-Butanol	31	9.272	9.296	-0.024	63	78715	2.47	2.72	
49 Cyclohexane	69	9.299	9.298	0.001	95	176817	2.47	2.51	
50 Carbon tetrachloride	117	9.315	9.312	0.003	97	974834	2.47	2.76	
53 Isooctane	57	10.145	10.145	0.000	97	1621108	2.47	2.55	
54 1,2-Dichloropropane	63	10.539	10.540	-0.001	86	381491	2.47	2.50	
55 n-Heptane	71	10.566	10.561	0.005	82	385034	2.47	2.54	
56 Trichloroethene	130	10.609	10.605	0.004	94	522341	2.47	2.52	
57 Dibromomethane	93	10.647	10.648	-0.001	95	464526	2.47	2.58	
58 Dichlorobromomethane	83	10.830	10.825	0.005	99	887479	2.47	2.75	
59 1,4-Dioxane	88	10.841	10.851	-0.010	83	166899	2.47	2.58	
60 Methyl methacrylate	41	10.981	10.990	-0.009	97	388529	2.47	2.70	
62 4-Methyl-2-pentanone (MIBK	43	11.866	11.878	-0.012	93	654369	2.47	2.67	
63 cis-1,3-Dichloropropene	75	11.914	11.915	-0.001	92	691544	2.47	2.75	
64 trans-1,3-Dichloropropene	75	12.658	12.660	-0.002	96	660382	2.47	2.72	
65 Toluene	91	12.799	12.795	0.003	93	1384914	2.47	2.52	
66 1,1,2-Trichloroethane	83	12.852	12.853	-0.001	99	381618	2.47	2.52	
69 2-Hexanone	58	13.300	13.313	-0.013	98	367923	2.47	2.80	
70 Chlorodibromomethane	129	13.580	13.580	0.000	97	863008	2.47	2.98	
71 n-Octane	85	13.618	13.618	0.000	84	463240	2.47	2.62	
72 Ethylene Dibromide	107	13.877	13.876	0.001	98	727571	2.47	2.69	
73 Tetrachloroethene	129	14.006	14.005	0.001	95	527727	2.47	2.57	
74 Chlorobenzene	112	14.912	14.910	0.002	93	1107854	2.47	2.55	
76 Ethylbenzene	91	15.236	15.237	-0.001	99	1846858	2.47	2.56	
77 m-Xylene & p-Xylene	91	15.414	15.413	0.001	100	2920104	4.94	5.23	
79 Bromoform	173	15.813	15.812	0.001	96	787496	2.47	3.16	
80 Styrene	104	15.883	15.884	-0.001	98	1032916	2.47	2.90	
81 n-Nonane	57	15.926	15.926	0.000	83	786465	2.47	2.61	
82 o-Xylene	91	15.948	15.948	0.000	98	1471695	2.47	2.49	
83 1,1,2,2-Tetrachloroethane	83	16.271	16.269	0.002	99	958280	2.47	2.71	
84 1,2,3-Trichloropropane	110	16.422	16.424	-0.002	98	329888	2.47	2.58	
85 Isopropylbenzene	105	16.568	16.566	0.002	97	2074532	2.47	2.63	
86 N-Propylbenzene	120	17.145	17.144	0.001	98	607119	2.47	2.82	
87 2-Chlorotoluene	126	17.161	17.164	-0.003	94	529617	2.47	2.66	
88 4-Ethyltoluene	105	17.312	17.312	0.000	99	2153012	2.47	2.63	
89 1,3,5-Trimethylbenzene	120	17.398	17.400	-0.002	92	901269	2.47	2.73	
90 Alpha Methyl Styrene	118	17.652	17.652	0.000	87	857882	2.47	3.00	
91 n-Decane	57	17.792	17.793	-0.001	93	1156312	2.47	2.83	
92 tert-Butylbenzene	119	17.867	17.868	-0.001	91	2063899	2.47	2.69	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.884	17.884	0.000	96	1891808	2.47	2.74	
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	99	1219490	2.47	2.75	
95 sec-Butylbenzene	105	18.169	18.170	-0.001	98	2709561	2.47	2.74	
96 Benzyl chloride	91	18.234	18.237	-0.003	98	1647735	2.47	3.18	
97 1,4-Dichlorobenzene	146	18.250	18.251	-0.001	94	1209201	2.47	2.74	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	97	2419457	2.47	2.78	
99 1,2,3-Trimethylbenzene	105	18.390	18.393	-0.003	99	1899492	2.47	2.43	
101 1,2-Dichlorobenzene	146	18.638	18.638	0.000	94	1184654	2.47	2.75	
104 n-Butylbenzene	91	18.833	18.832	0.001	99	2271258	2.47	2.93	
105 Undecane	57	19.226	19.228	-0.002	92	1290712	2.47	2.91	
106 1,2-Dibromo-3-Chloropropan	157	19.286	19.284	0.002	97	526122	2.47	2.00	
108 1,2,4,5-Tetramethylbenzene	119	19.641	19.641	0.000	96	2090737	2.47	4.92	
111 Dodecane	57	20.337	20.340	-0.003	98	1227394	2.47	2.96	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	94	949711	2.47	2.94	
113 Naphthalene	128	20.569	20.574	-0.005	99	2110664	2.47	2.95	
115 Hexachlorobutadiene	225	20.828	20.827	0.001	96	972166	2.47	2.76	
116 1,2,3-Trichlorobenzene	180	20.865	20.864	0.001	94	912486	2.47	2.80	
117 2-Methylnaphthalene	142	21.680	21.680	0.000	99	420170	5.67	2.38	
118 1-Methylnaphthalene	142	21.820	21.823	-0.003	99	445201	5.68	2.54	
S 119 Xylenes, Total	100				0		7.41	7.72	
S 120 1,2-Dichloroethene, Total	1				0		4.94	4.89	

Reagents:

40CV101S_00054	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

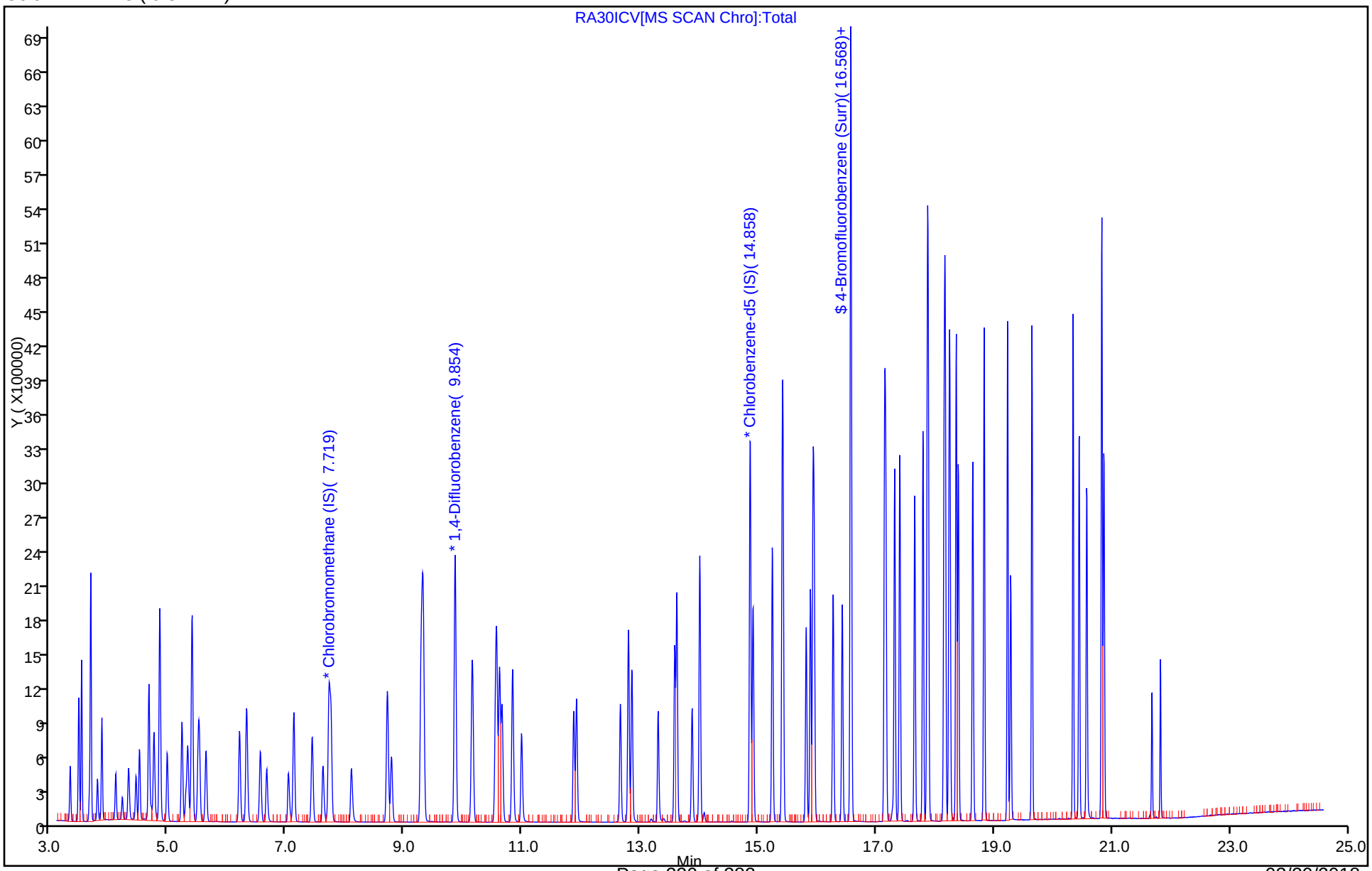
Report Date: 05-Feb-2018 13:03:47 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30ICV.D

Injection Date:	30-Jan-2018 21:11:30	Instrument ID:	MR	Operator ID:	
Lims ID:	ICV			Worklist Smp#:	14
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Lab Sample ID: CCVIS 140-18783/2 Calibration Date: 03/15/2018 13:44

Instrument ID: MR Calib Start Date: 06/28/2017 15:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/28/2017 21:58

Lab File ID: RCCVC15.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetaldehyde	Ave	0.3474	0.2461			10.0	-29.2	30.0
2-Methylpentane	Ave	1.822	2.069			2.00	13.5	30.0
2,3-Dimethylpentane	Ave	0.1274	0.1616			2.00	26.8	30.0
Thiophene	Ave	0.3433	0.4245			2.00	23.7	30.0
Methylcyclohexane	Ave	0.4439	0.5630			2.00	26.8	30.0
2-Methylthiophene	Ave	0.6999	0.9017			2.00	28.8	30.0
3-Methylthiophene	Ave	0.6908	0.8797			2.00	27.3	30.0
2,3-Dimethylheptane	Ave	0.5998	0.5965			2.00	-0.5	30.0
2-Ethylthiophene	Ave	0.9153	1.095			2.00	19.6	30.0
Butylcyclohexane	Ave	0.7978	1.167			2.00	46.3*	30.0
Indane	Ave	1.030	1.445			2.00	40.3*	30.0
Indene	QuaF		1.051			2.00		30.0
1,2,3,5-Tetramethylbenzene	Ave	0.9142	1.155			2.00	26.3	30.0
1,2,3,4-Tetramethylbenzene	Ave	1.236	1.519			2.00	22.9	30.0
Benzo(b)thiophene	Ave	0.9147	0.9697			2.00	6.0	30.0
1,2-Dimethyl-4-Ethylbenzene	QuaF					2.00		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RCCVC15.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 15-Mar-2018 13:44:30 ALS Bottle#: 15 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007635-002
Misc. Info.: S56
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub19

Method: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 15-Mar-2018 17:32:35 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: barlozhetskayaa Date: 15-Mar-2018 17:32:35

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.670	7.670	0.000	74	294315	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.816	9.816	0.000	94	1740930	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.837	14.837	0.000	87	1483213	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.546	16.546	0.000	93	1075653	4.00	3.83	
6 Chlorodifluoromethane	67	3.437	3.437	0.000	95	70133	2.00	1.95	
7 Propene	41	3.448	3.448	0.000	97	110911	2.00	1.58	
8 Dichlorodifluoromethane	85	3.491	3.491	0.000	99	588300	2.00	2.13	
9 Chloromethane	52	3.621	3.621	0.000	99	46818	2.00	1.86	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.648	3.648	0.000	92	415730	2.00	2.22	
12 Vinyl chloride	62	3.755	3.755	0.000	99	145148	2.00	1.88	
11 Acetaldehyde	44	3.755	3.755	0.000	99	181078	NC	NC	
13 Butane	43	3.831	3.831	0.000	89	156427	2.00	1.89	
14 Butadiene	54	3.831	3.831	0.000	95	91647	2.00	1.84	
15 Bromomethane	94	4.063	4.063	0.000	98	145604	2.00	2.04	
16 Chloroethane	64	4.176	4.176	0.000	98	67542	2.00	1.93	
17 Ethanol	31	4.284	4.284	0.000	90	133721	10.0	6.06	
18 Vinyl bromide	106	4.413	4.413	0.000	97	153685	2.00	2.20	
19 2-Methylbutane	43	4.467	4.467	0.000	80	109680	2.00	1.88	
20 Acrolein	56	4.618	4.618	0.000	94	32509	2.00	2.00	
21 Trichlorofluoromethane	101	4.629	4.629	0.000	99	542020	2.00	2.06	
22 Acetonitrile	40	4.661	4.661	0.000	98	35263	2.00	1.76	
23 Acetone	58	4.710	4.710	0.000	99	59701	2.00	1.94	
24 Isopropyl alcohol	45	4.807	4.807	0.000	93	246655	2.00	2.09	
25 Pentane	72	4.812	4.812	0.000	97	40517	2.00	1.97	
26 Ethyl ether	31	4.936	4.936	0.000	74	118410	2.00	1.59	
27 1,1-Dichloroethene	96	5.184	5.184	0.000	98	216929	2.00	1.95	
28 Acrylonitrile	53	5.249	5.249	0.000	93	120829	2.00	1.72	
29 2-Methyl-2-propanol	59	5.281	5.281	0.000	92	376951	2.00	1.70	
30 1,1,2-Trichloro-1,2,2-trif	101	5.352	5.352	0.000	97	485137	2.00	2.04	
31 Methylene Chloride	84	5.459	5.459	0.000	84	203992	2.00	1.77	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.481	5.481	0.000	93	158483	2.00	1.71	
33 Carbon disulfide	76	5.589	5.589	0.000	98	591514	2.00	1.92	
34 trans-1,2-Dichloroethene	96	6.155	6.155	0.000	97	223066	2.00	1.97	
35 2-Methylpentane	43	6.209	6.209	0.000	88	304415	NC	NC	
36 Methyl tert-butyl ether	73	6.279	6.279	0.000	94	660724	2.00	1.90	
37 1,1-Dichloroethane	63	6.505	6.505	0.000	100	376647	2.00	1.75	
38 Vinyl acetate	43	6.619	6.619	0.000	99	373945	2.00	1.80	
39 2-Butanone (MEK)	72	6.985	6.985	0.000	96	91512	2.00	1.71	
40 Hexane	56	7.082	7.082	0.000	84	148527	2.00	1.72	
41 cis-1,2-Dichloroethene	96	7.384	7.384	0.000	92	236691	2.00	1.95	
42 Ethyl acetate	43	7.573	7.573	0.000	99	301278	2.00	1.61	
43 Chloroform	83	7.708	7.708	0.000	94	514357	2.00	1.89	
44 Tetrahydrofuran	42	8.053	8.053	0.000	81	150230	2.00	1.58	
45 1,1,1-Trichloroethane	97	8.662	8.662	0.000	95	558711	2.00	1.95	
46 1,2-Dichloroethane	62	8.733	8.733	0.000	99	351946	2.00	1.91	
47 Benzene	78	9.234	9.234	0.000	96	650738	2.00	1.96	
48 n-Butanol	31	9.239	9.239	0.000	67	32318	2.00	1.47	
49 Cyclohexane	69	9.261	9.261	0.000	94	103399	2.00	1.94	
50 Carbon tetrachloride	117	9.277	9.277	0.000	97	587451	2.00	2.19	
51 2,3-Dimethylpentane	71	9.423	9.423	0.000	86	140620	NC	NC	
52 Thiophene	84	9.498	9.498	0.000	91	369548	NC	NC	
53 Isooctane	57	10.108	10.108	0.000	97	884759	2.00	1.83	
54 1,2-Dichloropropane	63	10.501	10.501	0.000	85	209653	2.00	1.81	
55 n-Heptane	71	10.528	10.528	0.000	81	220808	2.00	1.92	
56 Trichloroethene	130	10.571	10.571	0.000	95	335994	2.00	2.14	
57 Dibromomethane	93	10.609	10.609	0.000	93	276414	2.00	2.02	
58 Dichlorobromomethane	83	10.792	10.792	0.000	98	512196	2.00	2.09	
59 1,4-Dioxane	88	10.803	10.803	0.000	79	83506	2.00	1.70	
60 Methyl methacrylate	41	10.949	10.949	0.000	93	186600	2.00	1.71	
61 Methylcyclohexane	83	11.418	11.418	0.000	92	490025	NC	NC	
62 4-Methyl-2-pentanone (MIBK	43	11.833	11.833	0.000	92	317555	2.00	1.70	
63 cis-1,3-Dichloropropene	75	11.882	11.882	0.000	91	383030	2.00	2.00	
64 trans-1,3-Dichloropropene	75	12.631	12.631	0.000	96	355598	2.00	1.98	
65 Toluene	91	12.766	12.766	0.000	94	832227	2.00	2.04	
66 1,1,2-Trichloroethane	83	12.825	12.825	0.000	97	222310	2.00	1.98	
67 2-Methylthiophene	97	12.917	12.917	0.000	0	668679	NC	NC	a
68 3-Methylthiophene	97	13.127	13.127	0.000	0	652417	NC	NC	
69 2-Hexanone	58	13.273	13.273	0.000	99	186064	2.00	1.91	
70 Chlorodibromomethane	129	13.553	13.553	0.000	97	509360	2.00	2.37	
71 n-Octane	85	13.591	13.591	0.000	81	276650	2.00	2.11	
72 Ethylene Dibromide	107	13.850	13.850	0.000	99	429166	2.00	2.14	
73 Tetrachloroethene	129	13.979	13.979	0.000	97	341165	2.00	2.24	
74 Chlorobenzene	112	14.885	14.885	0.000	94	687622	2.00	2.14	
75 2,3-Dimethylheptane	43	15.004	15.004	0.000	80	442395	NC	NC	
76 Ethylbenzene	91	15.214	15.214	0.000	98	1096100	2.00	2.05	
78 2-Ethylthiophene	97	15.311	15.311	0.000	0	811952	NC	NC	
77 m-Xylene & p-Xylene	91	15.387	15.387	0.000	99	1751828	4.00	4.23	
79 Bromoform	173	15.786	15.786	0.000	97	449866	2.00	2.43	
80 Styrene	104	15.861	15.861	0.000	98	605245	2.00	2.29	
81 n-Nonane	57	15.904	15.904	0.000	83	432718	2.00	1.94	
82 o-Xylene	91	15.921	15.921	0.000	98	886165	2.00	2.02	
83 1,1,2,2-Tetrachloroethane	83	16.244	16.244	0.000	99	548485	2.00	2.09	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 1,2,3-Trichloropropane	110	16.400	16.400	0.000	97	196692	2.00	2.07	
85 Isopropylbenzene	105	16.546	16.546	0.000	97	1251213	2.00	2.14	
86 N-Propylbenzene	120	17.123	17.123	0.000	99	386781	2.00	2.42	
87 2-Chlorotoluene	126	17.139	17.139	0.000	93	340356	2.00	2.30	
88 4-Ethyltoluene	105	17.290	17.290	0.000	99	1354221	2.00	2.23	
89 1,3,5-Trimethylbenzene	120	17.377	17.377	0.000	92	666886	2.00	2.72	
90 Alpha Methyl Styrene	118	17.635	17.635	0.000	89	519758	2.00	2.45	
91 n-Decane	57	17.776	17.776	0.000	92	655862	2.00	2.16	
92 tert-Butylbenzene	119	17.851	17.851	0.000	91	1351984	2.00	2.37	
93 1,2,4-Trimethylbenzene	105	17.862	17.862	0.000	96	1233018	2.00	2.41	
94 1,3-Dichlorobenzene	146	18.131	18.131	0.000	99	820636	2.00	2.50	
95 sec-Butylbenzene	105	18.153	18.153	0.000	98	1769247	2.00	2.41	
96 Benzyl chloride	91	18.218	18.218	0.000	98	874743	2.00	2.27	
97 1,4-Dichlorobenzene	146	18.229	18.229	0.000	96	817733	2.00	2.49	
98 4-Isopropyltoluene	119	18.342	18.342	0.000	97	1664611	2.00	2.58	
99 1,2,3-Trimethylbenzene	105	18.374	18.374	0.000	98	998237	2.00	1.72	
100 Butylcyclohexane	83	18.471	18.471	0.000	96	865347	NC	NC	
101 1,2-Dichlorobenzene	146	18.617	18.617	0.000	95	807655	2.00	2.53	
102 2,3-Dihydroindene	117	18.628	18.628	0.000	94	1071460	NC	NC	
103 Indene	116	18.768	18.768	0.000	91	779069	NC	NC	
104 n-Butylbenzene	91	18.816	18.816	0.000	98	1464812	2.00	2.55	
105 Undecane	57	19.215	19.215	0.000	81	740951	2.00	2.25	
106 1,2-Dibromo-3-Chloropropan	157	19.269	19.269	0.000	98	332338	2.00	1.70	
108 1,2,4,5-Tetramethylbenzene	119	19.625	19.625	0.000	97	1399388	2.00	4.44	
109 1,2,3,5-Tetramethylbenzene	119	19.684	19.684	0.000	95	856331	NC	NC	
110 1,2,3,4-Tetramethylbenzene	119	20.089	20.089	0.000	97	1126761	NC	NC	
111 Dodecane	57	20.326	20.326	0.000	97	741808	2.00	2.41	
112 1,2,4-Trichlorobenzene	180	20.429	20.429	0.000	94	695002	2.00	2.90	
113 Naphthalene	128	20.558	20.558	0.000	99	1472894	2.00	2.77	
114 Benzo(b)thiophene	134	20.655	20.655	0.000	0	719141	NC	NC	
115 Hexachlorobutadiene	225	20.811	20.811	0.000	96	701077	2.00	2.68	
116 1,2,3-Trichlorobenzene	180	20.849	20.849	0.000	95	669979	2.00	2.77	
117 2-Methylnaphthalene	142	21.663	21.663	0.000	99	614327	6.40	4.70	
118 1-Methylnaphthalene	142	21.809	21.809	0.000	98	605886	6.05	4.66	
S 119 Xylenes, Total	100				0		6.00	6.25	
S 120 1,2-Dichloroethene, Total	1				0		4.00	3.93	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

a - User Assigned ID

Reagents:

40CV101S_00056	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

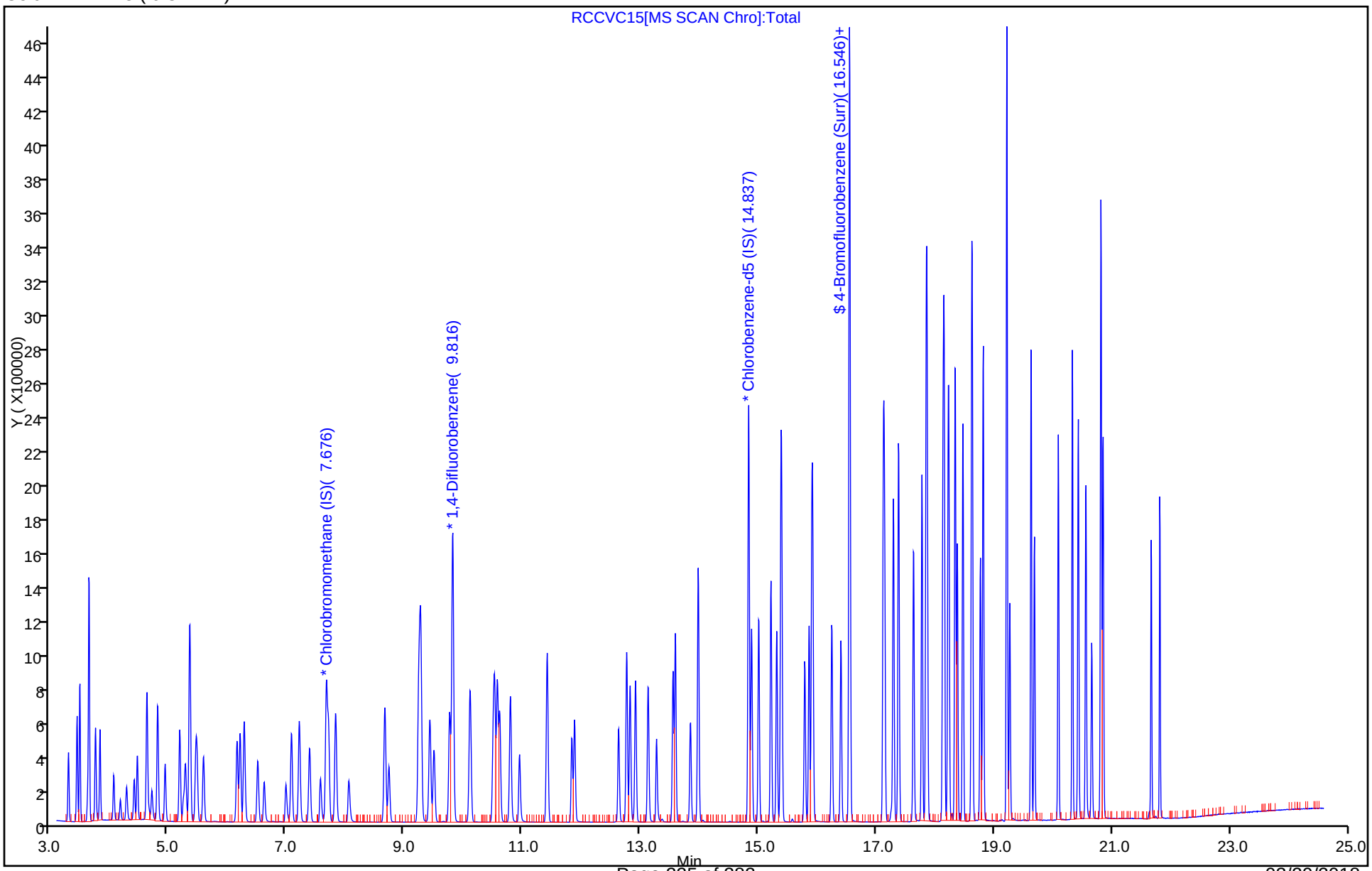
Report Date: 15-Mar-2018 17:32:37 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RCCVC15.D

Injection Date:	15-Mar-2018 13:44:30	Instrument ID:	MR	Operator ID:	
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

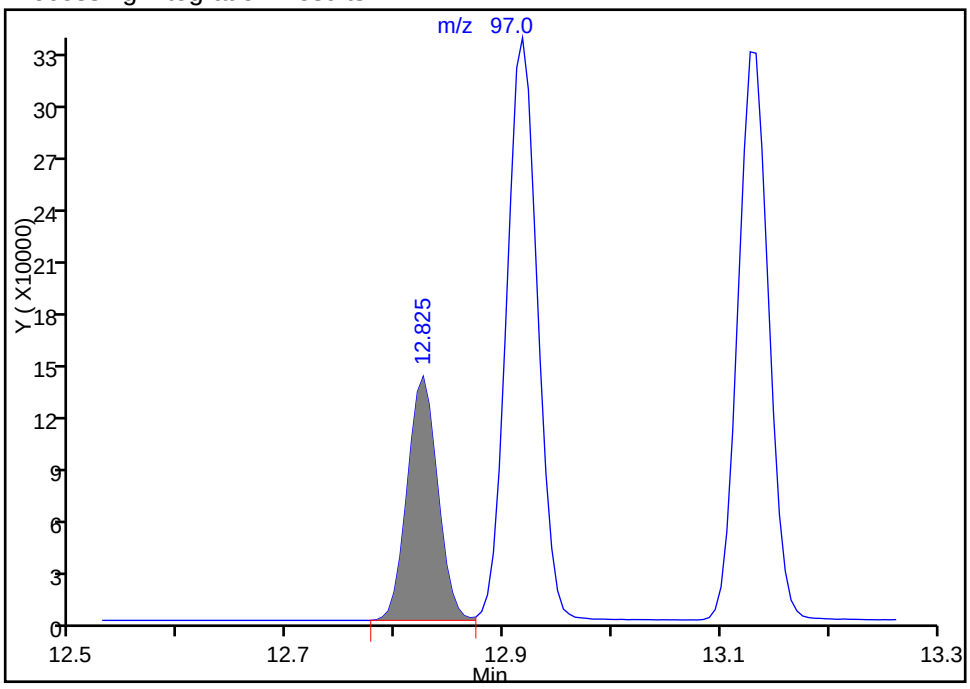
Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RCCVC15.D				
Injection Date:	15-Mar-2018 13:44:30	Instrument ID:	MR		
Lims ID:	CCVIS				
Client ID:					
Operator ID:		ALS Bottle#:	15	Worklist Smp#:	2
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

67 2-Methylthiophene, CAS: 554-14-3

Signal: 1

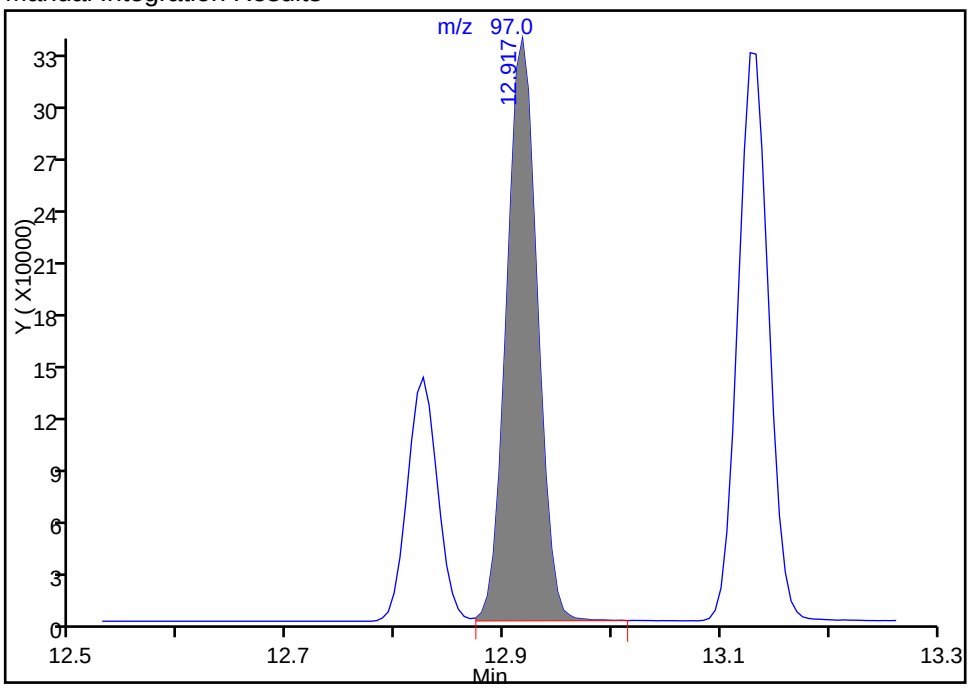
Processing Integration Results

RT: 12.83
Area: 274962
Amount: 0
Amount Units: ppb v/v



Manual Integration Results

RT: 12.92
Area: 668679
Amount: 0
Amount Units: ppb v/v



Reviewer: barlozhetskayaa, 15-Mar-2018 17:29:13

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

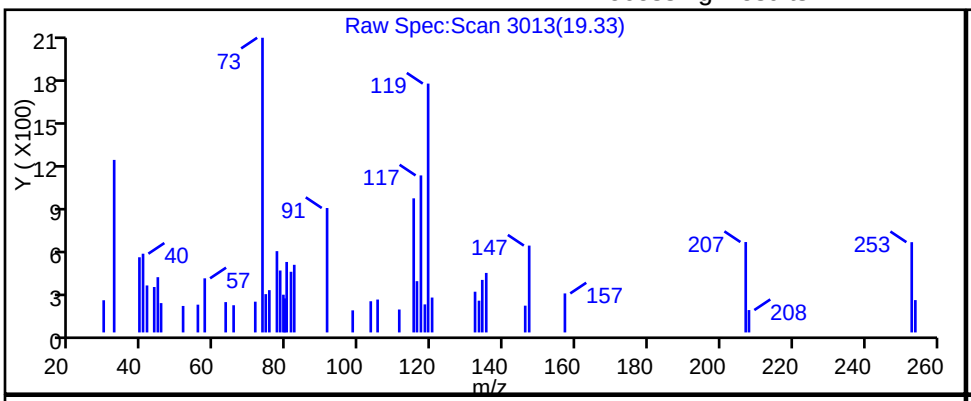
User Disabled Compound Report

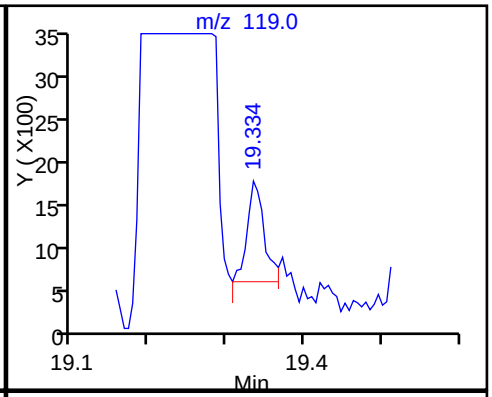
TestAmerica Knoxville

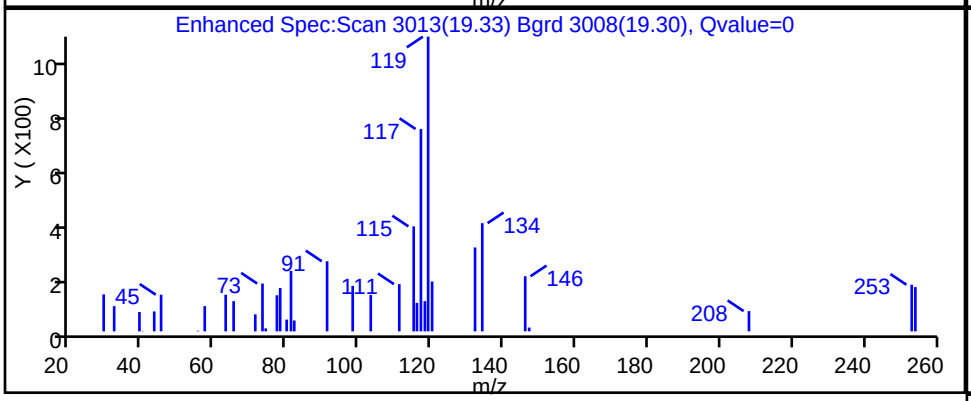
Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RCCVC15.D
Injection Date: 15-Mar-2018 13:44:30 Instrument ID: MR
Lims ID: CCVIS
Client ID:
Operator ID: ALS Bottle#: 15 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

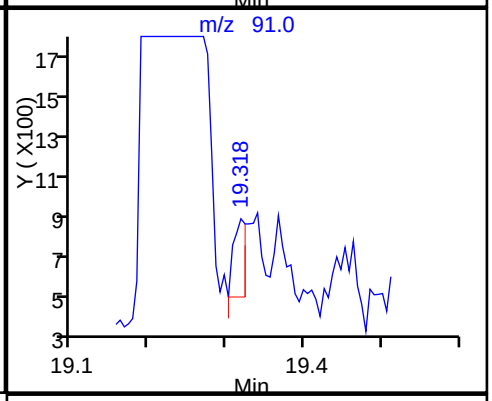
107 1,2-Dimethyl-4-Ethylbenzene, CAS: 934-80-5

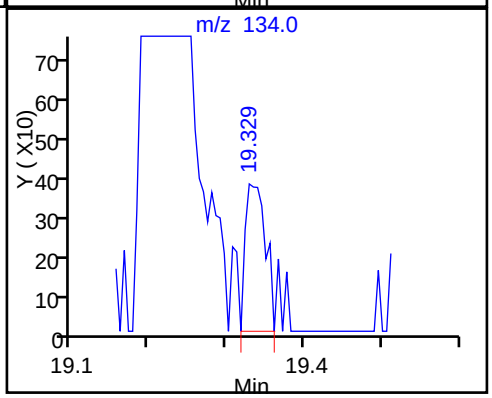
Processing Results











RT	Mass	Response	Amount
19.33	119.00	1819	
19.32	91.00	426	
19.33	134.00	681	

Reviewer: barlozhetskayaa, 15-Mar-2018 14:22:54
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Lab Sample ID: CCVIS 140-18783/2 Calibration Date: 03/15/2018 13:44

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RCCVC15.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4879	0.4766		1.95	2.00	-2.3	30.0
Propene	Ave	0.9557	0.7537		1.58	2.00	-21.1	30.0
Dichlorodifluoromethane	Ave	3.756	3.998		2.13	2.00	6.4	30.0
Chloromethane	Ave	0.3421	0.3182		1.86	2.00	-7.0	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.544	2.825		2.22	2.00	11.0	30.0
Vinyl chloride	Ave	1.049	0.9863		1.88	2.00	-6.0	30.0
1,3-Butadiene	Ave	0.6765	0.6228		1.84	2.00	-7.9	30.0
Butane	Ave	1.124	1.063		1.89	2.00	-5.4	30.0
Bromomethane	Ave	0.9705	0.9894		2.04	2.00	1.9	30.0
Chloroethane	Ave	0.4754	0.4590		1.93	2.00	-3.4	30.0
Ethanol	Ave	0.2999	0.1817		6.06	10.0	-39.4*	30.0
Vinyl bromide	Ave	0.9514	1.044		2.20	2.00	9.8	30.0
2-Methylbutane	Ave	0.7921	0.7453		1.88	2.00	-5.9	30.0
Acrolein	Ave	0.2209	0.2209		2.00	2.00	0.0	30.0
Trichlorofluoromethane	Ave	3.567	3.683		2.06	2.00	3.2	30.0
Acetonitrile	Ave	0.2718	0.2396		1.76	2.00	-11.8	30.0
Acetone	Ave	0.4182	0.4057		1.94	2.00	-3.0	30.0
Isopropyl alcohol	Ave	1.608	1.676		2.09	2.00	4.3	30.0
Pentane	Ave	0.2789	0.2753		1.97	2.00	-1.3	30.0
Ethyl ether	Ave	1.010	0.8047		1.59	2.00	-20.3	30.0
1,1-Dichloroethene	Ave	1.514	1.474		1.95	2.00	-2.7	30.0
Acrylonitrile	Ave	0.9563	0.8211		1.72	2.00	-14.1	30.0
tert-Butyl alcohol	Ave	3.014	2.562		1.70	2.00	-15.0	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.239	3.297		2.04	2.00	1.8	30.0
Methylene Chloride	Ave	1.564	1.386		1.77	2.00	-11.4	30.0
3-Chloropropene	Ave	1.257	1.077		1.71	2.00	-14.3	30.0
Carbon disulfide	Ave	4.190	4.020		1.92	2.00	-4.1	30.0
trans-1,2-Dichloroethene	Ave	1.537	1.516		1.97	2.00	-1.4	30.0
Methyl tert-butyl ether	Ave	4.739	4.490		1.90	2.00	-5.2	30.0
1,1-Dichloroethane	Ave	2.927	2.559		1.75	2.00	-12.6	30.0
Vinyl acetate	Ave	2.829	2.541		1.80	2.00	-10.2	30.0
2-Butanone (MEK)	Ave	0.7255	0.6219		1.71	2.00	-14.3	30.0
Hexane	Ave	1.173	1.009		1.72	2.00	-14.0	30.0
cis-1,2-Dichloroethene	Ave	1.647	1.608		1.95	2.00	-2.4	30.0
Ethyl acetate	Ave	2.540	2.047		1.61	2.00	-19.4	30.0
Chloroform	Ave	3.701	3.495		1.89	2.00	-5.6	30.0
Tetrahydrofuran	Ave	1.295	1.021		1.58	2.00	-21.1	30.0
1,1,1-Trichloroethane	Ave	3.888	3.797		1.95	2.00	-2.4	30.0
1,2-Dichloroethane	Ave	0.4231	0.4043		1.91	2.00	-4.4	30.0
Benzene	Ave	0.7642	0.7476		1.96	2.00	-2.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Lab Sample ID: CCVIS 140-18783/2 Calibration Date: 03/15/2018 13:44

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RCCVC15.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1-Butanol	Ave	0.0506	0.0371		1.47	2.00	-26.6	30.0
Cyclohexane	Ave	0.1227	0.1188		1.94	2.00	-3.2	30.0
Carbon tetrachloride	Ave	0.6160	0.6749		2.19	2.00	9.6	30.0
2,2,4-Trimethylpentane	Ave	1.108	1.016		1.83	2.00	-8.3	30.0
1,2-Dichloropropane	Ave	0.2659	0.2409		1.81	2.00	-9.4	30.0
Heptane	Ave	0.2649	0.2537		1.92	2.00	-4.2	30.0
Trichloroethene	Ave	0.3611	0.3860		2.14	2.00	6.9	30.0
Dibromomethane	Ave	0.3145	0.3176		2.02	2.00	1.0	30.0
Bromodichloromethane	Ave	0.5634	0.5884		2.09	2.00	4.4	30.0
1,4-Dioxane	Ave	0.1127	0.0959		1.70	2.00	-14.9	30.0
Methyl methacrylate	Ave	0.2509	0.2144		1.71	2.00	-14.6	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4284	0.3648		1.70	2.00	-14.8	30.0
cis-1,3-Dichloropropene	Ave	0.4392	0.4400		2.00	2.00	0.2	30.0
trans-1,3-Dichloropropene	Ave	0.4850	0.4795		1.98	2.00	-1.1	30.0
Toluene	Ave	1.102	1.122		2.04	2.00	1.9	30.0
1,1,2-Trichloroethane	Ave	0.3035	0.2998		1.98	2.00	-1.2	30.0
2-Hexanone	Ave	0.2628	0.2509		1.91	2.00	-4.5	30.0
Dibromochloromethane	Ave	0.5804	0.6868		2.37	2.00	18.3	30.0
Octane	Ave	0.3544	0.3730		2.11	2.00	5.3	30.0
1,2-Dibromoethane (EDB)	Ave	0.5418	0.5787		2.14	2.00	6.8	30.0
Tetrachloroethene	Ave	0.4106	0.4600		2.24	2.00	12.0	30.0
Chlorobenzene	Ave	0.8680	0.9272		2.14	2.00	6.8	30.0
Ethylbenzene	Ave	1.442	1.478		2.05	2.00	2.5	30.0
m-Xylene & p-Xylene	Ave	1.118	1.181		4.23	4.00	5.6	30.0
Bromoform	Ave	0.4993	0.6066		2.43	2.00	21.5	30.0
Styrene	Ave	0.7131	0.8161		2.29	2.00	14.4	30.0
Nonane	Ave	0.6024	0.5835		1.94	2.00	-3.1	30.0
o-Xylene	Ave	1.180	1.195		2.02	2.00	1.2	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7065	0.7396		2.09	2.00	4.7	30.0
1,2,3-Trichloropropane	Ave	0.2557	0.2652		2.07	2.00	3.7	30.0
Isopropylbenzene	Ave	1.579	1.687		2.14	2.00	6.9	30.0
Propylbenzene	Ave	0.4312	0.5215		2.42	2.00	20.9	30.0
2-Chlorotoluene	Ave	0.3988	0.4589		2.30	2.00	15.1	30.0
4-Ethyltoluene	Ave	1.639	1.826		2.23	2.00	11.4	30.0
1,3,5-Trimethylbenzene	Ave	0.6617	0.8993		2.72	2.00	35.9*	30.0
Alpha Methyl Styrene	Ave	0.5721	0.7009		2.45	2.00	22.5	30.0
Decane	Ave	0.8188	0.8844		2.16	2.00	8.0	30.0
tert-Butylbenzene	Ave	1.538	1.823		2.37	2.00	18.6	30.0
1,2,4-Trimethylbenzene	Ave	1.379	1.663		2.41	2.00	20.5	30.0
1,3-Dichlorobenzene	Ave	0.8870	1.107		2.50	2.00	24.8	30.0
sec-Butylbenzene	Ave	1.978	2.386		2.41	2.00	20.6	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Lab Sample ID: CCVIS 140-18783/2 Calibration Date: 03/15/2018 13:44

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RCCVC15.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzyl chloride	Ave	1.037	1.180		2.27	2.00	13.7	30.0
1,4-Dichlorobenzene	Ave	0.8846	1.103		2.49	2.00	24.6	30.0
4-Isopropyltoluene	Ave	1.739	2.245		2.58	2.00	29.1	30.0
1,2,3-Trimethylbenzene	Ave	1.566	1.346		1.72	2.00	-14.1	30.0
1,2-Dichlorobenzene	Ave	0.8615	1.089		2.53	2.00	26.4	30.0
Butylbenzene	Ave	1.551	1.975		2.55	2.00	27.4	30.0
Undecane	Ave	0.8863	0.999		2.25	2.00	12.7	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.5267	0.4481		1.70	2.00	-14.9	30.0
1,2,4,5-Tetramethylbenzene	Ave	0.8495	1.887		4.44	2.00	122.1*	30.0
Dodecane	Ave	0.8298	1.000		2.41	2.00	20.5	30.0
1,2,4-Trichlorobenzene	Ave	0.6453	0.9372		2.90	2.00	45.2*	30.0
Naphthalene	Ave	1.434	1.986		2.77	2.00	38.5*	30.0
Hexachlorobutadiene	Ave	0.7058	0.9454		2.68	2.00	33.9*	30.0
1,2,3-Trichlorobenzene	Ave	0.6529	0.9034		2.77	2.00	38.4*	30.0
2-Methylnaphthalene	Ave	0.3527	0.2589		4.70	6.40	-26.6	50.0
1-Methylnaphthalene	Ave	0.3505	0.2701		4.66	6.05	-23.0	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7584	0.7252		3.83	4.00	-4.4	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RCCVC15.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 15-Mar-2018 13:44:30 ALS Bottle#: 15 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007635-002
Misc. Info.: S56
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub19

Method: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 15-Mar-2018 17:32:35 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: barlozhetskayaa Date: 15-Mar-2018 17:32:35

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.670	7.670	0.000	74	294315	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.816	9.816	0.000	94	1740930	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.837	14.837	0.000	87	1483213	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.546	16.546	0.000	93	1075653	4.00	3.83	
6 Chlorodifluoromethane	67	3.437	3.437	0.000	95	70133	2.00	1.95	
7 Propene	41	3.448	3.448	0.000	97	110911	2.00	1.58	
8 Dichlorodifluoromethane	85	3.491	3.491	0.000	99	588300	2.00	2.13	
9 Chloromethane	52	3.621	3.621	0.000	99	46818	2.00	1.86	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.648	3.648	0.000	92	415730	2.00	2.22	
12 Vinyl chloride	62	3.755	3.755	0.000	99	145148	2.00	1.88	
11 Acetaldehyde	44	3.755	3.755	0.000	99	181078	NC	NC	
13 Butane	43	3.831	3.831	0.000	89	156427	2.00	1.89	
14 Butadiene	54	3.831	3.831	0.000	95	91647	2.00	1.84	
15 Bromomethane	94	4.063	4.063	0.000	98	145604	2.00	2.04	
16 Chloroethane	64	4.176	4.176	0.000	98	67542	2.00	1.93	
17 Ethanol	31	4.284	4.284	0.000	90	133721	10.0	6.06	
18 Vinyl bromide	106	4.413	4.413	0.000	97	153685	2.00	2.20	
19 2-Methylbutane	43	4.467	4.467	0.000	80	109680	2.00	1.88	
20 Acrolein	56	4.618	4.618	0.000	94	32509	2.00	2.00	
21 Trichlorofluoromethane	101	4.629	4.629	0.000	99	542020	2.00	2.06	
22 Acetonitrile	40	4.661	4.661	0.000	98	35263	2.00	1.76	
23 Acetone	58	4.710	4.710	0.000	99	59701	2.00	1.94	
24 Isopropyl alcohol	45	4.807	4.807	0.000	93	246655	2.00	2.09	
25 Pentane	72	4.812	4.812	0.000	97	40517	2.00	1.97	
26 Ethyl ether	31	4.936	4.936	0.000	74	118410	2.00	1.59	
27 1,1-Dichloroethene	96	5.184	5.184	0.000	98	216929	2.00	1.95	
28 Acrylonitrile	53	5.249	5.249	0.000	93	120829	2.00	1.72	
29 2-Methyl-2-propanol	59	5.281	5.281	0.000	92	376951	2.00	1.70	
30 1,1,2-Trichloro-1,2,2-trif	101	5.352	5.352	0.000	97	485137	2.00	2.04	
31 Methylene Chloride	84	5.459	5.459	0.000	84	203992	2.00	1.77	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.481	5.481	0.000	93	158483	2.00	1.71	
33 Carbon disulfide	76	5.589	5.589	0.000	98	591514	2.00	1.92	
34 trans-1,2-Dichloroethene	96	6.155	6.155	0.000	97	223066	2.00	1.97	
35 2-Methylpentane	43	6.209	6.209	0.000	88	304415	NC	NC	
36 Methyl tert-butyl ether	73	6.279	6.279	0.000	94	660724	2.00	1.90	
37 1,1-Dichloroethane	63	6.505	6.505	0.000	100	376647	2.00	1.75	
38 Vinyl acetate	43	6.619	6.619	0.000	99	373945	2.00	1.80	
39 2-Butanone (MEK)	72	6.985	6.985	0.000	96	91512	2.00	1.71	
40 Hexane	56	7.082	7.082	0.000	84	148527	2.00	1.72	
41 cis-1,2-Dichloroethene	96	7.384	7.384	0.000	92	236691	2.00	1.95	
42 Ethyl acetate	43	7.573	7.573	0.000	99	301278	2.00	1.61	
43 Chloroform	83	7.708	7.708	0.000	94	514357	2.00	1.89	
44 Tetrahydrofuran	42	8.053	8.053	0.000	81	150230	2.00	1.58	
45 1,1,1-Trichloroethane	97	8.662	8.662	0.000	95	558711	2.00	1.95	
46 1,2-Dichloroethane	62	8.733	8.733	0.000	99	351946	2.00	1.91	
47 Benzene	78	9.234	9.234	0.000	96	650738	2.00	1.96	
48 n-Butanol	31	9.239	9.239	0.000	67	32318	2.00	1.47	
49 Cyclohexane	69	9.261	9.261	0.000	94	103399	2.00	1.94	
50 Carbon tetrachloride	117	9.277	9.277	0.000	97	587451	2.00	2.19	
51 2,3-Dimethylpentane	71	9.423	9.423	0.000	86	140620	NC	NC	
52 Thiophene	84	9.498	9.498	0.000	91	369548	NC	NC	
53 Isooctane	57	10.108	10.108	0.000	97	884759	2.00	1.83	
54 1,2-Dichloropropane	63	10.501	10.501	0.000	85	209653	2.00	1.81	
55 n-Heptane	71	10.528	10.528	0.000	81	220808	2.00	1.92	
56 Trichloroethene	130	10.571	10.571	0.000	95	335994	2.00	2.14	
57 Dibromomethane	93	10.609	10.609	0.000	93	276414	2.00	2.02	
58 Dichlorobromomethane	83	10.792	10.792	0.000	98	512196	2.00	2.09	
59 1,4-Dioxane	88	10.803	10.803	0.000	79	83506	2.00	1.70	
60 Methyl methacrylate	41	10.949	10.949	0.000	93	186600	2.00	1.71	
61 Methylcyclohexane	83	11.418	11.418	0.000	92	490025	NC	NC	
62 4-Methyl-2-pentanone (MIBK	43	11.833	11.833	0.000	92	317555	2.00	1.70	
63 cis-1,3-Dichloropropene	75	11.882	11.882	0.000	91	383030	2.00	2.00	
64 trans-1,3-Dichloropropene	75	12.631	12.631	0.000	96	355598	2.00	1.98	
65 Toluene	91	12.766	12.766	0.000	94	832227	2.00	2.04	
66 1,1,2-Trichloroethane	83	12.825	12.825	0.000	97	222310	2.00	1.98	
67 2-Methylthiophene	97	12.917	12.917	0.000	0	668679	NC	NC	a
68 3-Methylthiophene	97	13.127	13.127	0.000	0	652417	NC	NC	
69 2-Hexanone	58	13.273	13.273	0.000	99	186064	2.00	1.91	
70 Chlorodibromomethane	129	13.553	13.553	0.000	97	509360	2.00	2.37	
71 n-Octane	85	13.591	13.591	0.000	81	276650	2.00	2.11	
72 Ethylene Dibromide	107	13.850	13.850	0.000	99	429166	2.00	2.14	
73 Tetrachloroethene	129	13.979	13.979	0.000	97	341165	2.00	2.24	
74 Chlorobenzene	112	14.885	14.885	0.000	94	687622	2.00	2.14	
75 2,3-Dimethylheptane	43	15.004	15.004	0.000	80	442395	NC	NC	
76 Ethylbenzene	91	15.214	15.214	0.000	98	1096100	2.00	2.05	
78 2-Ethylthiophene	97	15.311	15.311	0.000	0	811952	NC	NC	
77 m-Xylene & p-Xylene	91	15.387	15.387	0.000	99	1751828	4.00	4.23	
79 Bromoform	173	15.786	15.786	0.000	97	449866	2.00	2.43	
80 Styrene	104	15.861	15.861	0.000	98	605245	2.00	2.29	
81 n-Nonane	57	15.904	15.904	0.000	83	432718	2.00	1.94	
82 o-Xylene	91	15.921	15.921	0.000	98	886165	2.00	2.02	
83 1,1,2,2-Tetrachloroethane	83	16.244	16.244	0.000	99	548485	2.00	2.09	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 1,2,3-Trichloropropane	110	16.400	16.400	0.000	97	196692	2.00	2.07	
85 Isopropylbenzene	105	16.546	16.546	0.000	97	1251213	2.00	2.14	
86 N-Propylbenzene	120	17.123	17.123	0.000	99	386781	2.00	2.42	
87 2-Chlorotoluene	126	17.139	17.139	0.000	93	340356	2.00	2.30	
88 4-Ethyltoluene	105	17.290	17.290	0.000	99	1354221	2.00	2.23	
89 1,3,5-Trimethylbenzene	120	17.377	17.377	0.000	92	666886	2.00	2.72	
90 Alpha Methyl Styrene	118	17.635	17.635	0.000	89	519758	2.00	2.45	
91 n-Decane	57	17.776	17.776	0.000	92	655862	2.00	2.16	
92 tert-Butylbenzene	119	17.851	17.851	0.000	91	1351984	2.00	2.37	
93 1,2,4-Trimethylbenzene	105	17.862	17.862	0.000	96	1233018	2.00	2.41	
94 1,3-Dichlorobenzene	146	18.131	18.131	0.000	99	820636	2.00	2.50	
95 sec-Butylbenzene	105	18.153	18.153	0.000	98	1769247	2.00	2.41	
96 Benzyl chloride	91	18.218	18.218	0.000	98	874743	2.00	2.27	
97 1,4-Dichlorobenzene	146	18.229	18.229	0.000	96	817733	2.00	2.49	
98 4-Isopropyltoluene	119	18.342	18.342	0.000	97	1664611	2.00	2.58	
99 1,2,3-Trimethylbenzene	105	18.374	18.374	0.000	98	998237	2.00	1.72	
100 Butylcyclohexane	83	18.471	18.471	0.000	96	865347	NC	NC	
101 1,2-Dichlorobenzene	146	18.617	18.617	0.000	95	807655	2.00	2.53	
102 2,3-Dihydroindene	117	18.628	18.628	0.000	94	1071460	NC	NC	
103 Indene	116	18.768	18.768	0.000	91	779069	NC	NC	
104 n-Butylbenzene	91	18.816	18.816	0.000	98	1464812	2.00	2.55	
105 Undecane	57	19.215	19.215	0.000	81	740951	2.00	2.25	
106 1,2-Dibromo-3-Chloropropan	157	19.269	19.269	0.000	98	332338	2.00	1.70	
108 1,2,4,5-Tetramethylbenzene	119	19.625	19.625	0.000	97	1399388	2.00	4.44	
109 1,2,3,5-Tetramethylbenzene	119	19.684	19.684	0.000	95	856331	NC	NC	
110 1,2,3,4-Tetramethylbenzene	119	20.089	20.089	0.000	97	1126761	NC	NC	
111 Dodecane	57	20.326	20.326	0.000	97	741808	2.00	2.41	
112 1,2,4-Trichlorobenzene	180	20.429	20.429	0.000	94	695002	2.00	2.90	
113 Naphthalene	128	20.558	20.558	0.000	99	1472894	2.00	2.77	
114 Benzo(b)thiophene	134	20.655	20.655	0.000	0	719141	NC	NC	
115 Hexachlorobutadiene	225	20.811	20.811	0.000	96	701077	2.00	2.68	
116 1,2,3-Trichlorobenzene	180	20.849	20.849	0.000	95	669979	2.00	2.77	
117 2-Methylnaphthalene	142	21.663	21.663	0.000	99	614327	6.40	4.70	
118 1-Methylnaphthalene	142	21.809	21.809	0.000	98	605886	6.05	4.66	
S 119 Xylenes, Total	100				0		6.00	6.25	
S 120 1,2-Dichloroethene, Total	1				0		4.00	3.93	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

a - User Assigned ID

Reagents:

40CV101S_00056	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

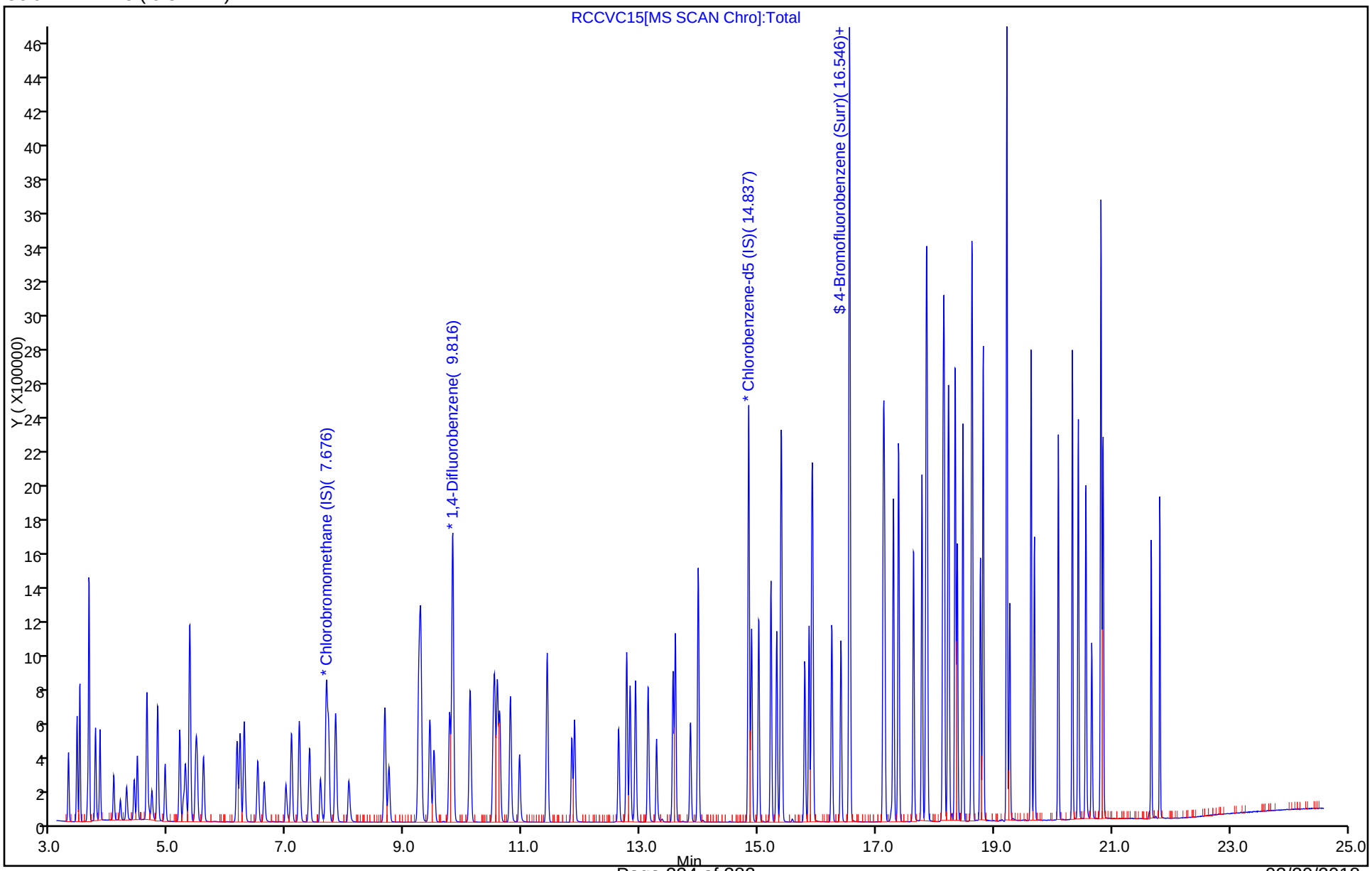
Report Date: 15-Mar-2018 17:32:37 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RCCVC15.D

Injection Date:	15-Mar-2018 13:44:30	Instrument ID:	MR	Operator ID:	
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Lab Sample ID: CCVIS 140-18835/2 Calibration Date: 03/16/2018 12:42

Instrument ID: MR Calib Start Date: 06/28/2017 15:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/28/2017 21:58

Lab File ID: RCCVC16.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetaldehyde	Ave	0.3474	0.2785			10.0	-19.8	30.0
2-Methylpentane	Ave	1.822	2.373			2.00	30.2*	30.0
2,3-Dimethylpentane	Ave	0.1274	0.1737			2.00	36.4*	30.0
Thiophene	Ave	0.3433	0.4498			2.00	31.0*	30.0
Methylcyclohexane	Ave	0.4439	0.4800			2.00	8.1	30.0
2,3-Dimethylheptane	Ave	0.5998	0.6787			2.00	13.1	30.0
Butylcyclohexane	Ave	0.7978	1.228			2.00	53.9*	30.0
Indane	Ave	1.030	1.421			2.00	38.0*	30.0
Indene	QuaF		1.162			2.00		30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\RCCVC16.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 16-Mar-2018 12:42:30 ALS Bottle#: 1 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007656-002
Misc. Info.: P56
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub16

Method: \\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 16-Mar-2018 15:54:39 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa Date: 16-Mar-2018 13:17:34

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.670	7.670	0.000	79	294853	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.811	9.811	0.000	94	1749788	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.837	14.837	0.000	87	1489530	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.546	16.546	0.000	93	1067552	4.00	3.78	
6 Chlorodifluoromethane	67	3.437	3.437	0.000	95	70659	2.00	1.96	
7 Propene	41	3.443	3.443	0.000	96	117109	2.00	1.66	
8 Dichlorodifluoromethane	85	3.486	3.486	0.000	100	466749	2.00	1.69	
9 Chloromethane	52	3.621	3.621	0.000	100	47545	2.00	1.89	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.642	3.642	0.000	92	412295	2.00	2.20	
11 Acetaldehyde	44	3.750	3.750	0.000	100	205267	NC	NC	
12 Vinyl chloride	62	3.756	3.756	0.000	99	141045	2.00	1.82	
14 Butadiene	54	3.826	3.826	0.000	93	92054	2.00	1.85	
13 Butane	43	3.831	3.831	0.000	89	153017	2.00	1.85	
15 Bromomethane	94	4.063	4.063	0.000	98	148444	2.00	2.07	
16 Chloroethane	64	4.176	4.176	0.000	97	67565	2.00	1.93	
17 Ethanol	31	4.284	4.284	0.000	90	199056	10.0	9.01	
18 Vinyl bromide	106	4.408	4.408	0.000	97	145232	2.00	2.07	
19 2-Methylbutane	43	4.462	4.462	0.000	80	107650	2.00	1.84	
20 Acrolein	56	4.618	4.618	0.000	94	32809	2.00	2.02	
21 Trichlorofluoromethane	101	4.624	4.624	0.000	99	544124	2.00	2.07	
22 Acetonitrile	40	4.661	4.661	0.000	97	39109	2.00	1.95	
23 Acetone	58	4.705	4.705	0.000	99	171351	6.00	5.56	
24 Isopropyl alcohol	45	4.807	4.807	0.000	83	693330	6.00	5.85	
25 Pentane	72	4.807	4.807	0.000	73	40674	2.00	1.98	
26 Ethyl ether	31	4.931	4.931	0.000	74	121503	2.00	1.63	
27 1,1-Dichloroethene	96	5.185	5.185	0.000	98	224817	2.00	2.01	
28 Acrylonitrile	53	5.249	5.249	0.000	93	127054	2.00	1.80	
29 2-Methyl-2-propanol	59	5.282	5.282	0.000	92	428815	2.00	1.93	
30 1,1,2-Trichloro-1,2,2-trif	101	5.352	5.352	0.000	96	500729	2.00	2.10	
31 Methylene Chloride	84	5.454	5.454	0.000	85	211949	2.00	1.84	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.476	5.476	0.000	93	171730	2.00	1.85	
33 Carbon disulfide	76	5.584	5.584	0.000	98	614658	2.00	1.99	
34 trans-1,2-Dichloroethene	96	6.155	6.155	0.000	98	234668	2.00	2.07	
35 2-Methylpentane	43	6.204	6.204	0.000	88	349858	NC	NC	
36 Methyl tert-butyl ether	73	6.274	6.274	0.000	94	683547	2.00	1.96	
37 1,1-Dichloroethane	63	6.506	6.506	0.000	100	390470	2.00	1.81	
38 Vinyl acetate	43	6.614	6.614	0.000	99	388277	2.00	1.86	
39 2-Butanone (MEK)	72	6.986	6.986	0.000	96	97284	2.00	1.82	
40 Hexane	56	7.077	7.077	0.000	84	155375	2.00	1.80	
41 cis-1,2-Dichloroethene	96	7.385	7.385	0.000	92	242938	2.00	2.00	
42 Ethyl acetate	43	7.568	7.568	0.000	99	333640	2.00	1.78	
43 Chloroform	83	7.708	7.708	0.000	96	531465	2.00	1.95	
44 Tetrahydrofuran	42	8.048	8.048	0.000	81	158396	2.00	1.66	
45 1,1,1-Trichloroethane	97	8.663	8.663	0.000	95	575251	2.00	2.01	
46 1,2-Dichloroethane	62	8.733	8.733	0.000	99	358391	2.00	1.94	
47 Benzene	78	9.234	9.234	0.000	96	661205	2.00	1.98	
48 n-Butanol	31	9.234	9.234	0.000	61	36132	2.00	1.63	
49 Cyclohexane	69	9.256	9.256	0.000	95	105849	2.00	1.97	
50 Carbon tetrachloride	117	9.272	9.272	0.000	97	569943	2.00	2.12	
51 2,3-Dimethylpentane	71	9.428	9.428	0.000	86	151958	NC	NC	
52 Thiophene	84	9.493	9.493	0.000	91	393532	NC	NC	
53 Isooctane	57	10.108	10.108	0.000	97	907684	2.00	1.87	
54 1,2-Dichloropropane	63	10.501	10.501	0.000	85	215318	2.00	1.85	
55 n-Heptane	71	10.523	10.523	0.000	81	229892	2.00	1.98	
56 Trichloroethene	130	10.572	10.572	0.000	94	343351	2.00	2.17	
57 Dibromomethane	93	10.609	10.609	0.000	94	279351	2.00	2.03	
58 Dichlorobromomethane	83	10.793	10.793	0.000	98	525983	2.00	2.13	
59 1,4-Dioxane	88	10.803	10.803	0.000	79	112271	2.00	2.28	
60 Methyl methacrylate	41	10.944	10.944	0.000	94	198634	2.00	1.81	
61 Methylcyclohexane	83	11.418	11.418	0.000	92	419966	NC	NC	
62 4-Methyl-2-pentanone (MIBK	43	11.833	11.833	0.000	91	334559	2.00	1.79	
63 cis-1,3-Dichloropropene	75	11.882	11.882	0.000	91	393985	2.00	2.05	
64 trans-1,3-Dichloropropene	75	12.626	12.626	0.000	96	372074	2.00	2.06	
65 Toluene	91	12.766	12.766	0.000	93	849599	2.00	2.07	
66 1,1,2-Trichloroethane	83	12.820	12.820	0.000	97	234568	2.00	2.08	
69 2-Hexanone	58	13.273	13.273	0.000	98	196645	2.00	2.01	
70 Chlorodibromomethane	129	13.553	13.553	0.000	97	523040	2.00	2.42	
71 n-Octane	85	13.591	13.591	0.000	81	280595	2.00	2.13	
72 Ethylene Dibromide	107	13.845	13.845	0.000	98	448641	2.00	2.22	
73 Tetrachloroethene	129	13.979	13.979	0.000	97	342571	2.00	2.24	
74 Chlorobenzene	112	14.885	14.885	0.000	94	689496	2.00	2.13	
75 2,3-Dimethylheptane	43	15.004	15.004	0.000	81	505462	NC	NC	
76 Ethylbenzene	91	15.214	15.214	0.000	98	1111001	2.00	2.07	
77 m-Xylene & p-Xylene	91	15.387	15.387	0.000	99	1755413	4.00	4.22	
79 Bromoform	173	15.786	15.786	0.000	97	459421	2.00	2.47	
80 Styrene	104	15.861	15.861	0.000	98	599533	2.00	2.26	
81 n-Nonane	57	15.905	15.905	0.000	80	438711	2.00	1.96	
82 o-Xylene	91	15.921	15.921	0.000	98	893539	2.00	2.03	
83 1,1,2,2-Tetrachloroethane	83	16.244	16.244	0.000	99	559612	2.00	2.13	
84 1,2,3-Trichloropropane	110	16.401	16.401	0.000	97	197428	2.00	2.07	
85 Isopropylbenzene	105	16.546	16.546	0.000	97	1212855	2.00	2.06	
86 N-Propylbenzene	120	17.123	17.123	0.000	99	367998	2.00	2.29	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
87 2-Chlorotoluene	126	17.139	17.139	0.000	93	322786	2.00	2.17	
88 4-Ethyltoluene	105	17.290	17.290	0.000	99	1389334	2.00	2.28	
89 1,3,5-Trimethylbenzene	120	17.377	17.377	0.000	92	575491	2.00	2.34	
90 Alpha Methyl Styrene	118	17.630	17.630	0.000	89	485220	2.00	2.28	
91 n-Decane	57	17.776	17.776	0.000	92	656530	2.00	2.15	
92 tert-Butylbenzene	119	17.846	17.846	0.000	95	1324102	2.00	2.31	
93 1,2,4-Trimethylbenzene	105	17.862	17.862	0.000	96	1200903	2.00	2.34	
94 1,3-Dichlorobenzene	146	18.132	18.132	0.000	99	799543	2.00	2.42	
95 sec-Butylbenzene	105	18.153	18.153	0.000	98	1727955	2.00	2.35	
96 Benzyl chloride	91	18.218	18.218	0.000	98	978627	2.00	2.53	
97 1,4-Dichlorobenzene	146	18.229	18.229	0.000	96	804638	2.00	2.44	
98 4-Isopropyltoluene	119	18.337	18.337	0.000	96	1684527	2.00	2.60	
99 1,2,3-Trimethylbenzene	105	18.374	18.374	0.000	99	1289208	2.00	2.21	
100 Butylcyclohexane	83	18.471	18.471	0.000	96	914560	NC	NC	
101 1,2-Dichlorobenzene	146	18.617	18.617	0.000	95	789350	2.00	2.46	
102 2,3-Dihydroindene	117	18.628	18.628	0.000	94	1058335	NC	NC	
103 Indene	116	18.768	18.768	0.000	91	865674	NC	NC	
104 n-Butylbenzene	91	18.816	18.816	0.000	98	1452315	2.00	2.51	
105 Undecane	57	19.215	19.215	0.000	90	748203	2.00	2.27	
106 1,2-Dibromo-3-Chloropropan	157	19.264	19.264	0.000	99	414285	2.00	2.11	
108 1,2,4,5-Tetramethylbenzene	119	19.625	19.625	0.000	97	1487179	2.00	4.70	
111 Dodecane	57	20.326	20.326	0.000	98	639257	2.00	2.07	
112 1,2,4-Trichlorobenzene	180	20.429	20.429	0.000	94	691681	2.00	2.88	
113 Naphthalene	128	20.558	20.558	0.000	99	1484717	2.00	2.78	
115 Hexachlorobutadiene	225	20.812	20.812	0.000	96	685515	2.00	2.61	
116 1,2,3-Trichlorobenzene	180	20.849	20.849	0.000	95	645463	2.00	2.65	
117 2-Methylnaphthalene	142	21.664	21.664	0.000	99	360282	6.25	2.74	
118 1-Methylnaphthalene	142	21.809	21.809	0.000	99	302292	6.25	2.32	
S 119 Xylenes, Total	100				0		6.00	6.25	
S 120 1,2-Dichloroethene, Total	1				0		4.00	4.07	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101P_00056	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

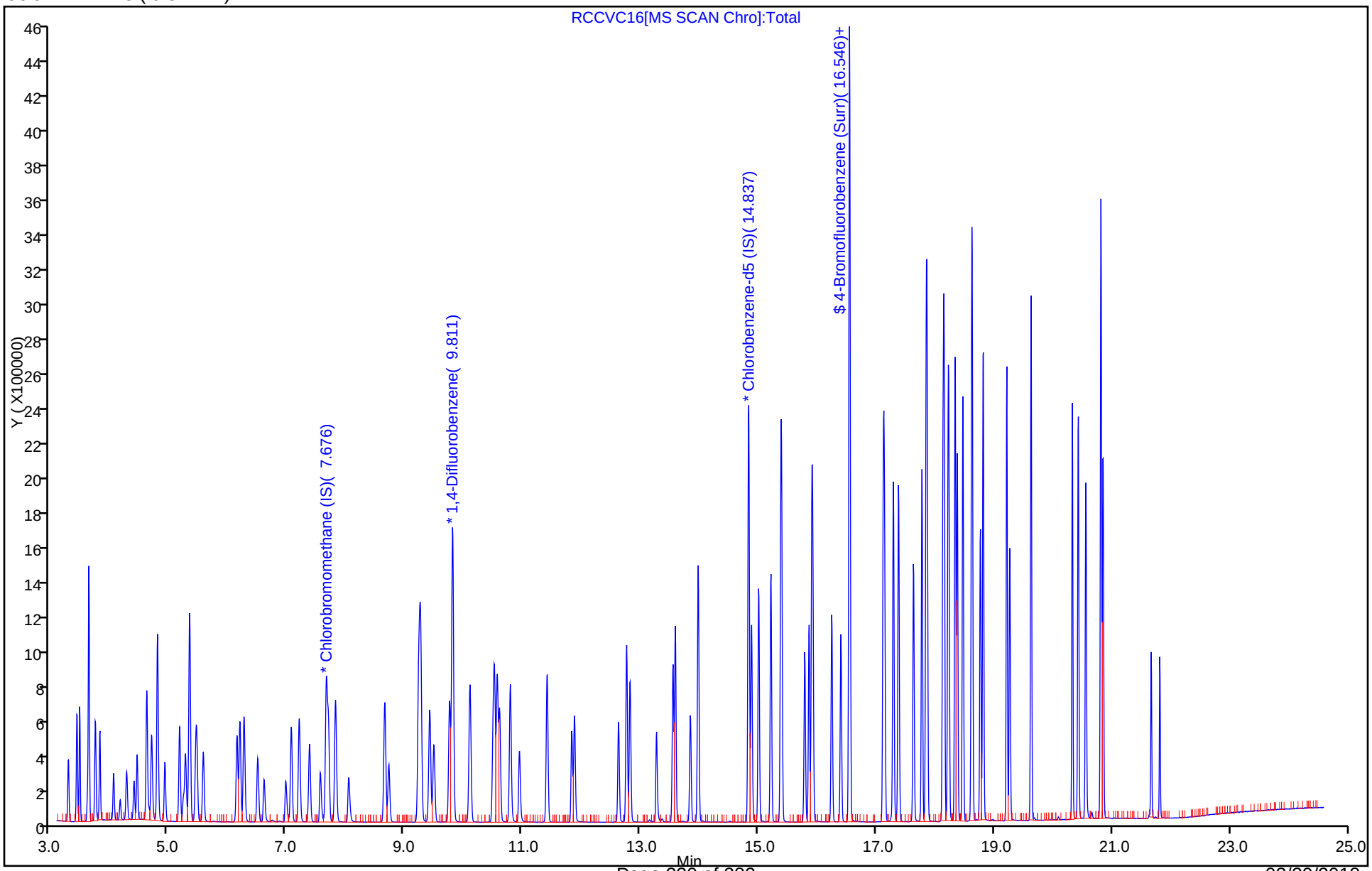
Report Date: 16-Mar-2018 15:54:42 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\RCCVC16.D

Injection Date:	16-Mar-2018 12:42:30	Instrument ID:	MR	Operator ID:	
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Lab Sample ID: CCVIS 140-18835/2 Calibration Date: 03/16/2018 12:42

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RCCVC16.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4879	0.4793		1.96	2.00	-1.8	30.0
Propene	Ave	0.9557	0.7944		1.66	2.00	-16.9	30.0
Dichlorodifluoromethane	Ave	3.756	3.166		1.69	2.00	-15.7	30.0
Chloromethane	Ave	0.3421	0.3225		1.89	2.00	-5.7	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.544	2.797		2.20	2.00	9.9	30.0
Vinyl chloride	Ave	1.049	0.9567		1.82	2.00	-8.8	30.0
1,3-Butadiene	Ave	0.6765	0.6244		1.85	2.00	-7.7	30.0
Butane	Ave	1.124	1.038		1.85	2.00	-7.7	30.0
Bromomethane	Ave	0.9705	1.007		2.07	2.00	3.7	30.0
Chloroethane	Ave	0.4754	0.4583		1.93	2.00	-3.6	30.0
Ethanol	Ave	0.2999	0.2700		9.01	10.0	-9.9	30.0
Vinyl bromide	Ave	0.9514	0.9851		2.07	2.00	3.5	30.0
2-Methylbutane	Ave	0.7921	0.7302		1.84	2.00	-7.8	30.0
Acrolein	Ave	0.2209	0.2225		2.02	2.00	0.8	30.0
Trichlorofluoromethane	Ave	3.567	3.691		2.07	2.00	3.5	30.0
Acetonitrile	Ave	0.2718	0.2653		1.95	2.00	-2.4	30.0
Acetone	Ave	0.4182	0.3874		5.56	6.00	-7.4	30.0
Isopropyl alcohol	Ave	1.608	1.568		5.85	6.00	-2.5	30.0
Pentane	Ave	0.2789	0.2759		1.98	2.00	-1.1	30.0
Ethyl ether	Ave	1.010	0.8242		1.63	2.00	-18.4	30.0
1,1-Dichloroethene	Ave	1.514	1.525		2.01	2.00	0.7	30.0
Acrylonitrile	Ave	0.9563	0.8618		1.80	2.00	-9.9	30.0
tert-Butyl alcohol	Ave	3.014	2.909		1.93	2.00	-3.5	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.239	3.396		2.10	2.00	4.9	30.0
Methylene Chloride	Ave	1.564	1.438		1.84	2.00	-8.1	30.0
3-Chloropropene	Ave	1.257	1.165		1.85	2.00	-7.3	30.0
Carbon disulfide	Ave	4.190	4.169		1.99	2.00	-0.5	30.0
trans-1,2-Dichloroethene	Ave	1.537	1.592		2.07	2.00	3.6	30.0
Methyl tert-butyl ether	Ave	4.739	4.637		1.96	2.00	-2.2	30.0
1,1-Dichloroethane	Ave	2.927	2.649		1.81	2.00	-9.5	30.0
Vinyl acetate	Ave	2.829	2.634		1.86	2.00	-6.9	30.0
2-Butanone (MEK)	Ave	0.7255	0.6599		1.82	2.00	-9.0	30.0
Hexane	Ave	1.173	1.054		1.80	2.00	-10.2	30.0
cis-1,2-Dichloroethene	Ave	1.647	1.648		2.00	2.00	0.0	30.0
Ethyl acetate	Ave	2.540	2.263		1.78	2.00	-10.9	30.0
Chloroform	Ave	3.701	3.605		1.95	2.00	-2.6	30.0
Tetrahydrofuran	Ave	1.295	1.074		1.66	2.00	-17.0	30.0
1,1,1-Trichloroethane	Ave	3.888	3.902		2.01	2.00	0.3	30.0
1,2-Dichloroethane	Ave	0.4231	0.4096		1.94	2.00	-3.2	30.0
1-Butanol	Ave	0.0506	0.0413		1.63	2.00	-18.3	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Lab Sample ID: CCVIS 140-18835/2 Calibration Date: 03/16/2018 12:42

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RCCVC16.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzene	Ave	0.7642	0.7558		1.98	2.00	-1.1	30.0
Cyclohexane	Ave	0.1227	0.1210		1.97	2.00	-1.4	30.0
Carbon tetrachloride	Ave	0.6160	0.6514		2.12	2.00	5.8	30.0
2,2,4-Trimethylpentane	Ave	1.108	1.037		1.87	2.00	-6.4	30.0
1,2-Dichloropropane	Ave	0.2659	0.2461		1.85	2.00	-7.4	30.0
Heptane	Ave	0.2649	0.2628		1.98	2.00	-0.8	30.0
Trichloroethene	Ave	0.3611	0.3925		2.17	2.00	8.7	30.0
Dibromomethane	Ave	0.3145	0.3193		2.03	2.00	1.5	30.0
Bromodichloromethane	Ave	0.5634	0.6012		2.13	2.00	6.7	30.0
1,4-Dioxane	Ave	0.1127	0.1283		2.28	2.00	13.9	30.0
Methyl methacrylate	Ave	0.2509	0.2270		1.81	2.00	-9.5	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4284	0.3824		1.79	2.00	-10.7	30.0
cis-1,3-Dichloropropene	Ave	0.4392	0.4503		2.05	2.00	2.5	30.0
trans-1,3-Dichloropropene	Ave	0.4850	0.4996		2.06	2.00	3.0	30.0
Toluene	Ave	1.102	1.141		2.07	2.00	3.5	30.0
1,1,2-Trichloroethane	Ave	0.3035	0.3150		2.08	2.00	3.8	30.0
2-Hexanone	Ave	0.2628	0.2640		2.01	2.00	0.5	30.0
Dibromochloromethane	Ave	0.5804	0.7023		2.42	2.00	21.0	30.0
Octane	Ave	0.3544	0.3768		2.13	2.00	6.3	30.0
1,2-Dibromoethane (EDB)	Ave	0.5418	0.6024		2.22	2.00	11.2	30.0
Tetrachloroethene	Ave	0.4106	0.4600		2.24	2.00	12.0	30.0
Chlorobenzene	Ave	0.8680	0.9258		2.13	2.00	6.7	30.0
Ethylbenzene	Ave	1.442	1.492		2.07	2.00	3.5	30.0
m-Xylene & p-Xylene	Ave	1.118	1.179		4.22	4.00	5.4	30.0
Bromoform	Ave	0.4993	0.6169		2.47	2.00	23.6	30.0
Styrene	Ave	0.7131	0.8050		2.26	2.00	12.9	30.0
Nonane	Ave	0.6024	0.5891		1.96	2.00	-2.2	30.0
o-Xylene	Ave	1.180	1.200		2.03	2.00	1.6	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7065	0.7514		2.13	2.00	6.4	30.0
1,2,3-Trichloropropane	Ave	0.2557	0.2651		2.07	2.00	3.7	30.0
Isopropylbenzene	Ave	1.579	1.629		2.06	2.00	3.1	30.0
Propylbenzene	Ave	0.4312	0.4941		2.29	2.00	14.6	30.0
2-Chlorotoluene	Ave	0.3988	0.4334		2.17	2.00	8.7	30.0
4-Ethyltoluene	Ave	1.639	1.865		2.28	2.00	13.8	30.0
1,3,5-Trimethylbenzene	Ave	0.6617	0.7727		2.34	2.00	16.8	30.0
Alpha Methyl Styrene	Ave	0.5721	0.6515		2.28	2.00	13.9	30.0
Decane	Ave	0.8188	0.8815		2.15	2.00	7.7	30.0
tert-Butylbenzene	Ave	1.538	1.778		2.31	2.00	15.6	30.0
1,2,4-Trimethylbenzene	Ave	1.379	1.612		2.34	2.00	16.9	30.0
1,3-Dichlorobenzene	Ave	0.8870	1.074		2.42	2.00	21.0	30.0
sec-Butylbenzene	Ave	1.978	2.320		2.35	2.00	17.3	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Lab Sample ID: CCVIS 140-18835/2 Calibration Date: 03/16/2018 12:42

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RCCVC16.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzyl chloride	Ave	1.037	1.314		2.53	2.00	26.7	30.0
1,4-Dichlorobenzene	Ave	0.8846	1.080		2.44	2.00	22.1	30.0
4-Isopropyltoluene	Ave	1.739	2.262		2.60	2.00	30.1*	30.0
1,2,3-Trimethylbenzene	Ave	1.566	1.731		2.21	2.00	10.5	30.0
1,2-Dichlorobenzene	Ave	0.8615	1.060		2.46	2.00	23.0	30.0
Butylbenzene	Ave	1.551	1.950		2.51	2.00	25.7	30.0
Undecane	Ave	0.8863	1.005		2.27	2.00	13.4	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.5267	0.5563		2.11	2.00	5.6	30.0
1,2,4,5-Tetramethylbenzene	Ave	0.8495	1.997		4.70	2.00	135.1*	30.0
Dodecane	Ave	0.8298	0.8583		2.07	2.00	3.4	30.0
1,2,4-Trichlorobenzene	Ave	0.6453	0.9287		2.88	2.00	43.9*	30.0
Naphthalene	Ave	1.434	1.994		2.78	2.00	39.0*	30.0
Hexachlorobutadiene	Ave	0.7058	0.9204		2.61	2.00	30.4*	30.0
1,2,3-Trichlorobenzene	Ave	0.6529	0.8667		2.65	2.00	32.7*	30.0
2-Methylnaphthalene	Ave	0.3527	0.1548		2.74	6.25	-56.1*	50.0
1-Methylnaphthalene	Ave	0.3505	0.1299		2.32	6.25	-62.9*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7584	0.7167		3.78	4.00	-5.5	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\RCCVC16.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 16-Mar-2018 12:42:30 ALS Bottle#: 1 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007656-002
Misc. Info.: P56
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub16

Method: \\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 16-Mar-2018 15:54:39 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa Date: 16-Mar-2018 13:17:34

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.670	7.670	0.000	79	294853	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.811	9.811	0.000	94	1749788	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.837	14.837	0.000	87	1489530	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.546	16.546	0.000	93	1067552	4.00	3.78	
6 Chlorodifluoromethane	67	3.437	3.437	0.000	95	70659	2.00	1.96	
7 Propene	41	3.443	3.443	0.000	96	117109	2.00	1.66	
8 Dichlorodifluoromethane	85	3.486	3.486	0.000	100	466749	2.00	1.69	
9 Chloromethane	52	3.621	3.621	0.000	100	47545	2.00	1.89	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.642	3.642	0.000	92	412295	2.00	2.20	
11 Acetaldehyde	44	3.750	3.750	0.000	100	205267	NC	NC	
12 Vinyl chloride	62	3.756	3.756	0.000	99	141045	2.00	1.82	
14 Butadiene	54	3.826	3.826	0.000	93	92054	2.00	1.85	
13 Butane	43	3.831	3.831	0.000	89	153017	2.00	1.85	
15 Bromomethane	94	4.063	4.063	0.000	98	148444	2.00	2.07	
16 Chloroethane	64	4.176	4.176	0.000	97	67565	2.00	1.93	
17 Ethanol	31	4.284	4.284	0.000	90	199056	10.0	9.01	
18 Vinyl bromide	106	4.408	4.408	0.000	97	145232	2.00	2.07	
19 2-Methylbutane	43	4.462	4.462	0.000	80	107650	2.00	1.84	
20 Acrolein	56	4.618	4.618	0.000	94	32809	2.00	2.02	
21 Trichlorofluoromethane	101	4.624	4.624	0.000	99	544124	2.00	2.07	
22 Acetonitrile	40	4.661	4.661	0.000	97	39109	2.00	1.95	
23 Acetone	58	4.705	4.705	0.000	99	171351	6.00	5.56	
24 Isopropyl alcohol	45	4.807	4.807	0.000	83	693330	6.00	5.85	
25 Pentane	72	4.807	4.807	0.000	73	40674	2.00	1.98	
26 Ethyl ether	31	4.931	4.931	0.000	74	121503	2.00	1.63	
27 1,1-Dichloroethene	96	5.185	5.185	0.000	98	224817	2.00	2.01	
28 Acrylonitrile	53	5.249	5.249	0.000	93	127054	2.00	1.80	
29 2-Methyl-2-propanol	59	5.282	5.282	0.000	92	428815	2.00	1.93	
30 1,1,2-Trichloro-1,2,2-trif	101	5.352	5.352	0.000	96	500729	2.00	2.10	
31 Methylene Chloride	84	5.454	5.454	0.000	85	211949	2.00	1.84	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.476	5.476	0.000	93	171730	2.00	1.85	
33 Carbon disulfide	76	5.584	5.584	0.000	98	614658	2.00	1.99	
34 trans-1,2-Dichloroethene	96	6.155	6.155	0.000	98	234668	2.00	2.07	
35 2-Methylpentane	43	6.204	6.204	0.000	88	349858	NC	NC	
36 Methyl tert-butyl ether	73	6.274	6.274	0.000	94	683547	2.00	1.96	
37 1,1-Dichloroethane	63	6.506	6.506	0.000	100	390470	2.00	1.81	
38 Vinyl acetate	43	6.614	6.614	0.000	99	388277	2.00	1.86	
39 2-Butanone (MEK)	72	6.986	6.986	0.000	96	97284	2.00	1.82	
40 Hexane	56	7.077	7.077	0.000	84	155375	2.00	1.80	
41 cis-1,2-Dichloroethene	96	7.385	7.385	0.000	92	242938	2.00	2.00	
42 Ethyl acetate	43	7.568	7.568	0.000	99	333640	2.00	1.78	
43 Chloroform	83	7.708	7.708	0.000	96	531465	2.00	1.95	
44 Tetrahydrofuran	42	8.048	8.048	0.000	81	158396	2.00	1.66	
45 1,1,1-Trichloroethane	97	8.663	8.663	0.000	95	575251	2.00	2.01	
46 1,2-Dichloroethane	62	8.733	8.733	0.000	99	358391	2.00	1.94	
47 Benzene	78	9.234	9.234	0.000	96	661205	2.00	1.98	
48 n-Butanol	31	9.234	9.234	0.000	61	36132	2.00	1.63	
49 Cyclohexane	69	9.256	9.256	0.000	95	105849	2.00	1.97	
50 Carbon tetrachloride	117	9.272	9.272	0.000	97	569943	2.00	2.12	
51 2,3-Dimethylpentane	71	9.428	9.428	0.000	86	151958	NC	NC	
52 Thiophene	84	9.493	9.493	0.000	91	393532	NC	NC	
53 Isooctane	57	10.108	10.108	0.000	97	907684	2.00	1.87	
54 1,2-Dichloropropane	63	10.501	10.501	0.000	85	215318	2.00	1.85	
55 n-Heptane	71	10.523	10.523	0.000	81	229892	2.00	1.98	
56 Trichloroethene	130	10.572	10.572	0.000	94	343351	2.00	2.17	
57 Dibromomethane	93	10.609	10.609	0.000	94	279351	2.00	2.03	
58 Dichlorobromomethane	83	10.793	10.793	0.000	98	525983	2.00	2.13	
59 1,4-Dioxane	88	10.803	10.803	0.000	79	112271	2.00	2.28	
60 Methyl methacrylate	41	10.944	10.944	0.000	94	198634	2.00	1.81	
61 Methylcyclohexane	83	11.418	11.418	0.000	92	419966	NC	NC	
62 4-Methyl-2-pentanone (MIBK	43	11.833	11.833	0.000	91	334559	2.00	1.79	
63 cis-1,3-Dichloropropene	75	11.882	11.882	0.000	91	393985	2.00	2.05	
64 trans-1,3-Dichloropropene	75	12.626	12.626	0.000	96	372074	2.00	2.06	
65 Toluene	91	12.766	12.766	0.000	93	849599	2.00	2.07	
66 1,1,2-Trichloroethane	83	12.820	12.820	0.000	97	234568	2.00	2.08	
69 2-Hexanone	58	13.273	13.273	0.000	98	196645	2.00	2.01	
70 Chlorodibromomethane	129	13.553	13.553	0.000	97	523040	2.00	2.42	
71 n-Octane	85	13.591	13.591	0.000	81	280595	2.00	2.13	
72 Ethylene Dibromide	107	13.845	13.845	0.000	98	448641	2.00	2.22	
73 Tetrachloroethene	129	13.979	13.979	0.000	97	342571	2.00	2.24	
74 Chlorobenzene	112	14.885	14.885	0.000	94	689496	2.00	2.13	
75 2,3-Dimethylheptane	43	15.004	15.004	0.000	81	505462	NC	NC	
76 Ethylbenzene	91	15.214	15.214	0.000	98	1111001	2.00	2.07	
77 m-Xylene & p-Xylene	91	15.387	15.387	0.000	99	1755413	4.00	4.22	
79 Bromoform	173	15.786	15.786	0.000	97	459421	2.00	2.47	
80 Styrene	104	15.861	15.861	0.000	98	599533	2.00	2.26	
81 n-Nonane	57	15.905	15.905	0.000	80	438711	2.00	1.96	
82 o-Xylene	91	15.921	15.921	0.000	98	893539	2.00	2.03	
83 1,1,2,2-Tetrachloroethane	83	16.244	16.244	0.000	99	559612	2.00	2.13	
84 1,2,3-Trichloropropane	110	16.401	16.401	0.000	97	197428	2.00	2.07	
85 Isopropylbenzene	105	16.546	16.546	0.000	97	1212855	2.00	2.06	
86 N-Propylbenzene	120	17.123	17.123	0.000	99	367998	2.00	2.29	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
87 2-Chlorotoluene	126	17.139	17.139	0.000	93	322786	2.00	2.17	
88 4-Ethyltoluene	105	17.290	17.290	0.000	99	1389334	2.00	2.28	
89 1,3,5-Trimethylbenzene	120	17.377	17.377	0.000	92	575491	2.00	2.34	
90 Alpha Methyl Styrene	118	17.630	17.630	0.000	89	485220	2.00	2.28	
91 n-Decane	57	17.776	17.776	0.000	92	656530	2.00	2.15	
92 tert-Butylbenzene	119	17.846	17.846	0.000	95	1324102	2.00	2.31	
93 1,2,4-Trimethylbenzene	105	17.862	17.862	0.000	96	1200903	2.00	2.34	
94 1,3-Dichlorobenzene	146	18.132	18.132	0.000	99	799543	2.00	2.42	
95 sec-Butylbenzene	105	18.153	18.153	0.000	98	1727955	2.00	2.35	
96 Benzyl chloride	91	18.218	18.218	0.000	98	978627	2.00	2.53	
97 1,4-Dichlorobenzene	146	18.229	18.229	0.000	96	804638	2.00	2.44	
98 4-Isopropyltoluene	119	18.337	18.337	0.000	96	1684527	2.00	2.60	
99 1,2,3-Trimethylbenzene	105	18.374	18.374	0.000	99	1289208	2.00	2.21	
100 Butylcyclohexane	83	18.471	18.471	0.000	96	914560	NC	NC	
101 1,2-Dichlorobenzene	146	18.617	18.617	0.000	95	789350	2.00	2.46	
102 2,3-Dihydroindene	117	18.628	18.628	0.000	94	1058335	NC	NC	
103 Indene	116	18.768	18.768	0.000	91	865674	NC	NC	
104 n-Butylbenzene	91	18.816	18.816	0.000	98	1452315	2.00	2.51	
105 Undecane	57	19.215	19.215	0.000	90	748203	2.00	2.27	
106 1,2-Dibromo-3-Chloropropan	157	19.264	19.264	0.000	99	414285	2.00	2.11	
108 1,2,4,5-Tetramethylbenzene	119	19.625	19.625	0.000	97	1487179	2.00	4.70	
111 Dodecane	57	20.326	20.326	0.000	98	639257	2.00	2.07	
112 1,2,4-Trichlorobenzene	180	20.429	20.429	0.000	94	691681	2.00	2.88	
113 Naphthalene	128	20.558	20.558	0.000	99	1484717	2.00	2.78	
115 Hexachlorobutadiene	225	20.812	20.812	0.000	96	685515	2.00	2.61	
116 1,2,3-Trichlorobenzene	180	20.849	20.849	0.000	95	645463	2.00	2.65	
117 2-Methylnaphthalene	142	21.664	21.664	0.000	99	360282	6.25	2.74	
118 1-Methylnaphthalene	142	21.809	21.809	0.000	99	302292	6.25	2.32	
S 119 Xylenes, Total	100				0		6.00	6.25	
S 120 1,2-Dichloroethene, Total	1				0		4.00	4.07	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101P_00056	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

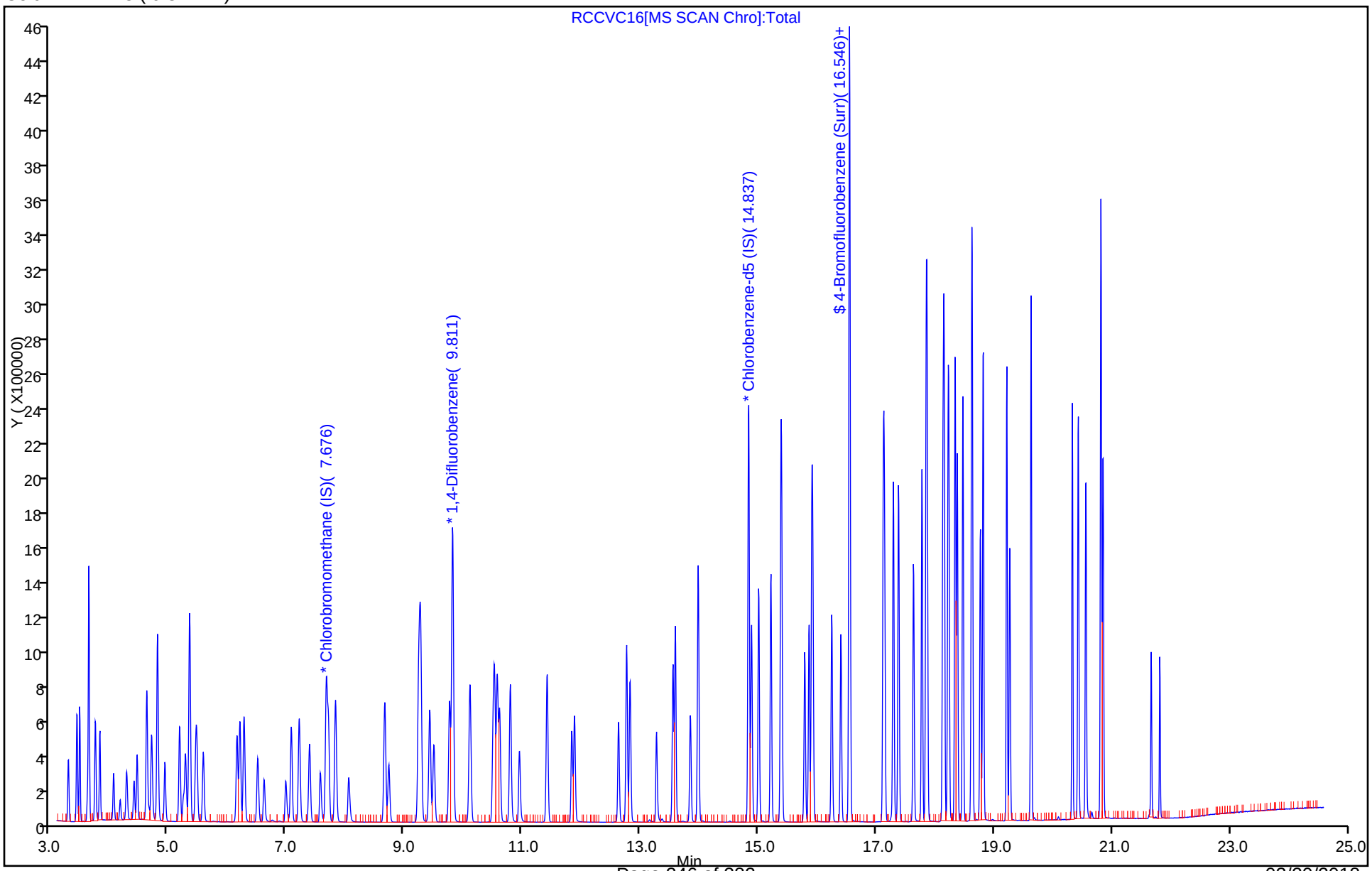
Report Date: 16-Mar-2018 15:54:42 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\RCCVC16.D

Injection Date:	16-Mar-2018 12:42:30	Instrument ID:	MR	Operator ID:	
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RBFBA30.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	30-Jan-2018 11:12:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007236-001				
Misc. Info.:	BFB				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	05-Feb-2018 13:03:43	Calib Date:	30-Jan-2018 19:38:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.328	4.408	-0.080	0	1711941	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

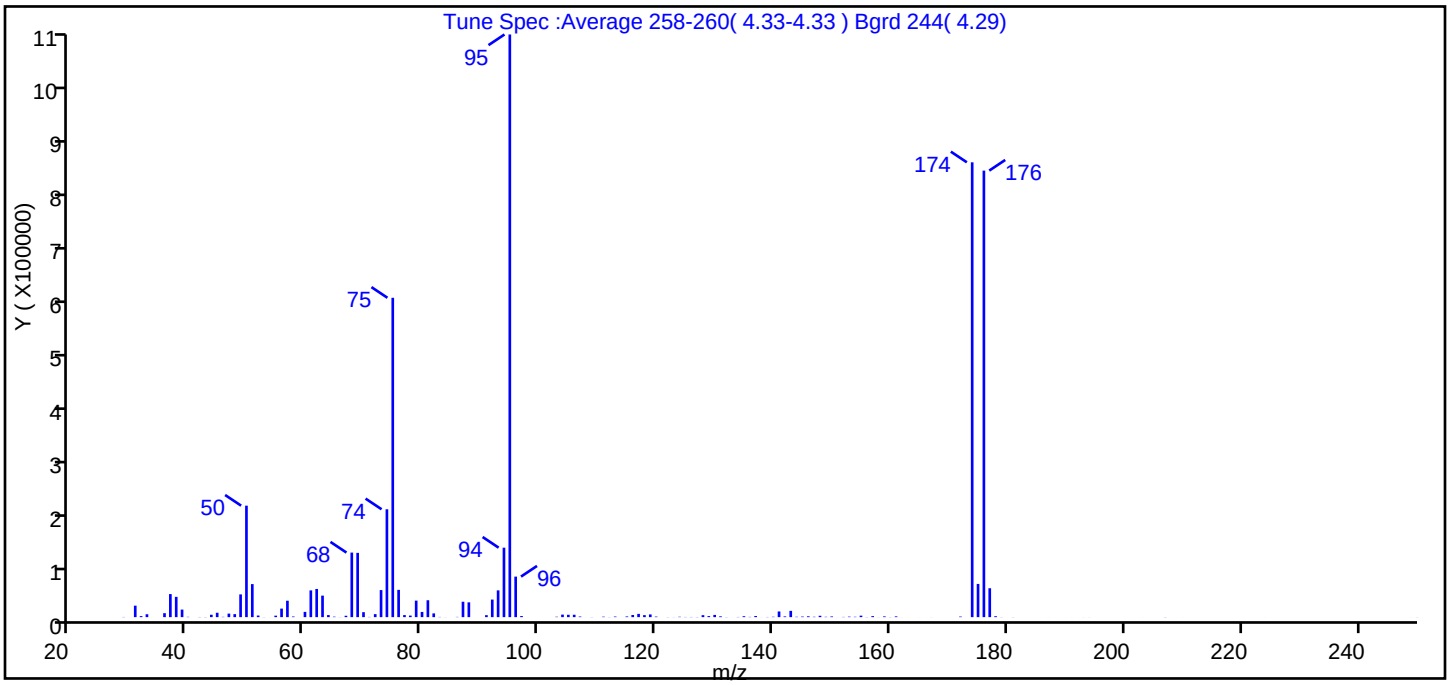
40MXSUR_00002 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RBFBA30.D
Injection Date: 30-Jan-2018 11:12:30 Instrument ID: MR
Lims ID: BFB
Client ID:
Operator ID: ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	19.1
75	30 to 60% of m/z 95	54.8
96	5 to 9% of m/z 95	7.0
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	78.1
175	5 to 9% of m/z 174	5.7 (7.3)
176	Greater than 95% but less than 101% of m/z 174	76.6 (98.2)
177	5 to 9% of m/z 176	5.0 (6.5)

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RBFBA30.D\MR_TO15.rslt\spectra.d
Injection Date: 30-Jan-2018 11:12:30
Spectrum: Tune Spec :Average 258-260(4.33-4.33) Bgrd 244(4.29)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 142

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	324	70.00	9036	115.00	1264	152.00	401
31.00	20896	71.00	383	116.00	3902	153.00	899
32.00	1867	72.00	5492	117.00	5927	154.00	656
33.00	5271	73.00	49280	118.00	3658	155.00	2692
36.00	7229	74.00	196288	119.00	4937	156.00	237
37.00	41976	75.00	581184	120.00	1007	157.00	1860
38.00	36920	76.00	49648	122.00	209	158.00	109
39.00	13749	77.00	3735	123.00	140	159.00	1331
40.00	537	78.00	2828	124.00	676	160.00	200
42.00	290	79.00	30072	125.00	329	161.00	1362
43.00	255	80.00	9490	126.00	311	162.00	67
44.00	4349	81.00	30752	127.00	273	163.00	37
45.00	7970	82.00	6831	128.00	3582	165.00	49
46.00	525	83.00	363	129.00	1881	167.00	83
47.00	6435	84.00	102	130.00	4059	172.00	1039
48.00	5497	86.00	429	131.00	1448	174.00	827712
49.00	41408	87.00	28040	132.00	219	175.00	60448
50.00	202880	88.00	26936	133.00	53	176.00	812608
51.00	60136	91.00	3596	134.00	327	177.00	52616
52.00	2904	92.00	31976	135.00	1662	178.00	1672
53.00	187	93.00	48736	136.00	441	179.00	171
54.00	39	94.00	126416	137.00	2035	181.00	172
55.00	2684	95.00	1060352	138.00	72	187.00	43
56.00	15572	96.00	73776	139.00	312	190.00	38
57.00	29888	97.00	1966	140.00	673	191.00	35
58.00	1141	98.00	36	141.00	10337	193.00	64
60.00	9583	103.00	725	142.00	1343	194.00	77
61.00	48696	104.00	4614	143.00	11431	203.00	36
62.00	51280	105.00	4311	144.00	656	207.00	218
63.00	39168	106.00	4347	145.00	1034	209.00	4
64.00	3758	107.00	1083	146.00	1535	210.00	33
65.00	855	108.00	25	147.00	664	224.00	41
66.00	165	109.00	185	148.00	2487	249.00	57

Report Date: 05-Feb-2018 13:03:43 Chrom Revision: 2.2 24-Jan-2018 15:37:30
Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RBFBA30.D\MR_TO15.rslt\spectra.d
Injection Date: 30-Jan-2018 11:12:30
Spectrum: Tune Spec :Average 258-260(4.33-4.33) Bgrd 244(4.29)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 142

m/z	Y	m/z	Y	m/z	Y	m/z	Y
67.00	2514	111.00	846	149.00	605	250.00	135
68.00	117480	112.00	180	150.00	1241		
69.00	116984	113.00	1062	151.00	46		

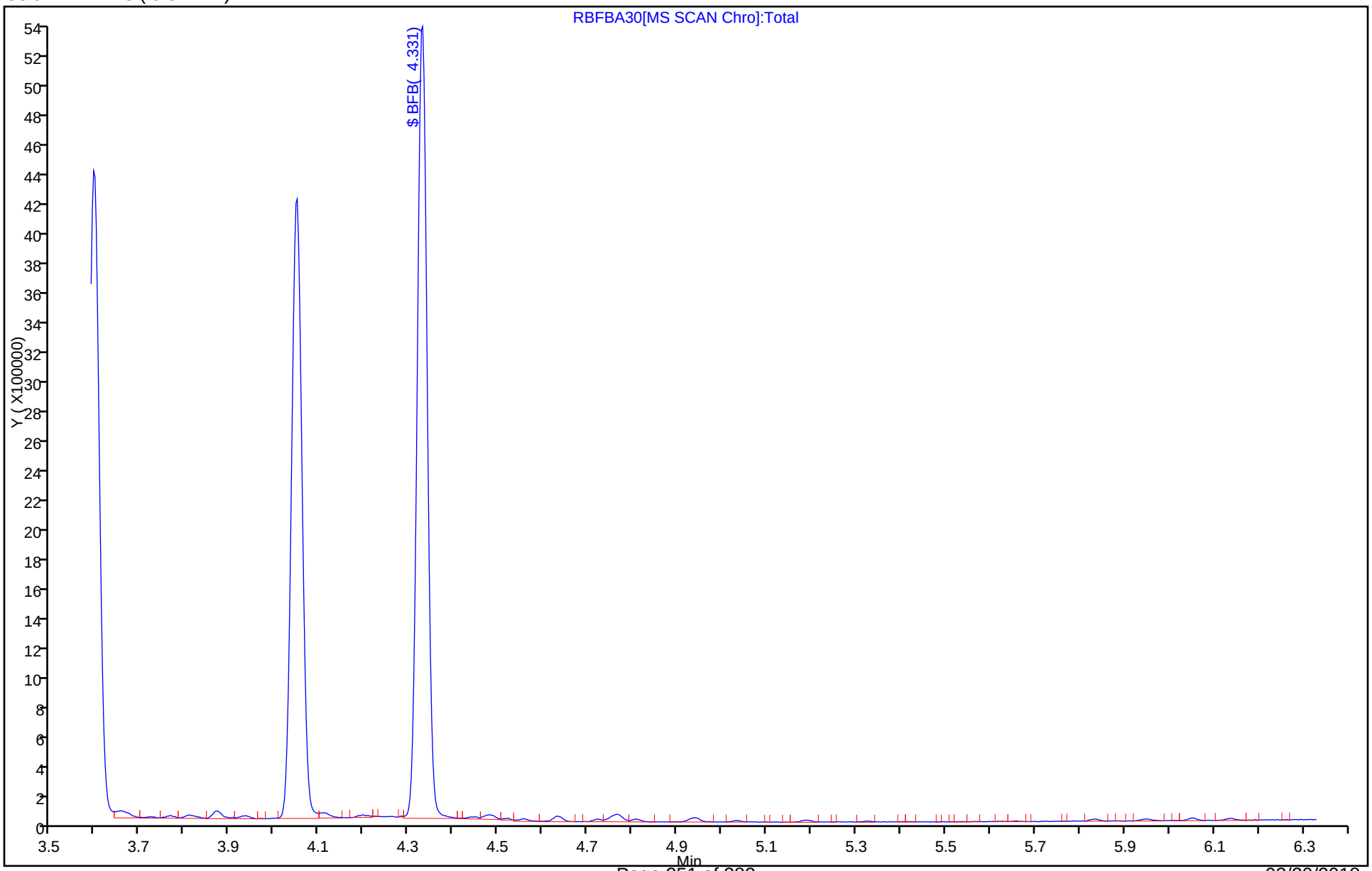
Report Date: 05-Feb-2018 13:03:43 Chrom Revision: 2.2 24-Jan-2018 15:37:30

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RBFBA30.D

Injection Date:	30-Jan-2018 11:12:30	Instrument ID:	MR	Operator ID:	
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RBFBC15.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	15-Mar-2018 13:12:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007635-001				
Misc. Info.:	BFB				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	15-Mar-2018 17:28:53	Calib Date:	30-Jan-2018 19:38:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK004				
First Level Reviewer: barlozhetskayaa		Date:	15-Mar-2018 17:28:53		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.314	4.314	0.000	0	1294370	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

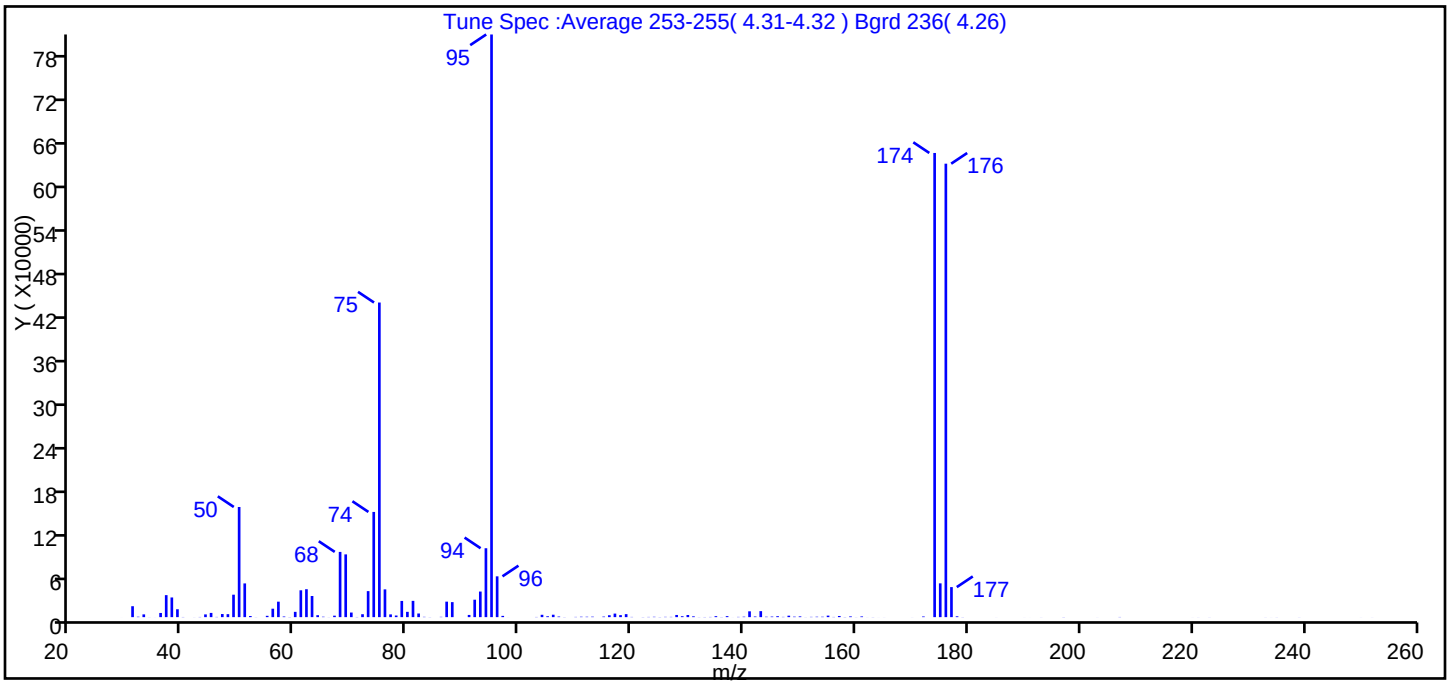
40MXSUR_00002 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RBFBC15.D
Injection Date: 15-Mar-2018 13:12:30 Instrument ID: MR
Lims ID: BFB
Client ID:
Operator ID: ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.9
75	30 to 60% of m/z 95	54.0
96	5 to 9% of m/z 95	7.0
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	79.7
175	5 to 9% of m/z 174	5.8 (7.3)
176	Greater than 95% but less than 101% of m/z 174	77.8 (97.7)
177	5 to 9% of m/z 176	5.2 (6.6)

Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RBFBC15.D\MR_TO15.rslt\spectra.d
Injection Date: 15-Mar-2018 13:12:30
Spectrum: Tune Spec :Average 253-255(4.31-4.32) Bgrd 236(4.26)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 149

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	19	70.00	6326	117.00	4877	156.00	267
31.00	15017	71.00	223	118.00	2757	157.00	1592
32.00	565	72.00	4022	119.00	4123	158.00	203
33.00	3797	73.00	35760	120.00	299	159.00	1009
34.00	78	74.00	144576	122.00	168	160.00	95
35.00	35	75.00	432320	123.00	289	161.00	964
36.00	5738	76.00	38152	124.00	476	162.00	45
37.00	30240	77.00	3775	125.00	192	163.00	126
38.00	27040	78.00	2245	126.00	392	164.00	37
39.00	10846	79.00	22272	127.00	346	165.00	53
40.00	220	80.00	7284	128.00	2989	170.00	51
42.00	71	81.00	22376	129.00	1235	172.00	890
43.00	250	82.00	5006	130.00	2945	174.00	637824
44.00	3779	83.00	411	131.00	1087	175.00	46440
45.00	5812	84.00	138	132.00	134	176.00	623104
46.00	288	86.00	412	133.00	206	177.00	41280
47.00	4270	87.00	21296	134.00	277	178.00	1135
48.00	4110	88.00	20624	135.00	1338	179.00	139
49.00	30856	91.00	3029	136.00	173	185.00	40
50.00	151360	92.00	23968	137.00	1379	190.00	33
51.00	46344	93.00	35168	138.00	37	191.00	20
52.00	1506	94.00	94688	139.00	324	193.00	67
53.00	100	95.00	800640	140.00	614	197.00	160
55.00	1814	96.00	56080	141.00	8006	203.00	45
56.00	11594	97.00	1734	142.00	867	207.00	245
57.00	21264	98.00	41	143.00	8235	220.00	33
58.00	861	103.00	258	144.00	574	221.00	59
59.00	195	104.00	3231	145.00	784	223.00	78
60.00	7274	105.00	1196	146.00	1282	233.00	72
61.00	36888	106.00	3339	147.00	342	234.00	38
62.00	38376	107.00	815	148.00	1996	235.00	87
63.00	29056	108.00	153	149.00	669	239.00	87
64.00	2674	110.00	321	150.00	1035	249.00	5

Report Date: 15-Mar-2018 17:28:54 Chrom Revision: 2.2 08-Feb-2018 13:38:42
Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RBFBC15.D\MR_TO15.rslt\spectra.d
Injection Date: 15-Mar-2018 13:12:30
Spectrum: Tune Spec :Average 253-255(4.31-4.32) Bgrd 236(4.26)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 149

m/z	Y	m/z	Y	m/z	Y	m/z	Y
65.00	572	111.00	582	151.00	97	250.00	41
66.00	101	112.00	559	152.00	375	252.00	48
67.00	2029	113.00	642	153.00	577		
68.00	89648	115.00	753	154.00	557		
69.00	86232	116.00	2625	155.00	2091		

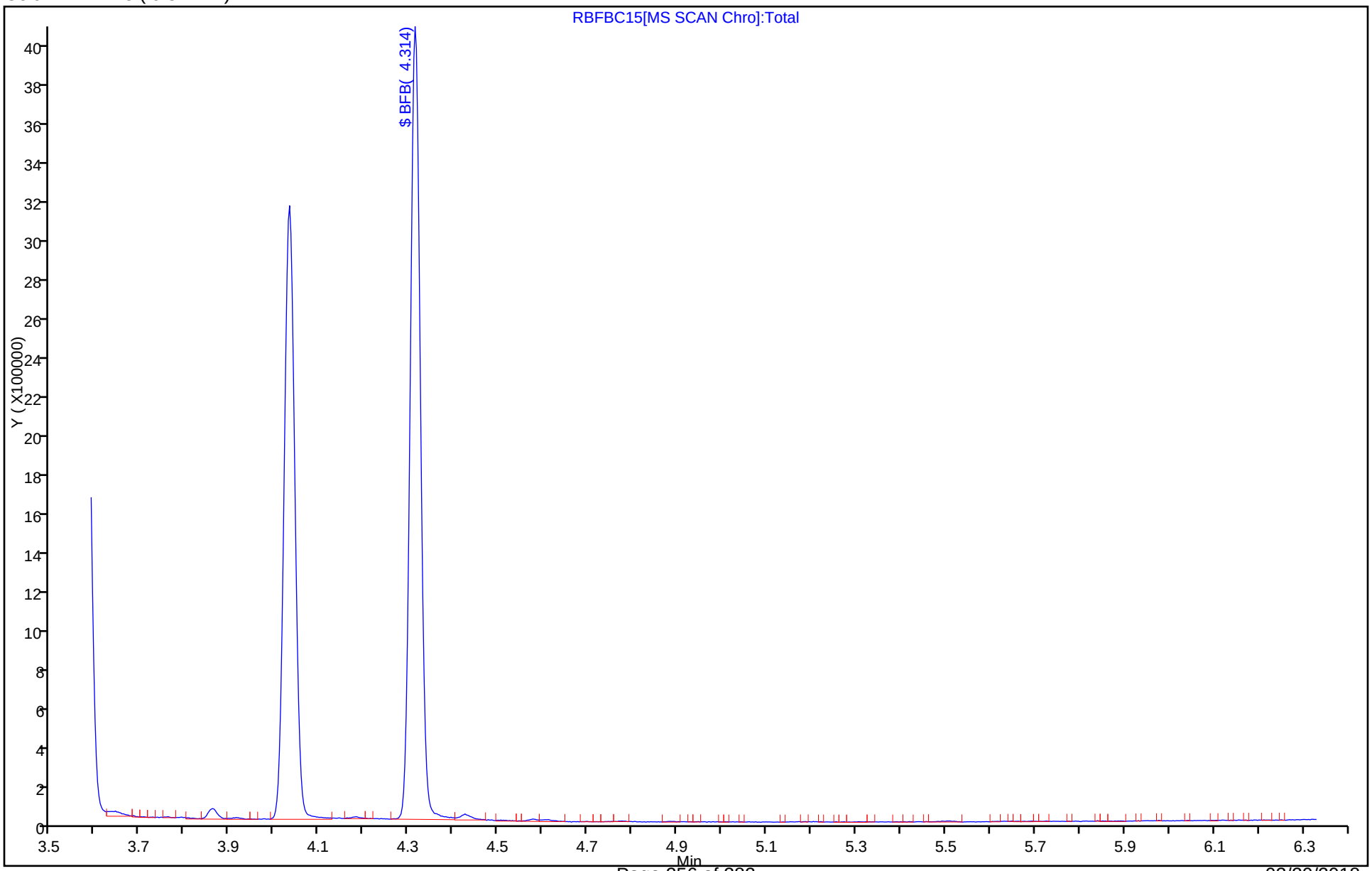
Report Date: 15-Mar-2018 17:28:54 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RBFBC15.D

Injection Date:	15-Mar-2018 13:12:30	Instrument ID:	MR	Operator ID:	
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\RBFBC16.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	16-Mar-2018 12:10:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007656-001				
Misc. Info.:	BFB				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	16-Mar-2018 15:54:37	Calib Date:	30-Jan-2018 19:38:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK031				
First Level Reviewer: barlozhetskayaa		Date:	16-Mar-2018 12:35:40		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.323	4.323	0.000	0	1328462	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

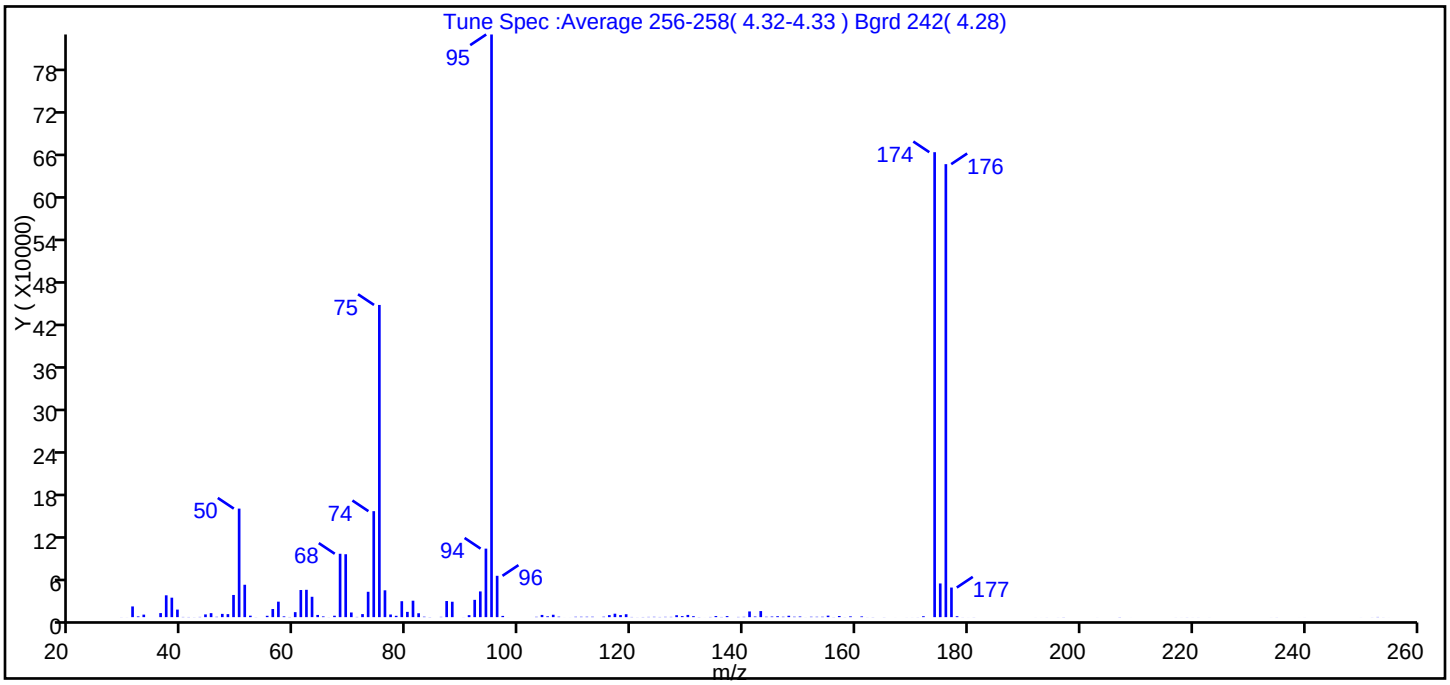
40MXSUR_00002 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\RBFBC16.D
Injection Date: 16-Mar-2018 12:10:30 Instrument ID: MR
Lims ID: BFB
Client ID:
Operator ID: ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.6
75	30 to 60% of m/z 95	53.6
96	5 to 9% of m/z 95	7.1
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	79.8
175	5 to 9% of m/z 174	5.8 (7.2)
176	Greater than 95% but less than 101% of m/z 174	77.7 (97.4)
177	5 to 9% of m/z 176	5.1 (6.5)

Data File: \\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\RBFBC16.D\MR_TO15.rslt\spectra.d
Injection Date: 16-Mar-2018 12:10:30
Spectrum: Tune Spec :Average 256-258(4.32-4.33) Bgrd 242(4.28)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 161

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	84	73.00	36072	121.00	85	165.00	109
30.00	53	74.00	150784	122.00	224	167.00	33
31.00	15241	75.00	444224	123.00	341	169.00	46
32.00	997	76.00	38192	124.00	457	170.00	46
33.00	3591	77.00	3738	125.00	259	171.00	92
36.00	5775	78.00	1915	126.00	417	172.00	1288
37.00	31072	79.00	22688	127.00	370	174.00	661568
38.00	27704	80.00	7498	128.00	2727	175.00	47936
39.00	10757	81.00	23400	129.00	1454	176.00	644544
40.00	295	82.00	5548	130.00	3156	177.00	42128
41.00	235	83.00	628	131.00	1355	178.00	1260
42.00	116	84.00	193	132.00	174	179.00	79
43.00	316	86.00	411	133.00	25	180.00	36
44.00	3899	87.00	22920	134.00	271	181.00	105
45.00	5676	88.00	21920	135.00	1572	192.00	35
46.00	475	90.00	73	136.00	246	193.00	20
47.00	4644	91.00	2819	137.00	1486	194.00	49
48.00	4304	92.00	24632	139.00	306	196.00	49
49.00	31568	93.00	36592	140.00	454	197.00	149
50.00	154432	94.00	97488	141.00	8113	203.00	35
51.00	46080	95.00	829056	142.00	898	207.00	189
52.00	2096	96.00	58824	143.00	8625	209.00	21
53.00	107	97.00	1767	144.00	563	217.00	54
55.00	1926	98.00	39	145.00	864	218.00	39
56.00	11570	103.00	469	146.00	1313	219.00	85
57.00	22024	104.00	3145	147.00	569	220.00	43
58.00	1083	105.00	1148	148.00	1961	221.00	52
59.00	239	106.00	3407	149.00	603	223.00	35
60.00	7103	107.00	664	150.00	926	234.00	35
61.00	38608	108.00	33	151.00	54	235.00	74
62.00	38896	109.00	34	152.00	564	239.00	12
63.00	28976	110.00	525	153.00	531	240.00	34
64.00	3127	111.00	549	154.00	555	250.00	36

Report Date: 16-Mar-2018 15:54:37 Chrom Revision: 2.2 08-Feb-2018 13:38:42
Data File: \\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\RBFBC16.D\MR_TO15.rslt\spectra.d
Injection Date: 16-Mar-2018 12:10:30
Spectrum: Tune Spec :Average 256-258(4.32-4.33) Bgrd 242(4.28)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 161

m/z	Y	m/z	Y	m/z	Y	m/z	Y
65.00	1017	112.00	577	155.00	2137	251.00	5
66.00	95	113.00	561	156.00	133	252.00	80
67.00	2018	115.00	599	157.00	1592	253.00	283
68.00	90168	116.00	2886	158.00	99	254.00	66
69.00	89512	117.00	4901	159.00	1085	255.00	21
70.00	6637	118.00	2963	161.00	1038		
71.00	313	119.00	4137	162.00	62		
72.00	4345	120.00	266	163.00	146		

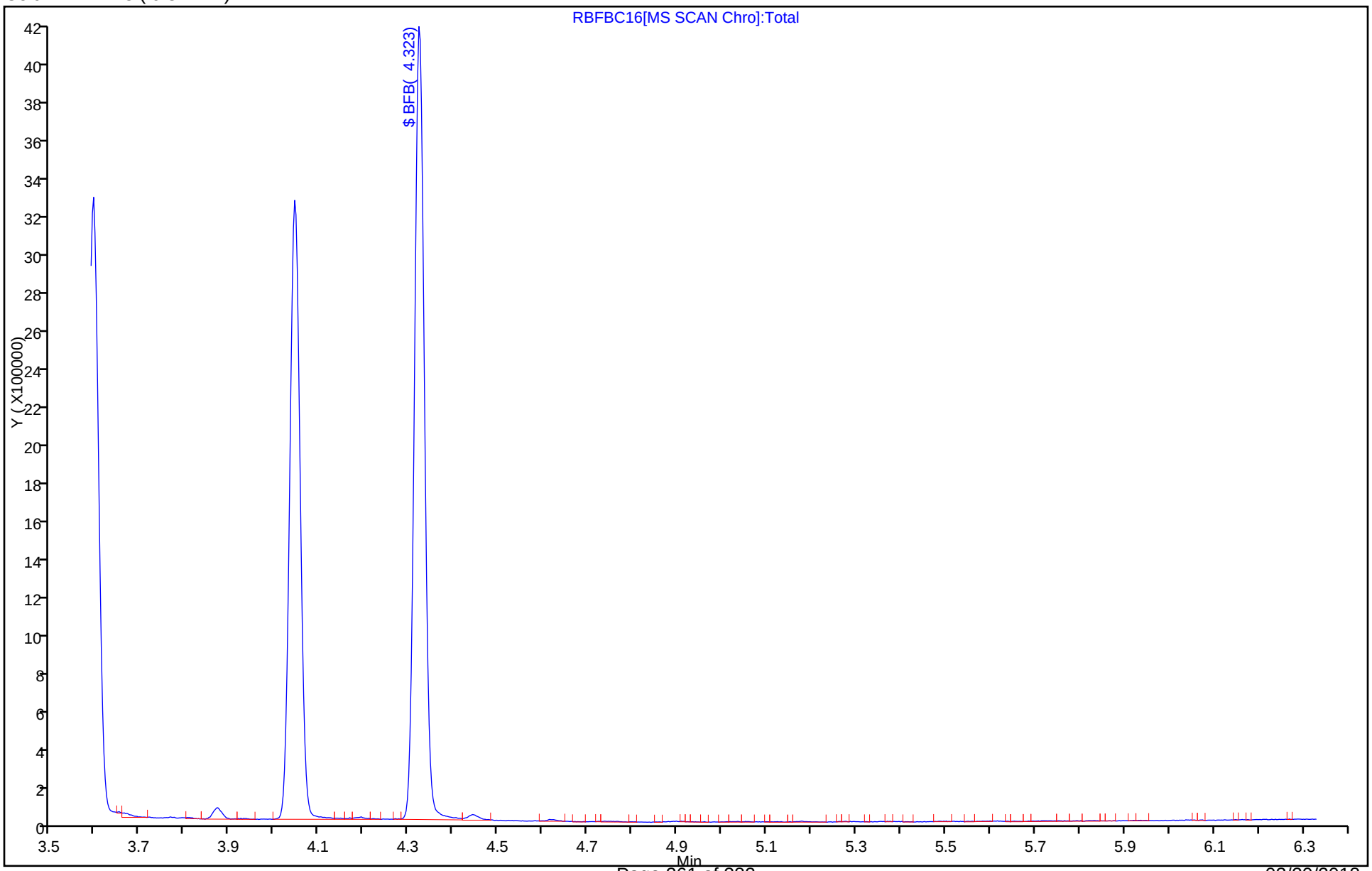
Report Date: 16-Mar-2018 15:54:37 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\RBFBC16.D

Injection Date:	16-Mar-2018 12:10:30	Instrument ID:	MR	Operator ID:	
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-18783/5

Matrix: Air Lab File ID: Rmb500C15.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 03/15/2018 17:14

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18783 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-18783/5

Matrix: Air Lab File ID: Rmb500C15.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 03/15/2018 17:14

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18783 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\Rmb500C15.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 15-Mar-2018 17:14:30 ALS Bottle#: 16 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007635-005
Misc. Info.: mb500mL
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 15-Mar-2018 17:50:09 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: barlozhetskayaa Date: 15-Mar-2018 17:50:09

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.665	7.670	-0.005	75	295572	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.811	9.816	-0.005	94	1758043	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.837	14.837	0.000	87	1486297	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.546	16.546	0.000	90	1120827	4.00	3.98	
11 Acetaldehyde	44	3.761	3.753	0.006	97	20608		NC	
13 Butane	43	3.852	3.828	0.021	87	5218		0.0628	
19 2-Methylbutane	43	4.473	4.464	0.006	76	900		0.0154	
20 Acrolein	56	4.640	4.615	0.022	86	1459		0.0894	
35 2-Methylpentane	43	6.220	6.205	0.011	26	316		NC	
102 2,3-Dihydroindene	117	18.638	18.628	0.010	1	252		NC	
107 1,2-Dimethyl-4-Ethylbenzen	119	19.329	19.334	-0.005	0	202		NC	
109 1,2,3,5-Tetramethylbenzene	119	19.755	19.684	0.071	1	284		NC	
110 1,2,3,4-Tetramethylbenzene	119	19.922	20.089	-0.167	1	320		NC	
114 Benzo(b)thiophene	134	20.666	20.655	0.011	0	770		NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

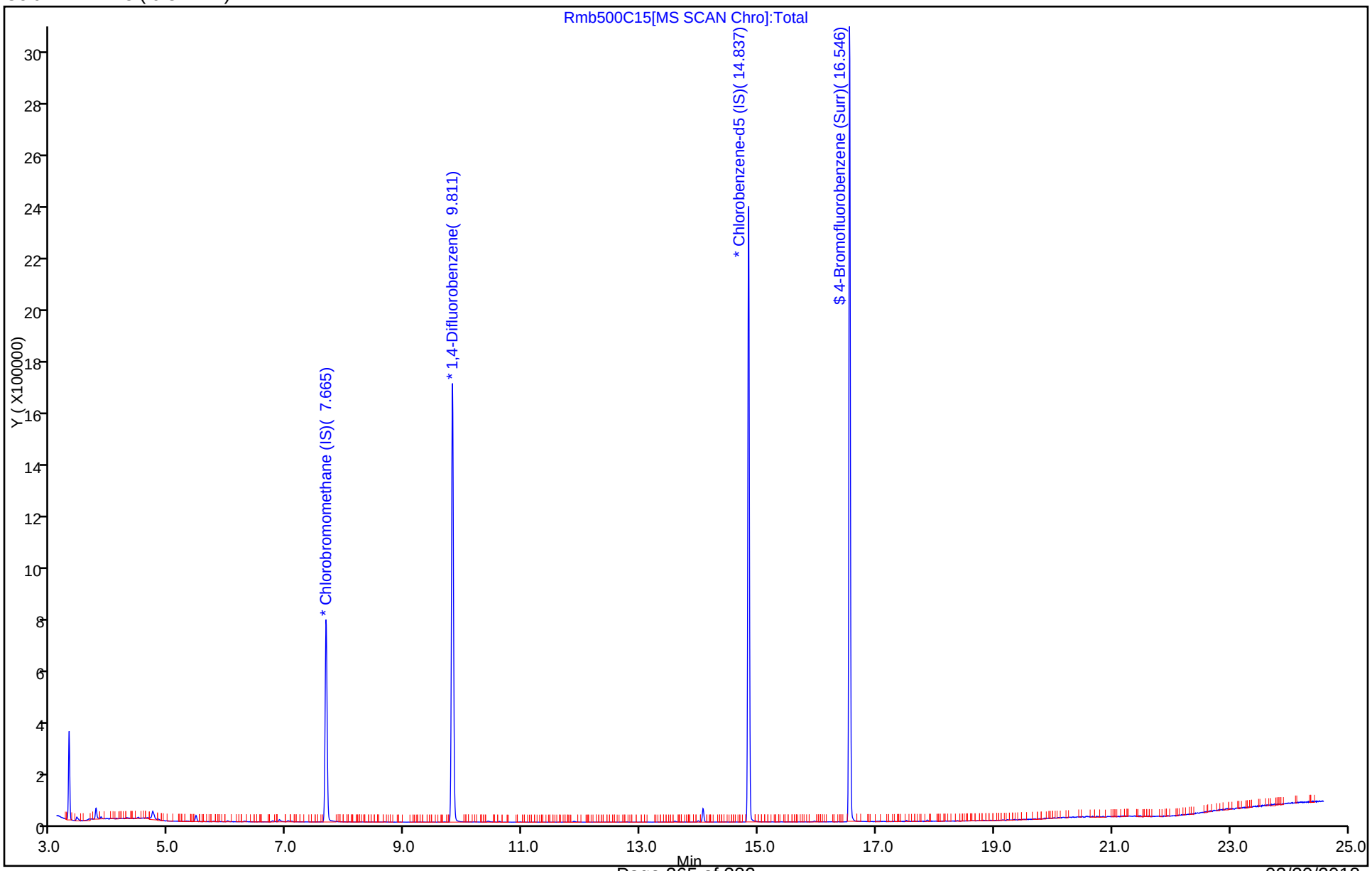
Report Date: 15-Mar-2018 17:50:09 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\Rmb500C15.D

Injection Date:	15-Mar-2018 17:14:30	Instrument ID:	MR	Operator ID:	
Lims ID:	MB			Worklist Smp#:	5
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\Rmb500C15.D				
Lims ID:	MB				
Client ID:					
Sample Type:	MB				
Inject. Date:	15-Mar-2018 17:14:30	ALS Bottle#:	16	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007635-005				
Misc. Info.:	mb500mL				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	15-Mar-2018 17:50:09	Calib Date:	30-Jan-2018 19:38:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK004				
First Level Reviewer: barlozhetskayaa		Date:	15-Mar-2018 17:50:09		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.98	99.44

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-18835/5

Matrix: Air Lab File ID: RC16MB500.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 03/16/2018 15:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18835 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-18835/5

Matrix: Air Lab File ID: RC16MB500.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 03/16/2018 15:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18835 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\RC16MB500.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 16-Mar-2018 15:10:30 ALS Bottle#: 16 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007656-005
Misc. Info.: MB500mL
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 16-Mar-2018 15:54:39 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa Date: 16-Mar-2018 15:51:45

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.670	7.670	0.000	75	300403	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.811	9.811	0.000	94	1779258	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.837	14.837	0.000	87	1485377	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.546	16.546	0.000	90	1128873	4.00	4.01	
11 Acetaldehyde	44	3.766	3.750	0.016	98	23450		NC	
13 Butane	43	3.853	3.831	0.022	88	4203		0.0498	
19 2-Methylbutane	43	4.483	4.462	0.021	77	1012		0.0170	
20 Acrolein	56	4.640	4.618	0.022	88	1726		0.1040	
35 2-Methylpentane	43	6.231	6.204	0.027	39	538		NC	
75 2,3-Dimethylheptane	43	14.831	15.004	-0.173	41	1206		NC	
102 2,3-Dihydroindene	117	18.628	18.628	0.000	1	521		NC	
107 1,2-Dimethyl-4-Ethylbenzen	119	19.248	19.334	-0.086	0	59		NC	
109 1,2,3,5-Tetramethylbenzene	119	19.685	19.684	0.001	7	840		NC	
110 1,2,3,4-Tetramethylbenzene	119	20.089	20.089	0.000	1	731		NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

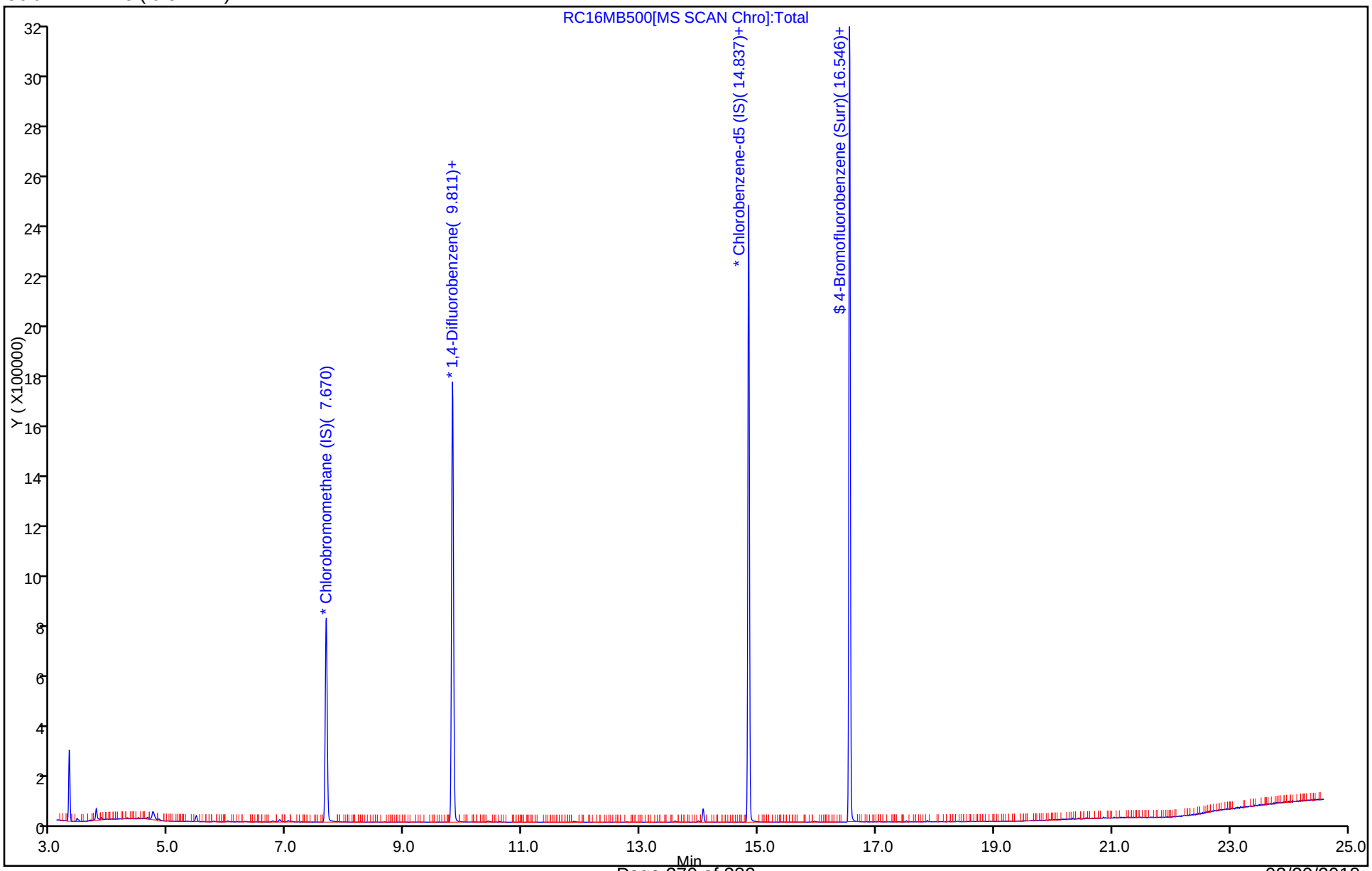
Report Date: 16-Mar-2018 15:54:49 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\RC16MB500.D

Injection Date:	16-Mar-2018 15:10:30	Instrument ID:	MR	Operator ID:	
Lims ID:	MB			Worklist Smp#:	5
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\RC16MB500.D				
Lims ID:	MB				
Client ID:					
Sample Type:	MB				
Inject. Date:	16-Mar-2018 15:10:30	ALS Bottle#:	16	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007656-005				
Misc. Info.:	MB500mL				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	16-Mar-2018 15:54:39	Calib Date:	30-Jan-2018 19:38:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK031				

First Level Reviewer: barlozhetskayaa Date: 16-Mar-2018 15:51:45

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.01	100.21

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10921-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 140-18783/1002

Matrix: Air | Lab File ID: RCCVC15-LCS.d

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 03/15/2018 13:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 18783 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.96		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.19		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	1.95		0.080	0.015
67-66-3	Chloroform	119.38	1.89		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	1.95		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.13		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	1.75		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	1.91		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	1.95		0.080	0.014
100-41-4	Ethylbenzene	106.17	2.05		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.77		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.90		0.40	0.068
91-20-3	Naphthalene	128.17	2.77		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.24		0.080	0.016
108-88-3	Toluene	92.14	2.04		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	1.97		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	2.90		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	1.95		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	1.98		0.080	0.021
79-01-6	Trichloroethene	131.39	2.14		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	1.72		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	2.41		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	2.72		0.080	0.026
75-01-4	Vinyl chloride	62.50	1.88		0.040	0.029
1330-20-7	Xylenes, Total	106.17	6.25		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RCCVC15-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 15-Mar-2018 13:44:30 ALS Bottle#: 15 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007635-002
Misc. Info.: S56
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 15-Mar-2018 17:32:35 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: barlozhetskayaa Date: 15-Mar-2018 17:32:35

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.670	7.670	0.000	74	294315	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.816	9.816	0.000	94	1740930	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.837	14.837	0.000	87	1483213	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.546	16.546	0.000	93	1075653	4.00	3.83	
6 Chlorodifluoromethane	67	3.437	3.437	0.000	95	70133	2.00	1.95	
7 Propene	41	3.448	3.448	0.000	97	110911	2.00	1.58	
8 Dichlorodifluoromethane	85	3.491	3.491	0.000	99	588300	2.00	2.13	
9 Chloromethane	52	3.621	3.621	0.000	99	46818	2.00	1.86	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.648	3.648	0.000	92	415730	2.00	2.22	
11 Acetaldehyde	44	3.755	3.755	0.000	99	181078	NC	NC	
12 Vinyl chloride	62	3.755	3.755	0.000	99	145148	2.00	1.88	
14 Butadiene	54	3.831	3.831	0.000	95	91647	2.00	1.84	
13 Butane	43	3.831	3.831	0.000	89	156427	2.00	1.89	
15 Bromomethane	94	4.063	4.063	0.000	98	145604	2.00	2.04	
16 Chloroethane	64	4.176	4.176	0.000	98	67542	2.00	1.93	
17 Ethanol	31	4.284	4.284	0.000	90	133721	10.0	6.06	
18 Vinyl bromide	106	4.413	4.413	0.000	97	153685	2.00	2.20	
19 2-Methylbutane	43	4.467	4.467	0.000	80	109680	2.00	1.88	
20 Acrolein	56	4.618	4.618	0.000	94	32509	2.00	2.00	
21 Trichlorofluoromethane	101	4.629	4.629	0.000	99	542020	2.00	2.06	
22 Acetonitrile	40	4.661	4.661	0.000	98	35263	2.00	1.76	
23 Acetone	58	4.710	4.710	0.000	99	59701	2.00	1.94	
24 Isopropyl alcohol	45	4.807	4.807	0.000	93	246655	2.00	2.09	
25 Pentane	72	4.812	4.812	0.000	97	40517	2.00	1.97	
26 Ethyl ether	31	4.936	4.936	0.000	74	118410	2.00	1.59	
27 1,1-Dichloroethene	96	5.184	5.184	0.000	98	216929	2.00	1.95	
28 Acrylonitrile	53	5.249	5.249	0.000	93	120829	2.00	1.72	
29 2-Methyl-2-propanol	59	5.281	5.281	0.000	92	376951	2.00	1.70	
30 1,1,2-Trichloro-1,2,2-trif	101	5.352	5.352	0.000	97	485137	2.00	2.04	
31 Methylene Chloride	84	5.459	5.459	0.000	84	203992	2.00	1.77	
32 3-Chloro-1-propene	39	5.481	5.481	0.000	93	158483	2.00	1.71	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.589	5.589	0.000	98	591514	2.00	1.92	
34 trans-1,2-Dichloroethene	96	6.155	6.155	0.000	97	223066	2.00	1.97	
35 2-Methylpentane	43	6.209	6.209	0.000	88	304415	NC	NC	
36 Methyl tert-butyl ether	73	6.279	6.279	0.000	94	660724	2.00	1.90	
37 1,1-Dichloroethane	63	6.505	6.505	0.000	100	376647	2.00	1.75	
38 Vinyl acetate	43	6.619	6.619	0.000	99	373945	2.00	1.80	
39 2-Butanone (MEK)	72	6.985	6.985	0.000	96	91512	2.00	1.71	
40 Hexane	56	7.082	7.082	0.000	84	148527	2.00	1.72	
41 cis-1,2-Dichloroethene	96	7.384	7.384	0.000	92	236691	2.00	1.95	
42 Ethyl acetate	43	7.573	7.573	0.000	99	301278	2.00	1.61	
43 Chloroform	83	7.708	7.708	0.000	94	514357	2.00	1.89	
44 Tetrahydrofuran	42	8.053	8.053	0.000	81	150230	2.00	1.58	
45 1,1,1-Trichloroethane	97	8.662	8.662	0.000	95	558711	2.00	1.95	
46 1,2-Dichloroethane	62	8.733	8.733	0.000	99	351946	2.00	1.91	
47 Benzene	78	9.234	9.234	0.000	96	650738	2.00	1.96	
48 n-Butanol	31	9.239	9.239	0.000	67	32318	2.00	1.47	
49 Cyclohexane	69	9.261	9.261	0.000	94	103399	2.00	1.94	
50 Carbon tetrachloride	117	9.277	9.277	0.000	97	587451	2.00	2.19	
51 2,3-Dimethylpentane	71	9.423	9.423	0.000	86	140620	NC	NC	
52 Thiophene	84	9.498	9.498	0.000	91	369548	NC	NC	
53 Isooctane	57	10.108	10.108	0.000	97	884759	2.00	1.83	
54 1,2-Dichloropropane	63	10.501	10.501	0.000	85	209653	2.00	1.81	
55 n-Heptane	71	10.528	10.528	0.000	81	220808	2.00	1.92	
56 Trichloroethene	130	10.571	10.571	0.000	95	335994	2.00	2.14	
57 Dibromomethane	93	10.609	10.609	0.000	93	276414	2.00	2.02	
58 Dichlorobromomethane	83	10.792	10.792	0.000	98	512196	2.00	2.09	
59 1,4-Dioxane	88	10.803	10.803	0.000	79	83506	2.00	1.70	
60 Methyl methacrylate	41	10.949	10.949	0.000	93	186600	2.00	1.71	
61 Methylcyclohexane	83	11.418	11.418	0.000	92	490025	NC	NC	
62 4-Methyl-2-pentanone (MIBK	43	11.833	11.833	0.000	92	317555	2.00	1.70	
63 cis-1,3-Dichloropropene	75	11.882	11.882	0.000	91	383030	2.00	2.00	
64 trans-1,3-Dichloropropene	75	12.631	12.631	0.000	96	355598	2.00	1.98	
65 Toluene	91	12.766	12.766	0.000	94	832227	2.00	2.04	
66 1,1,2-Trichloroethane	83	12.825	12.825	0.000	97	222310	2.00	1.98	
67 2-Methylthiophene	97	12.917	12.917	0.000	0	668679	NC	NC	a
68 3-Methylthiophene	97	13.127	13.127	0.000	0	652417	NC	NC	
69 2-Hexanone	58	13.273	13.273	0.000	99	186064	2.00	1.91	
70 Chlorodibromomethane	129	13.553	13.553	0.000	97	509360	2.00	2.37	
71 n-Octane	85	13.591	13.591	0.000	81	276650	2.00	2.11	
72 Ethylene Dibromide	107	13.850	13.850	0.000	99	429166	2.00	2.14	
73 Tetrachloroethene	129	13.979	13.979	0.000	97	341165	2.00	2.24	
74 Chlorobenzene	112	14.885	14.885	0.000	94	687622	2.00	2.14	
75 2,3-Dimethylheptane	43	15.004	15.004	0.000	80	442395	NC	NC	
76 Ethylbenzene	91	15.214	15.214	0.000	98	1096100	2.00	2.05	
78 2-Ethylthiophene	97	15.311	15.311	0.000	0	811952	NC	NC	
77 m-Xylene & p-Xylene	91	15.387	15.387	0.000	99	1751828	4.00	4.23	
79 Bromoform	173	15.786	15.786	0.000	97	449866	2.00	2.43	
80 Styrene	104	15.861	15.861	0.000	98	605245	2.00	2.29	
81 n-Nonane	57	15.904	15.904	0.000	83	432718	2.00	1.94	
82 o-Xylene	91	15.921	15.921	0.000	98	886165	2.00	2.02	
83 1,1,2,2-Tetrachloroethane	83	16.244	16.244	0.000	99	548485	2.00	2.09	
84 1,2,3-Trichloropropane	110	16.400	16.400	0.000	97	196692	2.00	2.07	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.546	16.546	0.000	97	1251213	2.00	2.14	
86 N-Propylbenzene	120	17.123	17.123	0.000	99	386781	2.00	2.42	
87 2-Chlorotoluene	126	17.139	17.139	0.000	93	340356	2.00	2.30	
88 4-Ethyltoluene	105	17.290	17.290	0.000	99	1354221	2.00	2.23	
89 1,3,5-Trimethylbenzene	120	17.377	17.377	0.000	92	666886	2.00	2.72	
90 Alpha Methyl Styrene	118	17.635	17.635	0.000	89	519758	2.00	2.45	
91 n-Decane	57	17.776	17.776	0.000	92	655862	2.00	2.16	
92 tert-Butylbenzene	119	17.851	17.851	0.000	91	1351984	2.00	2.37	
93 1,2,4-Trimethylbenzene	105	17.862	17.862	0.000	96	1233018	2.00	2.41	
94 1,3-Dichlorobenzene	146	18.131	18.131	0.000	99	820636	2.00	2.50	
95 sec-Butylbenzene	105	18.153	18.153	0.000	98	1769247	2.00	2.41	
96 Benzyl chloride	91	18.218	18.218	0.000	98	874743	2.00	2.27	
97 1,4-Dichlorobenzene	146	18.229	18.229	0.000	96	817733	2.00	2.49	
98 4-Isopropyltoluene	119	18.342	18.342	0.000	97	1664611	2.00	2.58	
99 1,2,3-Trimethylbenzene	105	18.374	18.374	0.000	98	998237	2.00	1.72	
100 Butylcyclohexane	83	18.471	18.471	0.000	96	865347	NC	NC	
101 1,2-Dichlorobenzene	146	18.617	18.617	0.000	95	807655	2.00	2.53	
102 2,3-Dihydroindene	117	18.628	18.628	0.000	94	1071460	NC	NC	
103 Indene	116	18.768	18.768	0.000	91	779069	NC	NC	
104 n-Butylbenzene	91	18.816	18.816	0.000	98	1464812	2.00	2.55	
105 Undecane	57	19.215	19.215	0.000	81	740951	2.00	2.25	
106 1,2-Dibromo-3-Chloropropan	157	19.269	19.269	0.000	98	332338	2.00	1.70	
108 1,2,4,5-Tetramethylbenzene	119	19.625	19.625	0.000	97	1399388	2.00	4.44	
109 1,2,3,5-Tetramethylbenzene	119	19.684	19.684	0.000	95	856331	NC	NC	
110 1,2,3,4-Tetramethylbenzene	119	20.089	20.089	0.000	97	1126761	NC	NC	
111 Dodecane	57	20.326	20.326	0.000	97	741808	2.00	2.41	
112 1,2,4-Trichlorobenzene	180	20.429	20.429	0.000	94	695002	2.00	2.90	
113 Naphthalene	128	20.558	20.558	0.000	99	1472894	2.00	2.77	
114 Benzo(b)thiophene	134	20.655	20.655	0.000	0	719141	NC	NC	
115 Hexachlorobutadiene	225	20.811	20.811	0.000	96	701077	2.00	2.68	
116 1,2,3-Trichlorobenzene	180	20.849	20.849	0.000	95	669979	2.00	2.77	
117 2-Methylnaphthalene	142	21.663	21.663	0.000	99	614327	6.40	4.70	
118 1-Methylnaphthalene	142	21.809	21.809	0.000	98	605886	6.05	4.66	
S 119 Xylenes, Total	100				0		6.00	6.25	
S 120 1,2-Dichloroethene, Total	1				0		4.00	3.93	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

a - User Assigned ID

Reagents:

40CV101S_00056	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

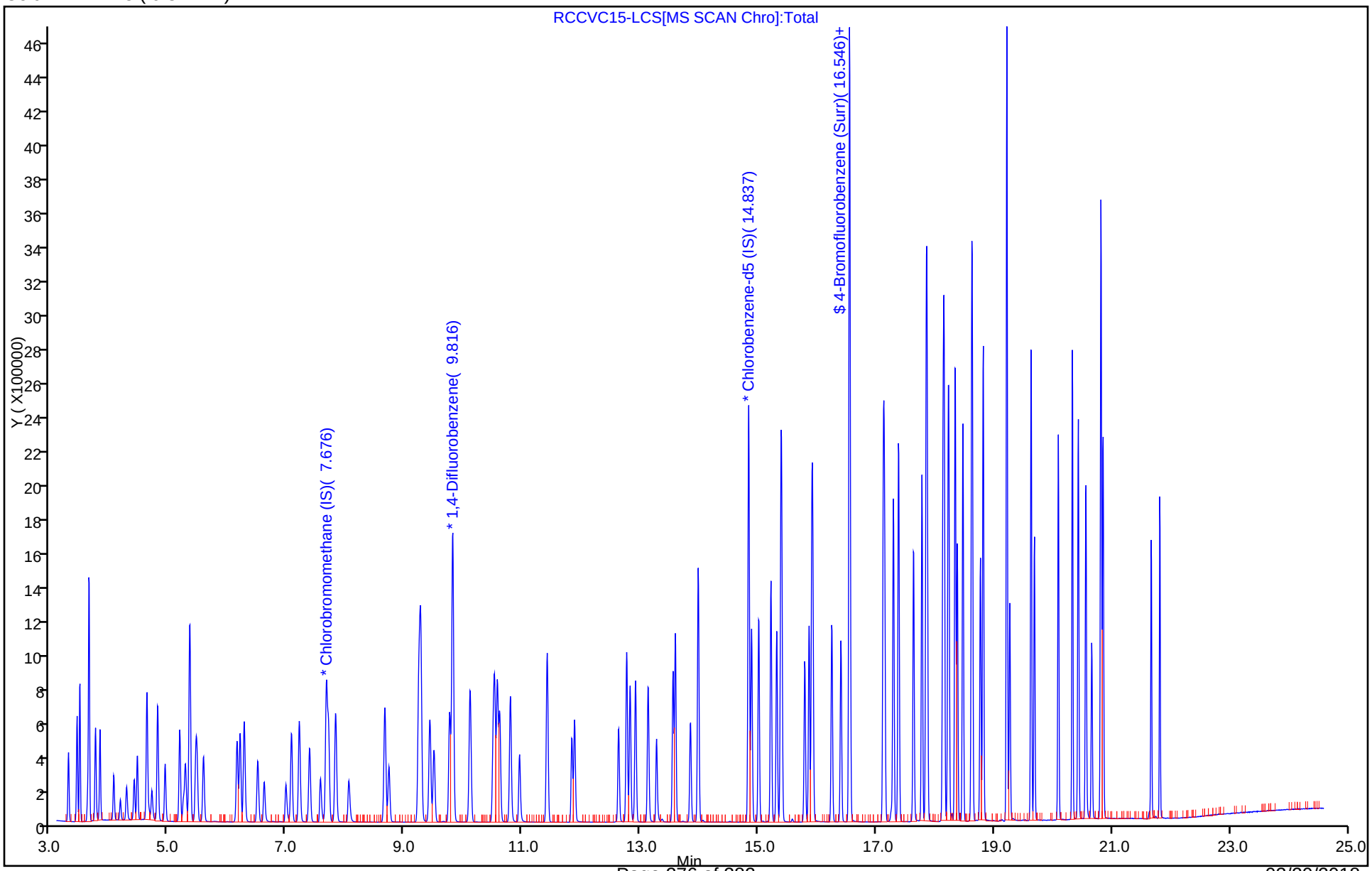
Report Date: 15-Mar-2018 17:32:42 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Laboratories

Data File: \\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RCCVC15-LCS.d

Injection Date:	15-Mar-2018 13:44:30	Instrument ID:	MR	Operator ID:	
Lims ID:	LCS			Worklist Smp#:	1002
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\RCCVC15-LCS.d				
Lims ID:	LCS				
Client ID:					
Sample Type:	LCS				
Inject. Date:	15-Mar-2018 13:44:30	ALS Bottle#:	15	Worklist Smp#:	1002
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007635-002				
Misc. Info.:	S56				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180313-7635.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	15-Mar-2018 17:32:35	Calib Date:	30-Jan-2018 19:38:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK004				

First Level Reviewer: barlozhetskayaa Date: 15-Mar-2018 17:32:35

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.83	95.63

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 140-18835/1002

Matrix: Air Lab File ID: RCCVC16-LCS.d

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 03/16/2018 12:42

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 18835 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.98		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.12		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	1.96		0.080	0.015
67-66-3	Chloroform	119.38	1.95		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	2.00		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	1.69		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	1.81		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	1.94		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	2.01		0.080	0.014
100-41-4	Ethylbenzene	106.17	2.07		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.84		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.96		0.40	0.068
91-20-3	Naphthalene	128.17	2.78		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.24		0.080	0.016
108-88-3	Toluene	92.14	2.07		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	2.07		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	2.88		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	2.01		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	2.08		0.080	0.021
79-01-6	Trichloroethene	131.39	2.17		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	2.21		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	2.34		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	2.34		0.080	0.026
75-01-4	Vinyl chloride	62.50	1.82		0.040	0.029
1330-20-7	Xylenes, Total	106.17	6.25		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\RCCVC16-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 16-Mar-2018 12:42:30 ALS Bottle#: 1 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007656-002
Misc. Info.: P56
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 16-Mar-2018 15:54:39 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa Date: 16-Mar-2018 13:17:34

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.670	7.670	0.000	79	294853	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.811	9.811	0.000	94	1749788	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.837	14.837	0.000	87	1489530	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.546	16.546	0.000	93	1067552	4.00	3.78	
6 Chlorodifluoromethane	67	3.437	3.437	0.000	95	70659	2.00	1.96	
7 Propene	41	3.443	3.443	0.000	96	117109	2.00	1.66	
8 Dichlorodifluoromethane	85	3.486	3.486	0.000	100	466749	2.00	1.69	
9 Chloromethane	52	3.621	3.621	0.000	100	47545	2.00	1.89	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.642	3.642	0.000	92	412295	2.00	2.20	
11 Acetaldehyde	44	3.750	3.750	0.000	100	205267	NC	NC	
12 Vinyl chloride	62	3.756	3.756	0.000	99	141045	2.00	1.82	
14 Butadiene	54	3.826	3.826	0.000	93	92054	2.00	1.85	
13 Butane	43	3.831	3.831	0.000	89	153017	2.00	1.85	
15 Bromomethane	94	4.063	4.063	0.000	98	148444	2.00	2.07	
16 Chloroethane	64	4.176	4.176	0.000	97	67565	2.00	1.93	
17 Ethanol	31	4.284	4.284	0.000	90	199056	10.0	9.01	
18 Vinyl bromide	106	4.408	4.408	0.000	97	145232	2.00	2.07	
19 2-Methylbutane	43	4.462	4.462	0.000	80	107650	2.00	1.84	
20 Acrolein	56	4.618	4.618	0.000	94	32809	2.00	2.02	
21 Trichlorofluoromethane	101	4.624	4.624	0.000	99	544124	2.00	2.07	
22 Acetonitrile	40	4.661	4.661	0.000	97	39109	2.00	1.95	
23 Acetone	58	4.705	4.705	0.000	99	171351	6.00	5.56	
24 Isopropyl alcohol	45	4.807	4.807	0.000	83	693330	6.00	5.85	
25 Pentane	72	4.807	4.807	0.000	73	40674	2.00	1.98	
26 Ethyl ether	31	4.931	4.931	0.000	74	121503	2.00	1.63	
27 1,1-Dichloroethene	96	5.185	5.185	0.000	98	224817	2.00	2.01	
28 Acrylonitrile	53	5.249	5.249	0.000	93	127054	2.00	1.80	
29 2-Methyl-2-propanol	59	5.282	5.282	0.000	92	428815	2.00	1.93	
30 1,1,2-Trichloro-1,2,2-trif	101	5.352	5.352	0.000	96	500729	2.00	2.10	
31 Methylene Chloride	84	5.454	5.454	0.000	85	211949	2.00	1.84	
32 3-Chloro-1-propene	39	5.476	5.476	0.000	93	171730	2.00	1.85	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.584	5.584	0.000	98	614658	2.00	1.99	
34 trans-1,2-Dichloroethene	96	6.155	6.155	0.000	98	234668	2.00	2.07	
35 2-Methylpentane	43	6.204	6.204	0.000	88	349858	NC	NC	
36 Methyl tert-butyl ether	73	6.274	6.274	0.000	94	683547	2.00	1.96	
37 1,1-Dichloroethane	63	6.506	6.506	0.000	100	390470	2.00	1.81	
38 Vinyl acetate	43	6.614	6.614	0.000	99	388277	2.00	1.86	
39 2-Butanone (MEK)	72	6.986	6.986	0.000	96	97284	2.00	1.82	
40 Hexane	56	7.077	7.077	0.000	84	155375	2.00	1.80	
41 cis-1,2-Dichloroethene	96	7.385	7.385	0.000	92	242938	2.00	2.00	
42 Ethyl acetate	43	7.568	7.568	0.000	99	333640	2.00	1.78	
43 Chloroform	83	7.708	7.708	0.000	96	531465	2.00	1.95	
44 Tetrahydrofuran	42	8.048	8.048	0.000	81	158396	2.00	1.66	
45 1,1,1-Trichloroethane	97	8.663	8.663	0.000	95	575251	2.00	2.01	
46 1,2-Dichloroethane	62	8.733	8.733	0.000	99	358391	2.00	1.94	
47 Benzene	78	9.234	9.234	0.000	96	661205	2.00	1.98	
48 n-Butanol	31	9.234	9.234	0.000	61	36132	2.00	1.63	
49 Cyclohexane	69	9.256	9.256	0.000	95	105849	2.00	1.97	
50 Carbon tetrachloride	117	9.272	9.272	0.000	97	569943	2.00	2.12	
51 2,3-Dimethylpentane	71	9.428	9.428	0.000	86	151958	NC	NC	
52 Thiophene	84	9.493	9.493	0.000	91	393532	NC	NC	
53 Isooctane	57	10.108	10.108	0.000	97	907684	2.00	1.87	
54 1,2-Dichloropropane	63	10.501	10.501	0.000	85	215318	2.00	1.85	
55 n-Heptane	71	10.523	10.523	0.000	81	229892	2.00	1.98	
56 Trichloroethene	130	10.572	10.572	0.000	94	343351	2.00	2.17	
57 Dibromomethane	93	10.609	10.609	0.000	94	279351	2.00	2.03	
58 Dichlorobromomethane	83	10.793	10.793	0.000	98	525983	2.00	2.13	
59 1,4-Dioxane	88	10.803	10.803	0.000	79	112271	2.00	2.28	
60 Methyl methacrylate	41	10.944	10.944	0.000	94	198634	2.00	1.81	
61 Methylcyclohexane	83	11.418	11.418	0.000	92	419966	NC	NC	
62 4-Methyl-2-pentanone (MIBK	43	11.833	11.833	0.000	91	334559	2.00	1.79	
63 cis-1,3-Dichloropropene	75	11.882	11.882	0.000	91	393985	2.00	2.05	
64 trans-1,3-Dichloropropene	75	12.626	12.626	0.000	96	372074	2.00	2.06	
65 Toluene	91	12.766	12.766	0.000	93	849599	2.00	2.07	
66 1,1,2-Trichloroethane	83	12.820	12.820	0.000	97	234568	2.00	2.08	
69 2-Hexanone	58	13.273	13.273	0.000	98	196645	2.00	2.01	
70 Chlorodibromomethane	129	13.553	13.553	0.000	97	523040	2.00	2.42	
71 n-Octane	85	13.591	13.591	0.000	81	280595	2.00	2.13	
72 Ethylene Dibromide	107	13.845	13.845	0.000	98	448641	2.00	2.22	
73 Tetrachloroethene	129	13.979	13.979	0.000	97	342571	2.00	2.24	
74 Chlorobenzene	112	14.885	14.885	0.000	94	689496	2.00	2.13	
75 2,3-Dimethylheptane	43	15.004	15.004	0.000	81	505462	NC	NC	
76 Ethylbenzene	91	15.214	15.214	0.000	98	1111001	2.00	2.07	
77 m-Xylene & p-Xylene	91	15.387	15.387	0.000	99	1755413	4.00	4.22	
79 Bromoform	173	15.786	15.786	0.000	97	459421	2.00	2.47	
80 Styrene	104	15.861	15.861	0.000	98	599533	2.00	2.26	
81 n-Nonane	57	15.905	15.905	0.000	80	438711	2.00	1.96	
82 o-Xylene	91	15.921	15.921	0.000	98	893539	2.00	2.03	
83 1,1,2,2-Tetrachloroethane	83	16.244	16.244	0.000	99	559612	2.00	2.13	
84 1,2,3-Trichloropropane	110	16.401	16.401	0.000	97	197428	2.00	2.07	
85 Isopropylbenzene	105	16.546	16.546	0.000	97	1212855	2.00	2.06	
86 N-Propylbenzene	120	17.123	17.123	0.000	99	367998	2.00	2.29	
87 2-Chlorotoluene	126	17.139	17.139	0.000	93	322786	2.00	2.17	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 4-Ethyltoluene	105	17.290	17.290	0.000	99	1389334	2.00	2.28	
89 1,3,5-Trimethylbenzene	120	17.377	17.377	0.000	92	575491	2.00	2.34	
90 Alpha Methyl Styrene	118	17.630	17.630	0.000	89	485220	2.00	2.28	
91 n-Decane	57	17.776	17.776	0.000	92	656530	2.00	2.15	
92 tert-Butylbenzene	119	17.846	17.846	0.000	95	1324102	2.00	2.31	
93 1,2,4-Trimethylbenzene	105	17.862	17.862	0.000	96	1200903	2.00	2.34	
94 1,3-Dichlorobenzene	146	18.132	18.132	0.000	99	799543	2.00	2.42	
95 sec-Butylbenzene	105	18.153	18.153	0.000	98	1727955	2.00	2.35	
96 Benzyl chloride	91	18.218	18.218	0.000	98	978627	2.00	2.53	
97 1,4-Dichlorobenzene	146	18.229	18.229	0.000	96	804638	2.00	2.44	
98 4-Isopropyltoluene	119	18.337	18.337	0.000	96	1684527	2.00	2.60	
99 1,2,3-Trimethylbenzene	105	18.374	18.374	0.000	99	1289208	2.00	2.21	
100 Butylcyclohexane	83	18.471	18.471	0.000	96	914560	NC	NC	
101 1,2-Dichlorobenzene	146	18.617	18.617	0.000	95	789350	2.00	2.46	
102 2,3-Dihydroindene	117	18.628	18.628	0.000	94	1058335	NC	NC	
103 Indene	116	18.768	18.768	0.000	91	865674	NC	NC	
104 n-Butylbenzene	91	18.816	18.816	0.000	98	1452315	2.00	2.51	
105 Undecane	57	19.215	19.215	0.000	90	748203	2.00	2.27	
106 1,2-Dibromo-3-Chloropropan	157	19.264	19.264	0.000	99	414285	2.00	2.11	
108 1,2,4,5-Tetramethylbenzene	119	19.625	19.625	0.000	97	1487179	2.00	4.70	
111 Dodecane	57	20.326	20.326	0.000	98	639257	2.00	2.07	
112 1,2,4-Trichlorobenzene	180	20.429	20.429	0.000	94	691681	2.00	2.88	
113 Naphthalene	128	20.558	20.558	0.000	99	1484717	2.00	2.78	
115 Hexachlorobutadiene	225	20.812	20.812	0.000	96	685515	2.00	2.61	
116 1,2,3-Trichlorobenzene	180	20.849	20.849	0.000	95	645463	2.00	2.65	
117 2-Methylnaphthalene	142	21.664	21.664	0.000	99	360282	6.25	2.74	
118 1-Methylnaphthalene	142	21.809	21.809	0.000	99	302292	6.25	2.32	
S 119 Xylenes, Total	100				0		6.00	6.25	
S 120 1,2-Dichloroethene, Total	1				0		4.00	4.07	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101P_00056	Amount Added: 100.00	Units: mL	
40MXISSURP_00003	Amount Added: 40.00	Units: mL	Run Reagent

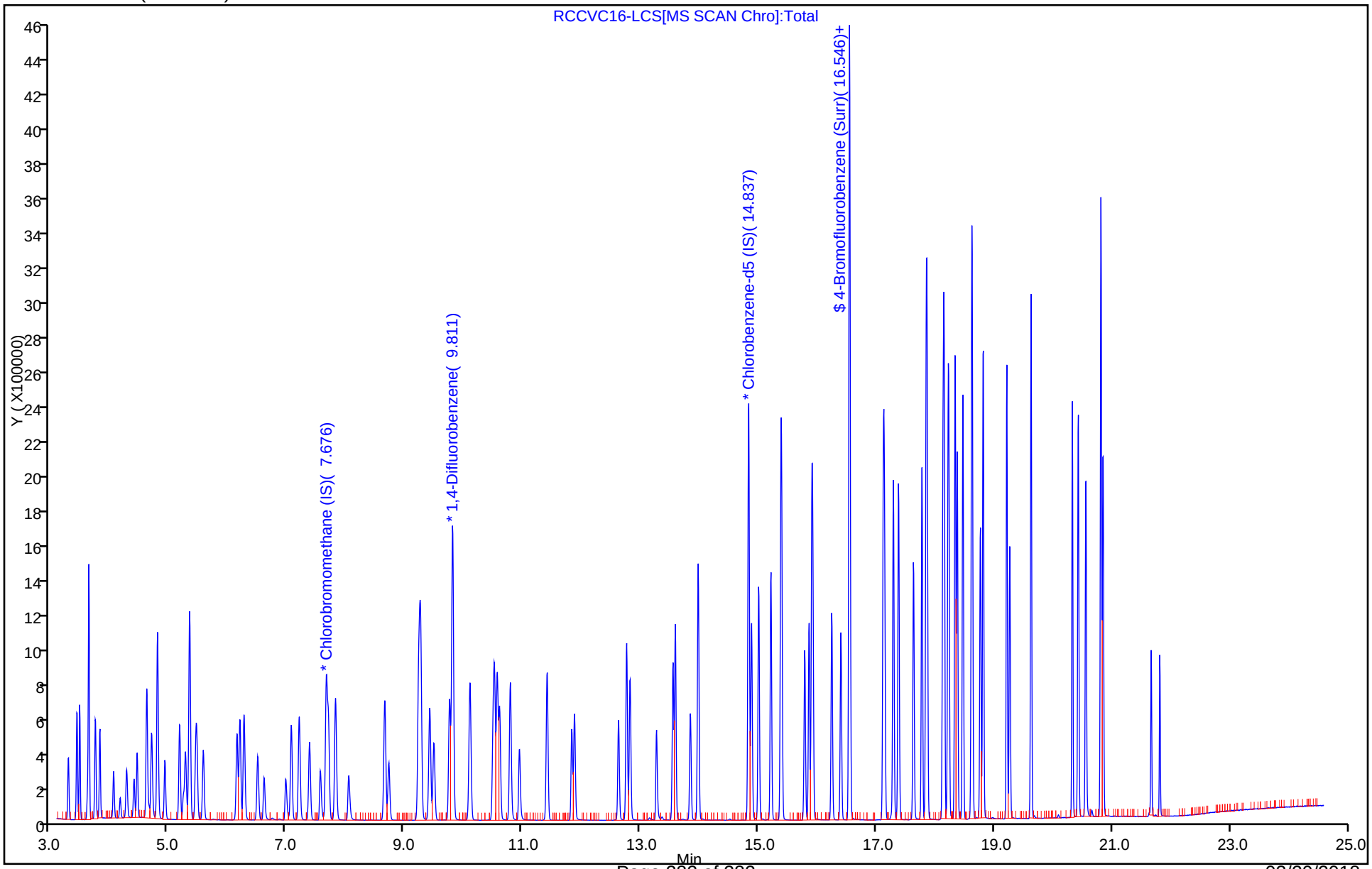
Report Date: 16-Mar-2018 15:54:47 Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Laboratories

Data File: \\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\RCCVC16-LCS.d

Injection Date:	16-Mar-2018 12:42:30	Instrument ID:	MR	Operator ID:	
Lims ID:	LCS			Worklist Smp#:	1002
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\RCCVC16-LCS.d				
Lims ID:	LCS				
Client ID:					
Sample Type:	LCS				
Inject. Date:	16-Mar-2018 12:42:30	ALS Bottle#:	1	Worklist Smp#:	1002
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007656-002				
Misc. Info.:	P56				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180315-7656.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	16-Mar-2018 15:54:39	Calib Date:	30-Jan-2018 19:38:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK031				
First Level Reviewer: barlozhetskayaa		Date:	16-Mar-2018 13:17:34		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.78	94.51

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Instrument ID: MR Start Date: 01/30/2018 11:12

Analysis Batch Number: 17762 End Date: 01/30/2018 23:36

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-17762/1		01/30/2018 11:12	1	RBFBA30.D	RTX-5 0.32(mm)
IC 140-17762/3		01/30/2018 12:29	1	RA30IC01.D	RTX-5 0.32(mm)
IC 140-17762/4		01/30/2018 13:16	1	RA30IC02.D	RTX-5 0.32(mm)
140-10625-A-5 MDLV		01/30/2018 13:16	1		RTX-5 0.32(mm)
ZZZZZ		01/30/2018 13:16	1		RTX-5 0.32(mm)
IC 140-17762/5		01/30/2018 14:04	1	RA30IC03.D	RTX-5 0.32(mm)
140-10625-A-6 MDLV		01/30/2018 14:04	1		RTX-5 0.32(mm)
ZZZZZ		01/30/2018 14:04	1		RTX-5 0.32(mm)
IC 140-17762/6		01/30/2018 14:50	1	RA30IC04.D	RTX-5 0.32(mm)
140-10625-A-7 MDLV		01/30/2018 14:50	1		RTX-5 0.32(mm)
ZZZZZ		01/30/2018 14:50	1		RTX-5 0.32(mm)
IC 140-17762/7		01/30/2018 15:39	1	RA30IC05.D	RTX-5 0.32(mm)
140-10625-A-8 MDLV		01/30/2018 15:39	1		RTX-5 0.32(mm)
ZZZZZ		01/30/2018 15:39	1		RTX-5 0.32(mm)
IC 140-17762/8		01/30/2018 16:27	1	RA30IC06.D	RTX-5 0.32(mm)
ICIS 140-17762/9		01/30/2018 17:15	1	RA30IC07.D	RTX-5 0.32(mm)
IC 140-17762/10		01/30/2018 18:03	1	RA30IC08.D	RTX-5 0.32(mm)
IC 140-17762/11		01/30/2018 18:50	1	RA30IC09.D	RTX-5 0.32(mm)
IC 140-17762/12		01/30/2018 19:38	1	RA30IC10.D	RTX-5 0.32(mm)
ICV 140-17762/14		01/30/2018 21:11	1	RA30ICV.D	RTX-5 0.32(mm)
ZZZZZ		01/30/2018 23:36	1		RTX-5 0.32(mm)

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 18 & KNOX-MS-0023, Rev 3

Analysis Date:	1/30/18	Instrument:	MR	Chrom WL #:	7236	TALS Batch & Event #	TO14/15: A762 / 1371	
							DOD: 17764 / 1373	OHIO: 17763/ 1372

Chrom/Worklist Review	1st	Comments	2nd
1. Re-read each Limit Group [method editor-limit groups]	✓		na
2. Verify LODV in Chrom [method editor -> edit -> MDL]	✓		na
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]	✓		✓
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]	✓		✓
5. Did BFB meet tune criteria? [F8]	✓		✓
6. Were all standards injected within 24 hr of BFB? [F7]	✓		✓
7. High point checked for saturation and point removed if so? [Chrom]	✓		✓
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]	N		NS
9. RT for each IS ±20 sec avg. RT? [F6 IstdRec]	✓		✓
10. Area for each IS ± 40% avg. area? [F6 IstdRec]	✓		✓
11. Each analyte ± 0.06 RRT of avg. RRT? [F6 - RRT]	✓		✓
12. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/ sec-butylbenzene/1,2,3-trimethylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	na		NS
• 1,2,4- and 1,2,3-trichlorobenzenes	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	na		NS

MLG Review	TO	DOD	OH	Comments	TO-	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1& 2 methylnaphthalene ≤ 50% [F6 ∑]	✓	—	—		✓	✓	✓
15. Were at least 5 levels of each compound analyzed? [F6]	✓	—	—		✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.? [F6]	✓	—	—		✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? (Note: Ohio does not allow quad) [F6]	na	—	—		NS	—	—
18. If curves were used, is correlation coefficient ≥0.990? [F6]	na	—	—		NS	—	—
19. Is the intercept less than the RL for each curve? [F6]	NS	—	—		NS	—	—
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntrl-C, details]	N	—	na		NS	NS	na
21. Is low point RSE ≤ 50 %? [F6]	✓	✓	✓	Mech.	✓	✓	✓
22. Is the second source analysis within limits? [F8 - icv]	✓	✓	✓	DNU 1+2 ppm.	✓	✓	✓
Analyst/Date: 8/8/18				2nd Level Reviewer/Date: 020518			

TALS Review	TO	DOD	OH	Comments	TO	DOD	OH
23. Upload ICAL		✓			na	na	na
24. Graphics uploaded? [paperclip]	✓	✓	✓		✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events –'Fix ICAL linkage' if needed]	✓	✓	✓		✓	✓	✓
26. Runs linked to BFB? [QC Links]	✓	✓	✓		✓	✓	✓
27. Run Checklist and acknowledge findings [F8]	✓	✓	✓		✓	✓	✓
28. If criteria not met, was a NCM generated?	NA	—	—		NS	—	—
29. After review in TALS, approve the method in TALS.	na	na	na		✓	✓	✓
30. After verifying TALS is correct, lock method in Chrom <resolve any error issues>		na	na		✓	✓	✓
31. Checklist & Entech report scanned, attached & assigned properly?		na	na		✓	✓	✓

Analyst/date: 2/5/18	2nd Level Reviewer/date: 020518
Comments: With 1+2 Methylnaph low & @ 45%.	Comments:

MS017r43, 10/10/2017

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Instrument ID: MR Start Date: 03/15/2018 13:12

Analysis Batch Number: 18783 End Date: 03/16/2018 10:57

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-18783/1		03/15/2018 13:12	1	RBFBC15.D	RTX-5 0.32(mm)
CCVIS 140-18783/2		03/15/2018 13:44	1	RCCVC15.D	RTX-5 0.32(mm)
LCS 140-18783/1002		03/15/2018 13:44	1	RCCVC15-LCS.d	RTX-5 0.32(mm)
ZZZZZ		03/15/2018 16:23	1		RTX-5 0.32(mm)
MB 140-18783/5		03/15/2018 17:14	1	Rmb500C15.D	RTX-5 0.32(mm)
ZZZZZ		03/15/2018 18:00	1		RTX-5 0.32(mm)
ZZZZZ		03/15/2018 18:46	1		RTX-5 0.32(mm)
ZZZZZ		03/15/2018 19:34	838.83		RTX-5 0.32(mm)
140-10921-1		03/15/2018 20:21	1	RC15p104.D	RTX-5 0.32(mm)
140-10921-2		03/15/2018 21:08	1	RC15p105.D	RTX-5 0.32(mm)
140-10921-3		03/15/2018 21:55	1	RC15p106.D	RTX-5 0.32(mm)
140-10921-5		03/15/2018 23:29	1	RC15p108.D	RTX-5 0.32(mm)
140-10921-6		03/16/2018 00:17	1	RC15p109.D	RTX-5 0.32(mm)
ZZZZZ		03/16/2018 01:03	1		RTX-5 0.32(mm)
ZZZZZ		03/16/2018 01:52	1		RTX-5 0.32(mm)
ZZZZZ		03/16/2018 02:40	124.9		RTX-5 0.32(mm)
ZZZZZ		03/16/2018 03:32	1		RTX-5 0.32(mm)
ZZZZZ		03/16/2018 04:24	1		RTX-5 0.32(mm)
ZZZZZ		03/16/2018 05:16	1		RTX-5 0.32(mm)
ZZZZZ		03/16/2018 06:09	1		RTX-5 0.32(mm)
ZZZZZ		03/16/2018 07:01	1		RTX-5 0.32(mm)
ZZZZZ		03/16/2018 10:57	1		RTX-5 0.32(mm)

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 18 & KNOX-MS-0023, Rev 3

Instrument/Date	MR 3/15/18		Routine	DOD	OHIO
CCAL Chrom WL #	7635	CCAL Batch #	18783	NA	NA
ICAL Chrom WL #	7236	ICAL Batch # / Event #	17762 / 1371		

Chrom Review	1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	✓		NA
2. Did BFB meet tune criteria? [F8]	✓	□ [Failed TO-14A, but passes TO-15] (NCM#_____)	✓
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICal File batch #/start/end Cal date/time)? [F8]	✓		✓
4. Is the %D ≤ 30% for all target analytes? ethanol [≤ 50% for 1&2 methylnaphthalene] napth + Hexachlor. 1, ND NCM# 11702 [Chrom-F8] [TALS-Sample Results Tab]	✓	□ CCV - %D - LCS criteria met (NCM# 11701) ☒ CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM# 135tmbz, 124tclbz (ME))	✓
5. Elution order checked on isomeric pairs? [Chrom]		NCM# 11702	
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene/1,2,3-trimethylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	NA		NA
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene	✓		✓
• 2-, and 1-methylnaphthalene	NA		NA
6. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	NA		NA
7. Has the RT been updated to the method?	✓		✓
Analyst/date RB 3/15/18		**2nd Level Reviewer/date** [signature] 03/16/18	
8. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]	✓	Volumes checked on-screen	✓
9. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]	✓		✓
10. Were all samples/QC analyzed within 24 hr of BFB? [F7]	✓		✓
11. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). *If no, list blank ID:*	✓	□ Method Blank – Report, ND (NCM#_____) □ Method Blank – Report, 10X (NCM#_____)	✓
12. All runs - peaks ID'd correctly and false positives removed?	✓		✓
13. If manual integrations performed, are they properly performed, correctly ID'd, baseline clearly identified, and reason given?	✓		✓
14. IS/Surr within limits? *List samples and reason (e.g., 1 thru 5):* [Batch Results IS & SUR Tab] Sample ____ Reason ____ Sample ____ Reason ____	✓	□ (1) Surrogate – Matrix (NCM#_____) □ (2) Surrogate – High, ND (NCM#_____) □ (3) ISTD – RA/RA Concurs (NCM#_____) □ (4) Surrogate –RX concur, Report both (NCM#_____) ☒ (5) ISTD – Matrix, DL required (NCM#_____)	✓
15. Samples outside calibration range scheduled for dilution?	✓	□ ICAL – Range Exceeded; Minimum Dilution	✓

Chrom Review	1st	If No, why is data reportable?	2nd
16. For first analysis that is at a dilution, is highest target analyte >20% cal range? *List samples and reason:* Sample 10954 #1 Reason elevs (NT) Sample Ncm# 11705 Reason	✓	□ (1) Reporting Limit – Dilution, Matrix (NCM#_____) ☒ (2) Reporting Limit – Dilution, Non-Target (NCM# 11702) □ (3) Issues with initial collection volume; see DRC.	✓
17. RIC inspected for proper integration for TPH?	NA		NA
18. Obvious non-TPH peaks excluded?			
19. Individual TPH peak area < octane high point area?			

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 18 & KNOX-MS-0023, Rev 3

TALS Review	1st	If No, why is data reportable?	2nd
20. Graphics uploaded? [paperclip]	✓		✓
21. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	✓		✓
22. Sample special instructions verified?	✓		✓
23. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	✓	☐ Marginal Exceedances - Within ME Limits and Random; Report (NCM# ___) ☑ LCS/LCSD - %R High (NCM# 11703) ↑, ND 135 tmbz & 124tcibz NCM# 11703	✓
24. Suffixes assigned properly (DL/RE)? [Sample List Tab]	NA		NA
25. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	✓		✓
26. Analytes over calibration range set to secondary [Conditions Review Tab]	NA		NA
27. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	✓		✓
28. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) *(If DUP not reported - set to 'Acceptable' for each job)*	✓		✓
29. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	✓	**500 mL blank ID:** (5) **200 mL blank ID:** (4)	✓
30. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	✓		✓
31. Correct ICV linked to each MB? [QC Links]	✓		✓
32. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	✓		✓
33. Run Checklist and acknowledge findings [F8]	✓		✓
34. Runs set to 1st level review?	✓	Runs set to 2nd level review?	✓
35. QC checker run and items addressed?	-na-		✓
36. Checklist & Entech report scanned, attached & assigned properly?	-na-		✓

Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed
>90	5
71 - 90	4
51 - 70	3
31 - 50	2
11 - 30	1
< 11	0

Analyst: XS **Date:** 3/16/18	**2nd Level Reviewer :** ✓ **Date:** 3/16/18
Comments:	**Comments:**
10936#2 CI Acetone "C" NCM# 11706	
Example Calculation:	
On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF	
10954#3 pce @ 5.5 → 15578.55 ppb v/v	

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-10921-1

SDG No.:

Instrument ID: MR Start Date: 03/16/2018 12:10

Analysis Batch Number: 18835 End Date: 03/17/2018 05:58

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-18835/1		03/16/2018 12:10	1	RBFBC16.D	RTX-5 0.32(mm)
CCVIS 140-18835/2		03/16/2018 12:42	1	RCCVC16.D	RTX-5 0.32(mm)
LCS 140-18835/1002		03/16/2018 12:42	1	RCCVC16-LCS.d	RTX-5 0.32(mm)
MB 140-18835/5		03/16/2018 15:10	1	RC16MB500.D	RTX-5 0.32(mm)
ZZZZZ		03/16/2018 16:07	1		RTX-5 0.32(mm)
ZZZZZ		03/16/2018 19:22	1		RTX-5 0.32(mm)
ZZZZZ		03/16/2018 20:15	1		RTX-5 0.32(mm)
ZZZZZ		03/16/2018 21:03	1		RTX-5 0.32(mm)
ZZZZZ		03/16/2018 21:52	1		RTX-5 0.32(mm)
ZZZZZ		03/16/2018 22:44	1		RTX-5 0.32(mm)
ZZZZZ		03/17/2018 00:23	10.27		RTX-5 0.32(mm)
ZZZZZ		03/17/2018 01:09	34.66		RTX-5 0.32(mm)
ZZZZZ		03/17/2018 01:56	33.46		RTX-5 0.32(mm)
ZZZZZ		03/17/2018 02:43	35.01		RTX-5 0.32(mm)
ZZZZZ		03/17/2018 03:36	1		RTX-5 0.32(mm)
ZZZZZ		03/17/2018 04:22	26.1		RTX-5 0.32(mm)
ZZZZZ		03/17/2018 05:10	26.1		RTX-5 0.32(mm)
140-10921-4		03/17/2018 05:58	1	RC16p202.D	RTX-5 0.32(mm)

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 18 & KNOX-MS-0023, Rev 3

Instrument/Date	MR 3/16/18		Routine	DOD	OHIO
CCAL Chrom WL #	7656	CCAL Batch #	18835	NA	18866
ICAL Chrom WL #	7236	ICAL Batch # / Event #	17762 / 1371		17763 / 1372

Chrom Review	1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	✓		
2. Did BFB meet tune criteria? [F8]	✓	☐ [Failed TO-14A, but passes TO-15] (NCM#)	✓
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICal File batch #/start/end Cal date/time)? [F8]	✓	Naphth.	✓
4. Is the %D ≤ 30% for all target analytes? Naphthalene [≤ 50% for 1&2 methylnaphthalene] 124tcbz 1, ND [Chrom-F8] [TALS-Sample Results Tab]	✓	☒CCV - %D - LCS criteria met (NCM# 11712) ☒CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM# 11713)	✓
5. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene/1,2,3-trimethylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	NA		NA
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene	✓		✓
• 2-, and 1-methylnaphthalene	NA		NA
6. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	NA		NA
7. Has the RT been updated to the method?	✓		✓
Analyst/date AB 3/16/18		**2nd Level Reviewer/date** 031918	
8. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]	✓	Volumes checked on-screen	✓
9. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]	✓		✓
10. Were all samples/QC analyzed within 24 hr of BFB? [F7]	✓		✓
11. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). *If no, list blank ID:*	✓	☐ Method Blank – Report, ND (NCM#) ☐ Method Blank – Report, 10X (NCM#)	✓
12. All runs - peaks ID'd correctly and false positives removed?	✓		✓
13. If manual integrations performed, are they properly performed, correctly ID'd, baseline clearly identified, and reason given?	✓		✓
14. IS/Surr within limits? *List samples and reason (e.g., 1 thru 5):* [Batch Results IS & SUR Tab] Sample / Reason / Sample / Reason	✓	☐ (1) Surrogate – Matrix (NCM#) ☐ (2) Surrogate – High, ND (NCM#) ☐ (3) ISTD – RA/RA Concurs (NCM#) ☐ (4) Surrogate –RX concur, Report both (NCM#) ☐ (5) ISTD – Matrix, DL required (NCM#)	✓
15. Samples outside calibration range scheduled for dilution?	✓	☐ ICAL – Range Exceeded; Minimum Dilution	✓
Chrom Review	**1st**	**If No, why is data reportable?**	**2nd**
16. For first analysis that is at a dilution, is highest target analyte >20% cal range? *List samples and reason:* Sample / Reason / Sample / Reason: 10941 #3, 4 elws (NP) NCM# 11715	✓	☐ (1) Reporting Limit – Dilution, Matrix (NCM#) ☐ (2) Reporting Limit – Dilution, Non-Target (NCM# 11715) ☐ (3) Issues with initial collection volume; see DRC.	✓
17. RIC inspected for proper integration for TPH?	NA		NA
18. Obvious non-TPH peaks excluded?			
19. Individual TPH peak area < octane high point area?			

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 18 & KNOX-MS-0023, Rev 3

TALS Review	1st	If No, why is data reportable?	2nd
20. Graphics uploaded? [paperclip]	✓		✓
21. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	✓		✓
22. Sample special instructions verified?	✓		✓
23. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	✓	☐ Marginal Exceedances - Within ME Limits and Random; Report (NCM# ___) ~~☐~~ LCS/LCSD - %R High (NCM# 11714) ↑124 tcb bz, ND, NCM# ~~11715~~ 11714 3/17/18	✓
24. Suffixes assigned properly (DL/RE)? [Sample List Tab]	✓		✓
25. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	✓		✓
26. Analytes over calibration range set to secondary [Conditions Review Tab]	✓		✓
27. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	✓		✓
28. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) *(If DUP not reported - set to 'Acceptable' for each job)*	✓		✓
29. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	✓	**500 mL blank ID:** 5 **200 mL blank ID:** —	✓
30. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	✓		✓
31. Correct ICV linked to each MB? [QC Links]	✓		✓
32. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	✓		✓
33. Run Checklist and acknowledge findings [F8]	✓		✓
34. Runs set to 1st level review?	✓	Runs set to 2nd level review?	✓
35. QC checker run and items addressed?	QC		✓
36. Checklist & Entech report scanned, attached & assigned properly?	PR		✓

Analyst:	**Date:** 3/17/18	**2nd Level Reviewer :**	**Date:** 03/19/18
Comments:		**Comments:**	

Example Calculation:

On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF

10963#1 tce @ 5.66 → 3019.61

Rep. 3 ✓

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10373-1

SDG No.:

Client Sample ID: 10780 Lab Sample ID: 140-10373-8

Matrix: Air Lab File ID: LOT10373.D

Analysis Method: TO-15 Date Collected: 01/03/2018 11:25

Sample wt/vol: 200(mL) Date Analyzed: 01/04/2018 17:41

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 17146 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND	*	2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10373-1

SDG No.:

Client Sample ID: 10780 | Lab Sample ID: 140-10373-8

Matrix: Air | Lab File ID: LOT10373.D

Analysis Method: TO-15 | Date Collected: 01/03/2018 11:25

Sample wt/vol: 200(mL) | Date Analyzed: 01/04/2018 17:41

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17146 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND	*	2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	NC		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10373-1

SDG No.:

Client Sample ID: 10780 | Lab Sample ID: 140-10373-8

Matrix: Air | Lab File ID: LOT10373.D

Analysis Method: TO-15 | Date Collected: 01/03/2018 11:25

Sample wt/vol: 200(mL) | Date Analyzed: 01/04/2018 17:41

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17146 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	NC		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171229-7026.b\LOT10373.D				
Lims ID:	140-10373-A-8				
Client ID:	10780				
Sample Type:	Client				
Inject. Date:	04-Jan-2018 17:41:30	ALS Bottle#:	3	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007026-009				
Misc. Info.:	10780				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20171229-7026.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	05-Jan-2018 10:20:07	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK017				

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.730	7.730	0.000	69	316222	4.00	
* 2 1,4-Difluorobenzene	114	9.870	9.870	0.000	94	1788102	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.869	14.869	0.000	86	1543560	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.579	16.578	0.000	91	1199759	4.24	
50 Thiophene	84	9.223	9.321	-0.103	1	288	NC	
99 2,3-Dihydroindene	117	18.660	18.660	0.000	1	182	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

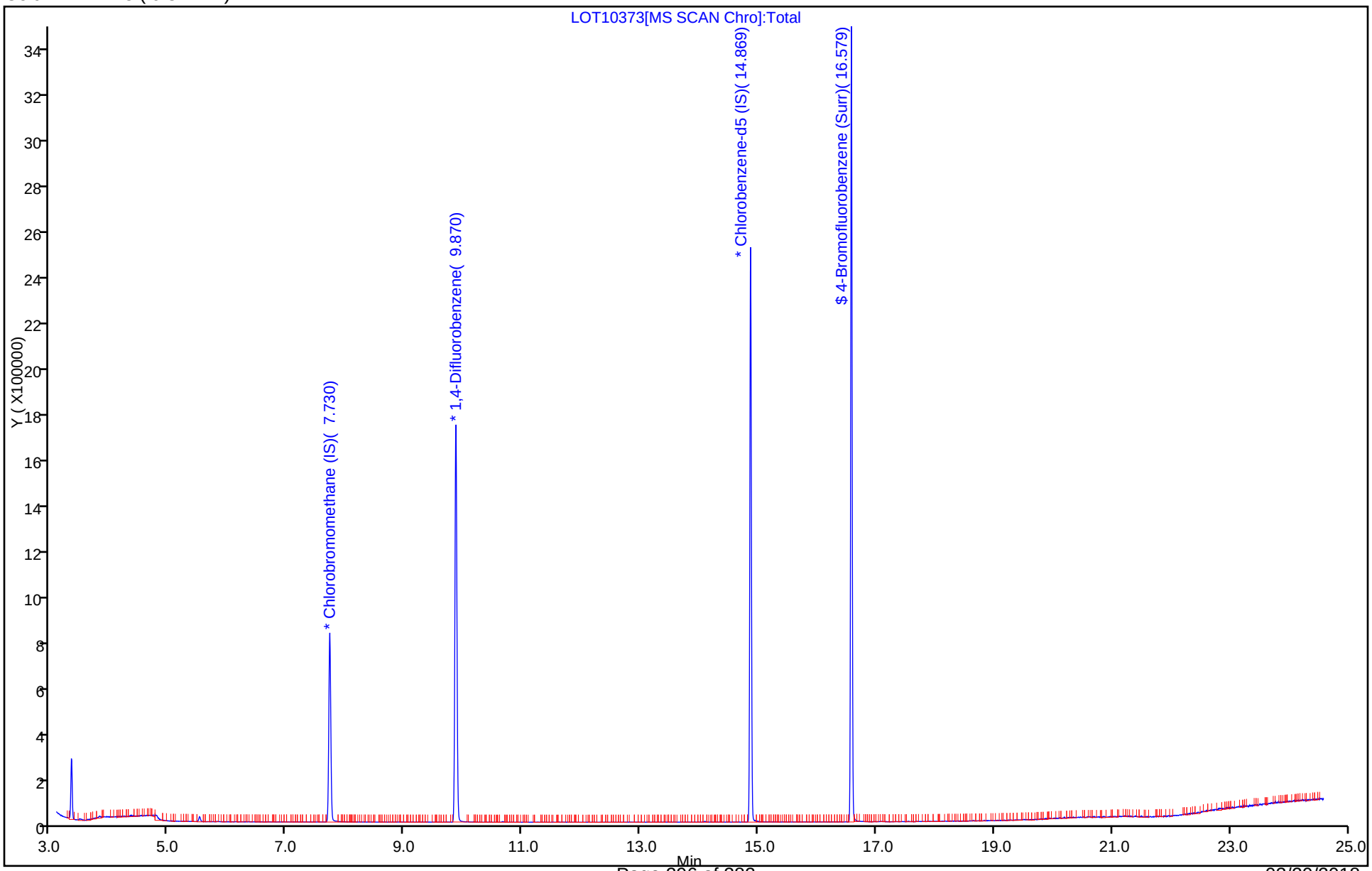
Report Date: 05-Jan-2018 10:20:14 Chrom Revision: 2.2 08-Dec-2017 11:41:26

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20171229-7026.b\LOT10373.D

Injection Date:	04-Jan-2018 17:41:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10373-A-8	Lab Sample ID:	140-10373-8	Worklist Smp#:	9
Client ID:	10780				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

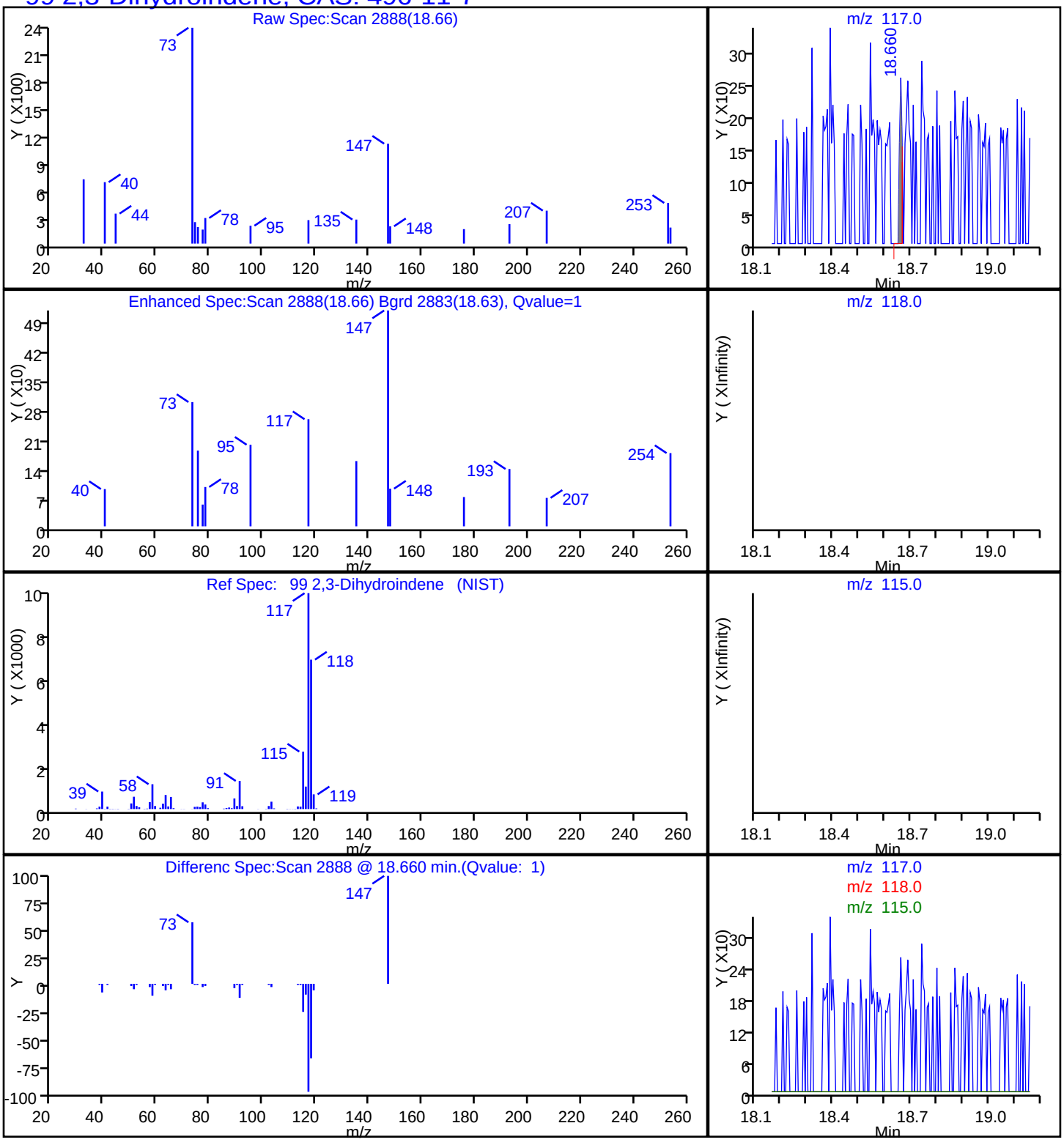
Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171229-7026.b\LOT10373.D		
Injection Date:	04-Jan-2018 17:41:30	Instrument ID:	MR
Lims ID:	140-10373-A-8	Lab Sample ID:	140-10373-8
Client ID:	10780		
Operator ID:		ALS Bottle#:	3 Worklist Smp#: 9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

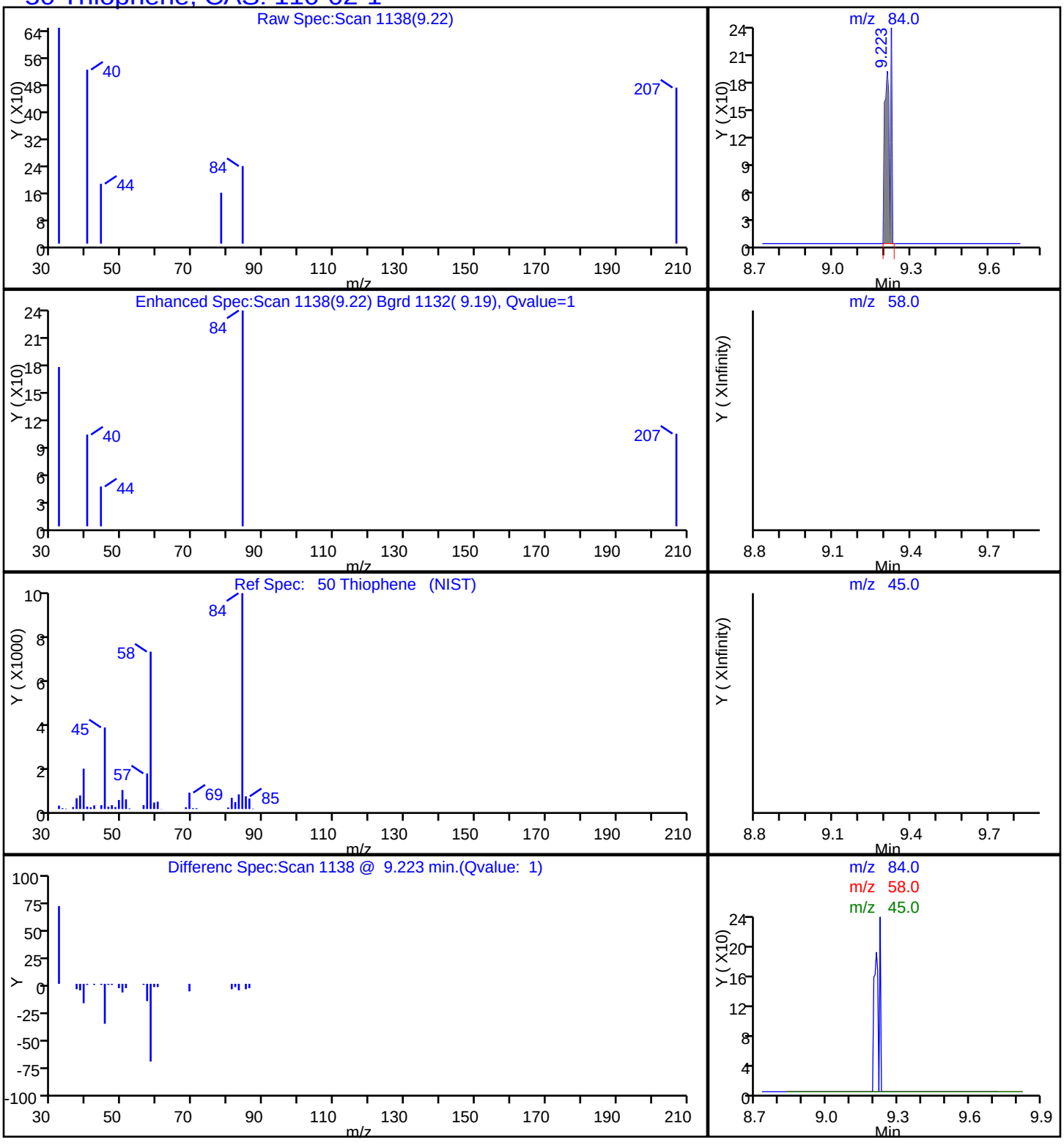
99 2,3-Dihydroindene, CAS: 496-11-7



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20171229-7026.b\LOT10373.D		
Injection Date:	04-Jan-2018 17:41:30	Instrument ID:	MR
Lims ID:	140-10373-A-8	Lab Sample ID:	140-10373-8
Client ID:	10780		
Operator ID:		ALS Bottle#:	3 Worklist Smp#: 9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

50 Thiophene, CAS: 110-02-1



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10383-1

SDG No.:

Client Sample ID: 10795 | Lab Sample ID: 140-10383-1

Matrix: Air | Lab File ID: Q10383BK01.D

Analysis Method: TO-15 | Date Collected: 01/05/2018 10:25

Sample wt/vol: 200(mL) | Date Analyzed: 01/09/2018 13:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17180 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10383-1

SDG No.:

Client Sample ID: 10795 | Lab Sample ID: 140-10383-1

Matrix: Air | Lab File ID: Q10383BK01.D

Analysis Method: TO-15 | Date Collected: 01/05/2018 10:25

Sample wt/vol: 200(mL) | Date Analyzed: 01/09/2018 13:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17180 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	NC		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10383-1

SDG No.:

Client Sample ID: 10795 Lab Sample ID: 140-10383-1

Matrix: Air Lab File ID: Q10383BK01.D

Analysis Method: TO-15 Date Collected: 01/05/2018 10:25

Sample wt/vol: 200(mL) Date Analyzed: 01/09/2018 13:22

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 17180 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK01.D				
Lims ID:	140-10383-A-1				
Client ID:	10795				
Sample Type:	Client				
Inject. Date:	09-Jan-2018 13:22:30	ALS Bottle#:	1	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007047-004				
Misc. Info.:	10795				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	09-Jan-2018 14:03:25	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK002				
First Level Reviewer: tajh		Date:	09-Jan-2018 14:03:07		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.724	7.740	-0.016	81	256971	4.00	
* 2 1,4-Difluorobenzene	114	9.865	9.870	-0.005	94	1448206	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.869	14.869	0.000	89	1231628	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.578	16.578	0.000	90	978340	4.34	
33 Carbon disulfide	76	5.648	5.653	-0.005	98	9012	0.0325	
99 2,3-Dihydroindene	117	18.687	18.660	0.027	1	121	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

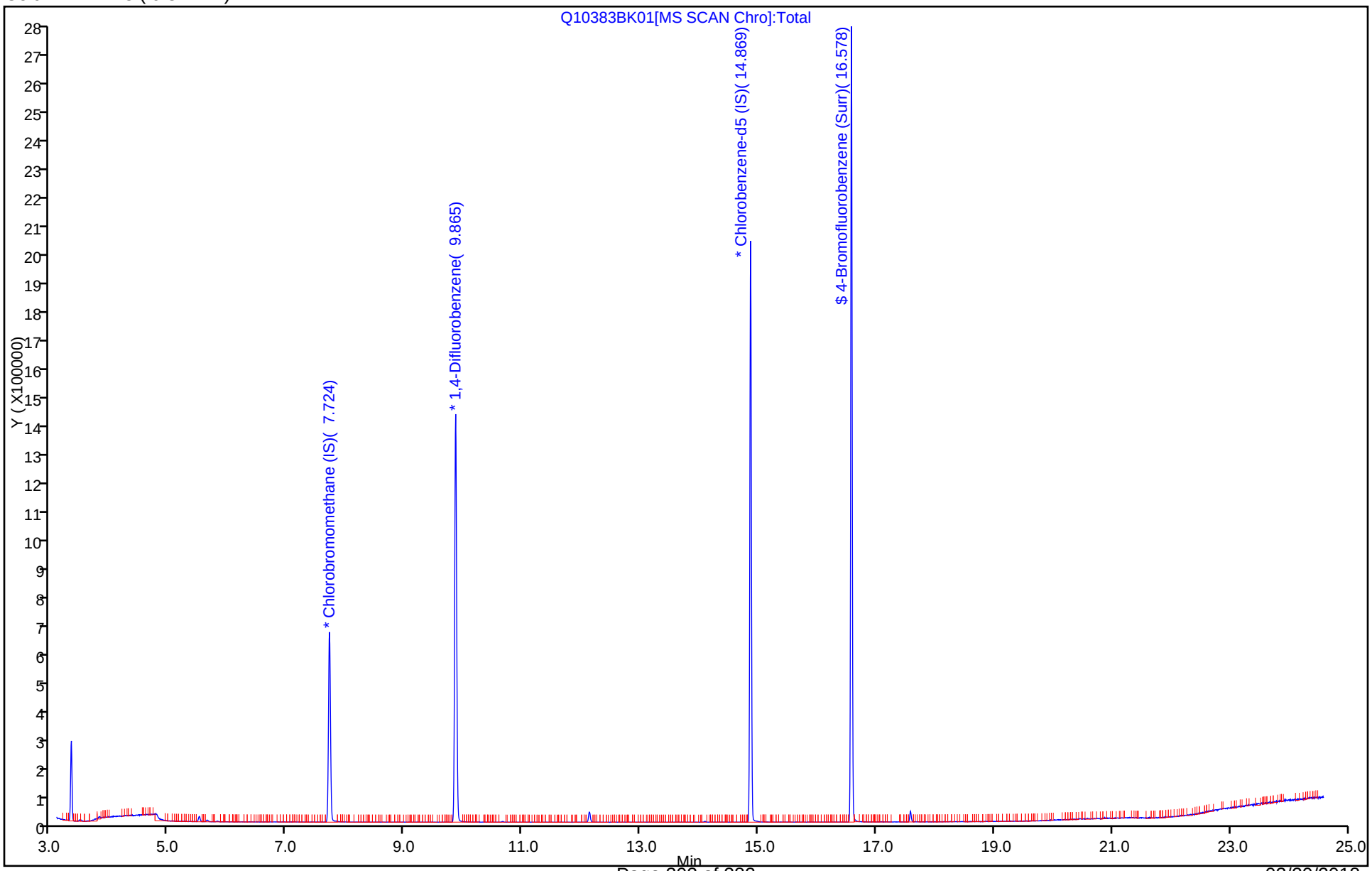
Report Date: 09-Jan-2018 14:03:28 Chrom Revision: 2.2 08-Dec-2017 11:41:26

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK01.D

Injection Date:	09-Jan-2018 13:22:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10383-A-1	Lab Sample ID:	140-10383-1	Worklist Smp#:	4
Client ID:	10795				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

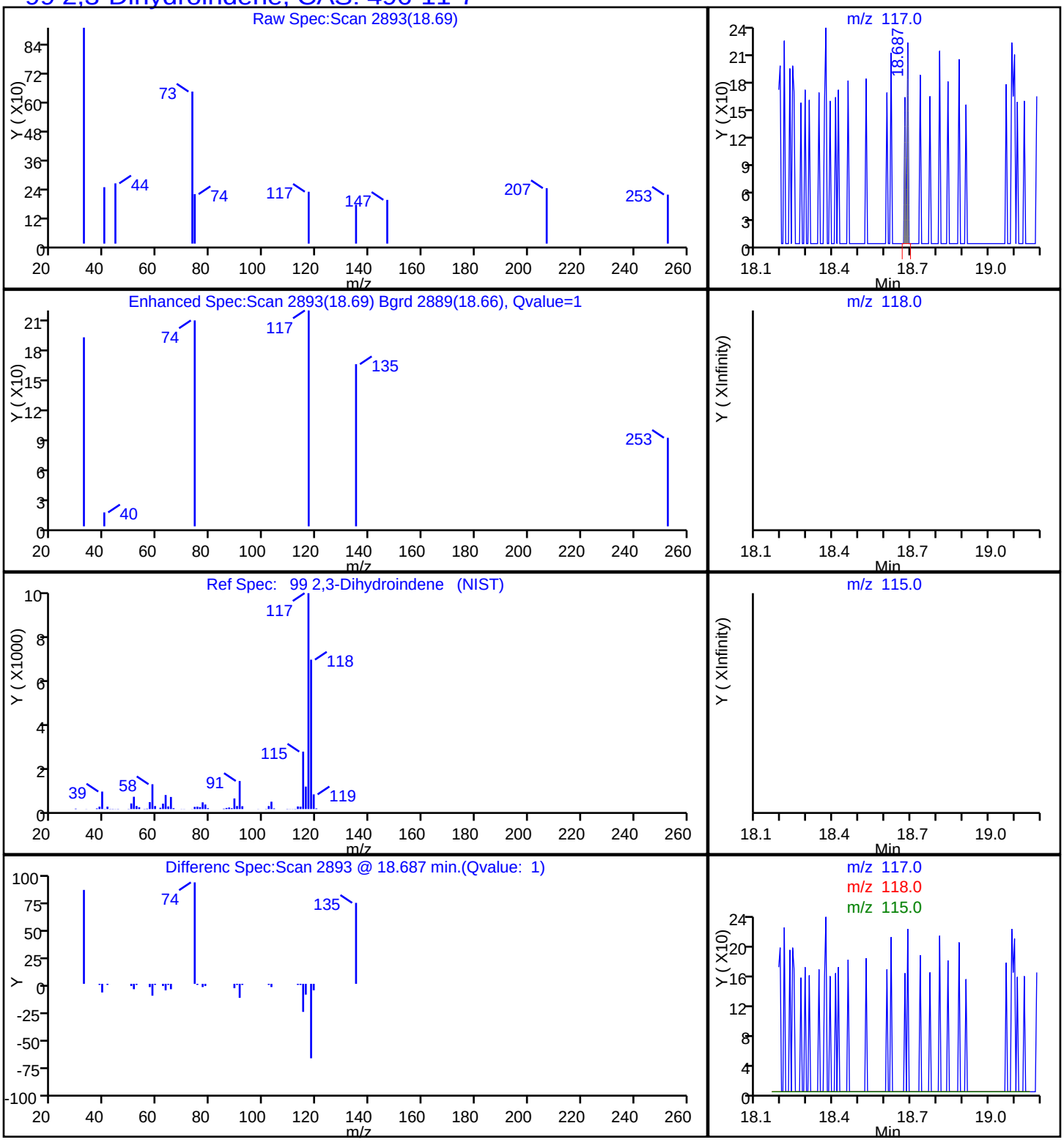
Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK01.D		
Injection Date:	09-Jan-2018 13:22:30	Instrument ID:	MR
Lims ID:	140-10383-A-1	Lab Sample ID:	140-10383-1
Client ID:	10795		
Operator ID:		ALS Bottle#:	1 Worklist Smp#: 4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

99 2,3-Dihydroindene, CAS: 496-11-7



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10383-1

SDG No.:

Client Sample ID: 10495 | Lab Sample ID: 140-10383-2

Matrix: Air | Lab File ID: Q10383BK02.D

Analysis Method: TO-15 | Date Collected: 01/05/2018 10:25

Sample wt/vol: 200(mL) | Date Analyzed: 01/09/2018 14:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17180 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10383-1

SDG No.:

Client Sample ID: 10495 | Lab Sample ID: 140-10383-2

Matrix: Air | Lab File ID: Q10383BK02.D

Analysis Method: TO-15 | Date Collected: 01/05/2018 10:25

Sample wt/vol: 200(mL) | Date Analyzed: 01/09/2018 14:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17180 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	NC		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10383-1

SDG No.:

Client Sample ID: 10495 | Lab Sample ID: 140-10383-2

Matrix: Air | Lab File ID: Q10383BK02.D

Analysis Method: TO-15 | Date Collected: 01/05/2018 10:25

Sample wt/vol: 200(mL) | Date Analyzed: 01/09/2018 14:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17180 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	NC		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK02.D				
Lims ID:	140-10383-A-2				
Client ID:	10495				
Sample Type:	Client				
Inject. Date:	09-Jan-2018 14:10:30	ALS Bottle#:	2	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007047-005				
Misc. Info.:	10495				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	10-Jan-2018 10:19:12	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK010				
First Level Reviewer: tajh		Date:	10-Jan-2018 10:10:34		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.730	7.740	-0.010	70	262320	4.00	
* 2 1,4-Difluorobenzene	114	9.870	9.870	0.000	94	1500078	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.869	14.869	0.000	87	1274517	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.579	16.578	0.001	90	1004774	4.30	
33 Carbon disulfide	76	5.659	5.638	0.006	98	30958	0.1092	
50 Thiophene	84	9.213	9.321	-0.113	1	179	NC	
99 2,3-Dihydroindene	117	18.590	18.660	-0.070	1	154	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

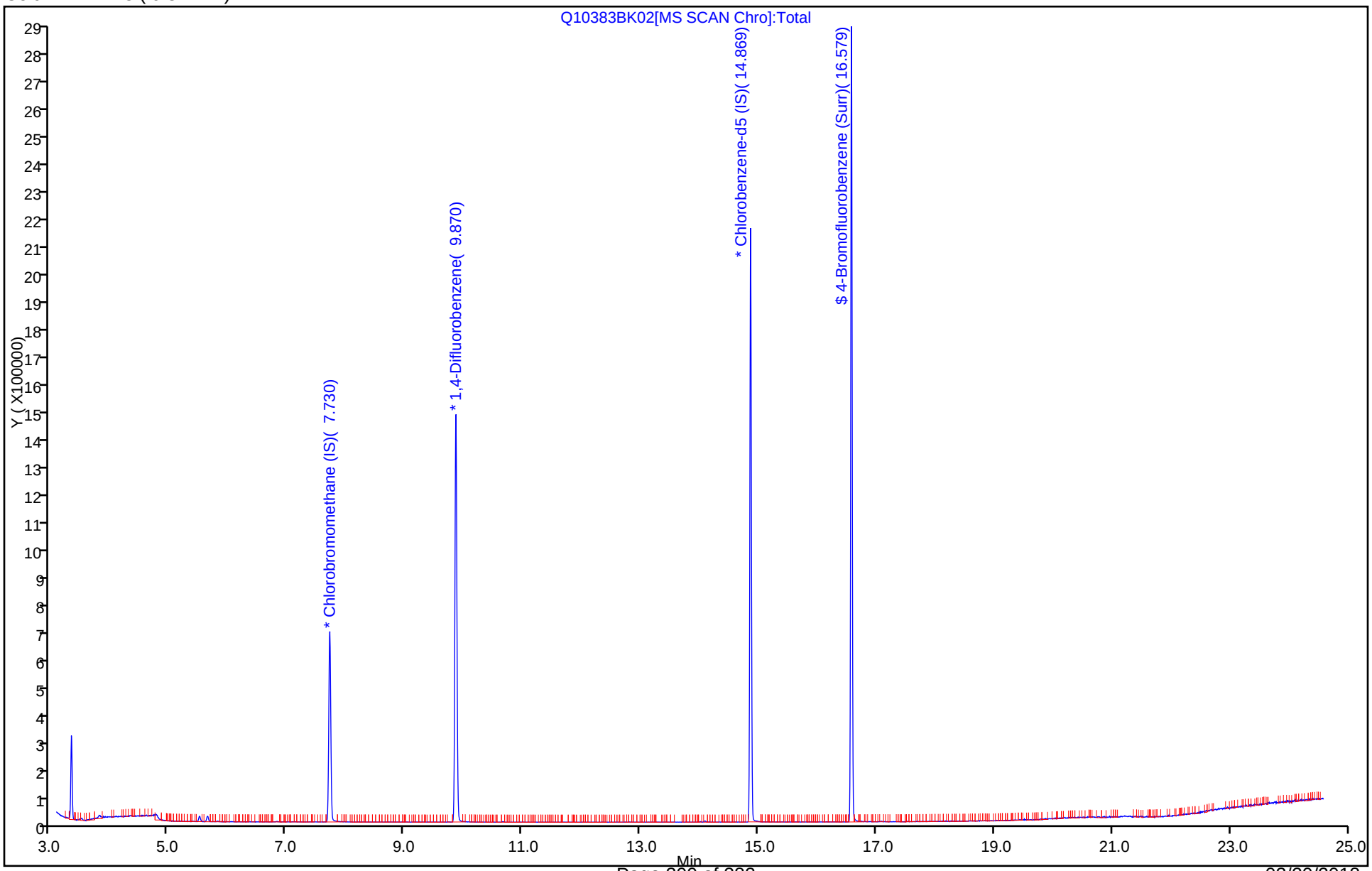
Report Date: 10-Jan-2018 10:19:19 Chrom Revision: 2.2 08-Dec-2017 11:41:26

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK02.D

Injection Date:	09-Jan-2018 14:10:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10383-A-2	Lab Sample ID:	140-10383-2	Worklist Smp#:	5
Client ID:	10495				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

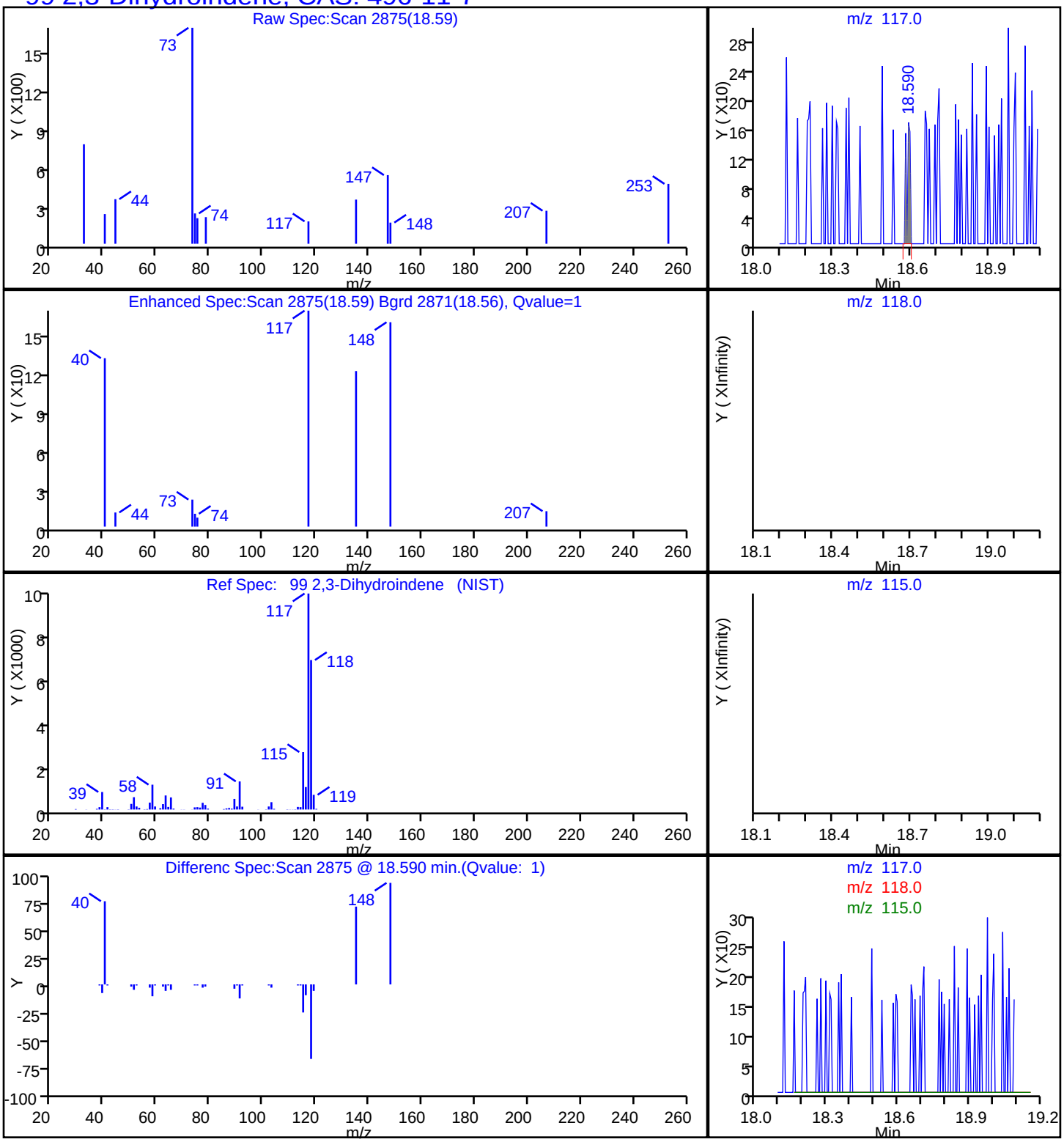


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK02.D

Injection Date:	09-Jan-2018 14:10:30	Instrument ID:	MR
Lims ID:	140-10383-A-2	Lab Sample ID:	140-10383-2
Client ID:	10495		
Operator ID:		ALS Bottle#:	2 Worklist Smp#: 5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

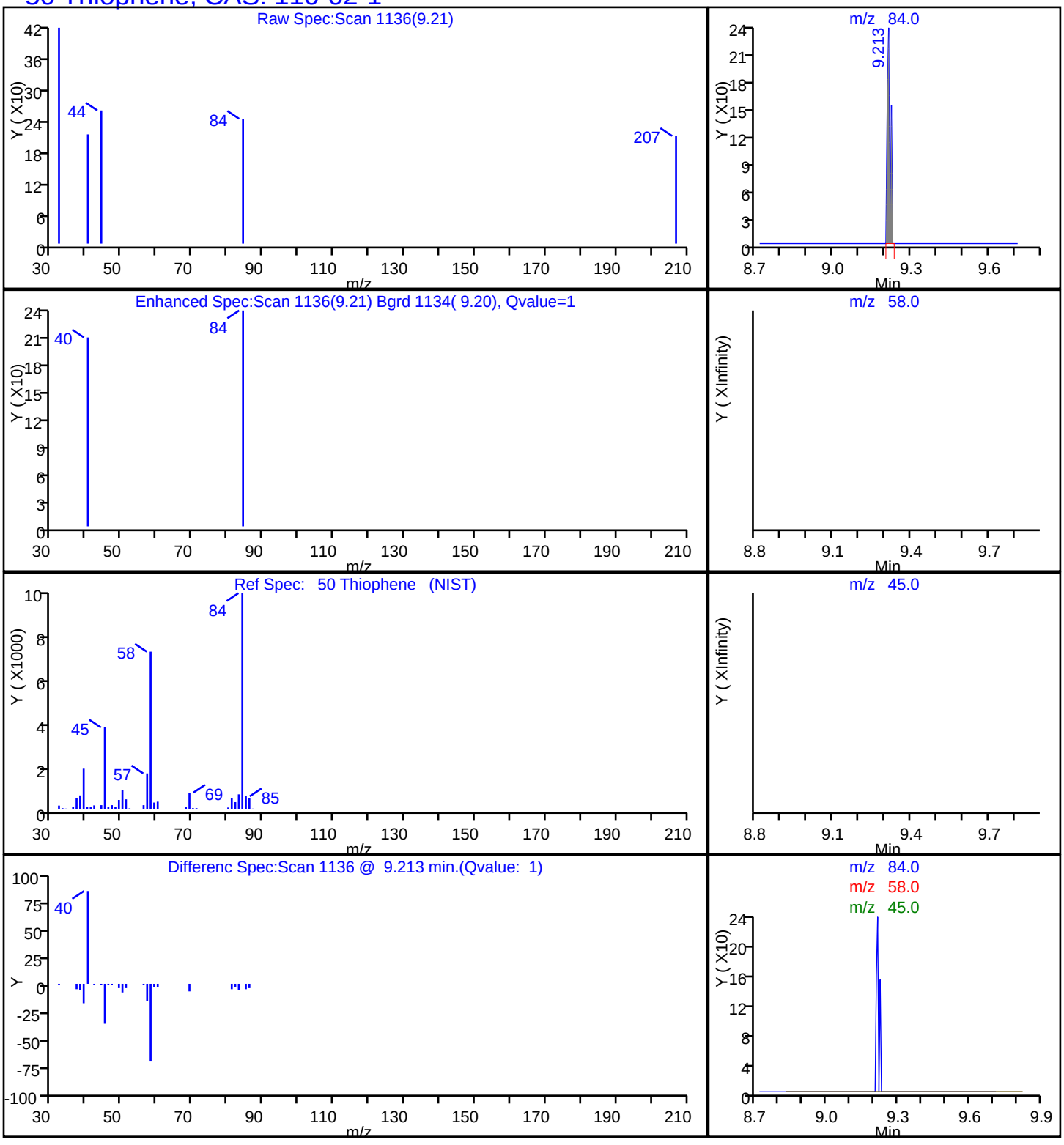
99 2,3-Dihydroindene, CAS: 496-11-7



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK02.D
Injection Date: 09-Jan-2018 14:10:30 Instrument ID: MR
Lims ID: 140-10383-A-2 Lab Sample ID: 140-10383-2
Client ID: 10495
Operator ID: ALS Bottle#: 2 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

50 Thiophene, CAS: 110-02-1



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10383-1

SDG No.:

Client Sample ID: 11547 | Lab Sample ID: 140-10383-3

Matrix: Air | Lab File ID: Q10383BK03.D

Analysis Method: TO-15 | Date Collected: 01/05/2018 10:25

Sample wt/vol: 200(mL) | Date Analyzed: 01/09/2018 14:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17180 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10383-1

SDG No.:

Client Sample ID: 11547 Lab Sample ID: 140-10383-3

Matrix: Air Lab File ID: Q10383BK03.D

Analysis Method: TO-15 Date Collected: 01/05/2018 10:25

Sample wt/vol: 200(mL) Date Analyzed: 01/09/2018 14:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 17180 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	NC		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10383-1

SDG No.:

Client Sample ID: 11547 | Lab Sample ID: 140-10383-3

Matrix: Air | Lab File ID: Q10383BK03.D

Analysis Method: TO-15 | Date Collected: 01/05/2018 10:25

Sample wt/vol: 200(mL) | Date Analyzed: 01/09/2018 14:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17180 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	NC		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK03.D				
Lims ID:	140-10383-A-3				
Client ID:	11547				
Sample Type:	Client				
Inject. Date:	09-Jan-2018 14:57:30	ALS Bottle#:	3	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007047-006				
Misc. Info.:	11547				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	10-Jan-2018 10:19:12	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK010				
First Level Reviewer: tajh		Date:	10-Jan-2018 10:11:54		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.735	7.740	-0.005	71	270333	4.00	
* 2 1,4-Difluorobenzene	114	9.871	9.870	0.001	94	1549708	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.869	14.869	0.000	87	1292420	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.579	16.578	0.001	90	1041379	4.40	
50 Thiophene	84	9.213	9.321	-0.113	1	198	NC	
56 Trichloroethene	130	10.631	10.619	0.006	93	2198	0.0147	
99 2,3-Dihydroindene	117	18.665	18.660	0.005	1	64	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

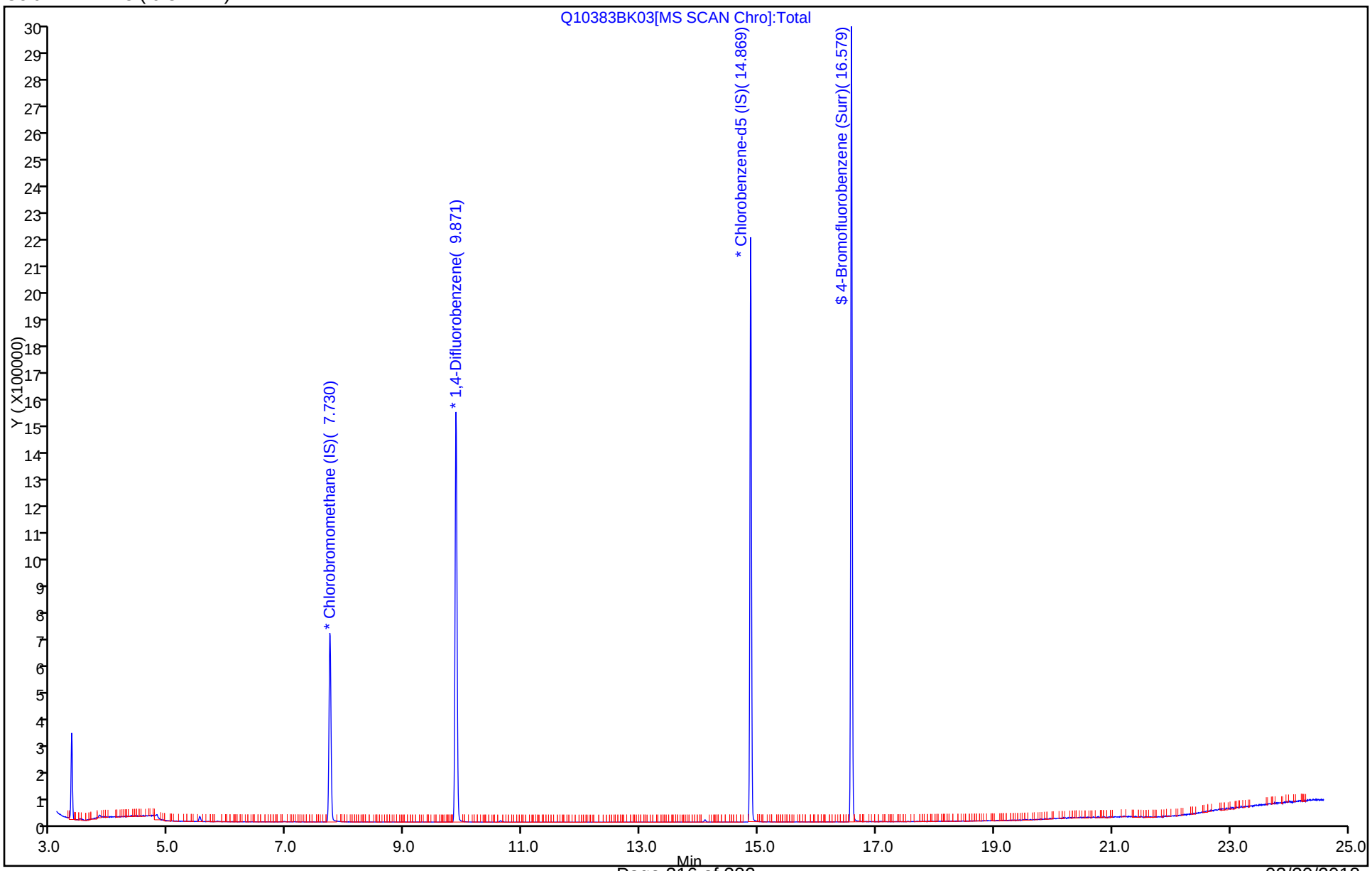
Report Date: 10-Jan-2018 10:19:21 Chrom Revision: 2.2 08-Dec-2017 11:41:26

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK03.D

Injection Date:	09-Jan-2018 14:57:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10383-A-3	Lab Sample ID:	140-10383-3	Worklist Smp#:	6
Client ID:	11547				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

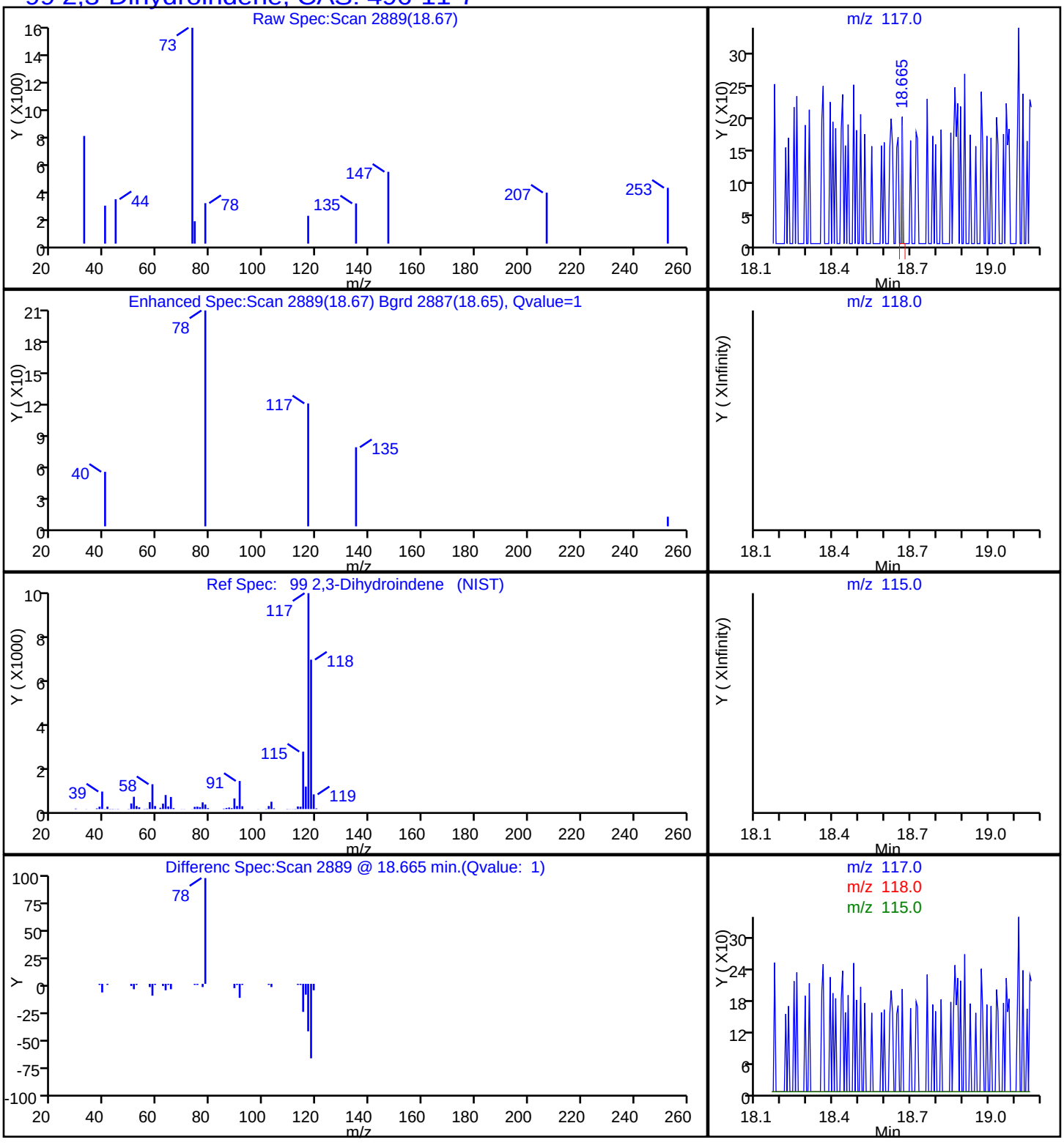
Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK03.D		
Injection Date:	09-Jan-2018 14:57:30	Instrument ID:	MR
Lims ID:	140-10383-A-3	Lab Sample ID:	140-10383-3
Client ID:	11547		
Operator ID:		ALS Bottle#:	3 Worklist Smp#: 6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

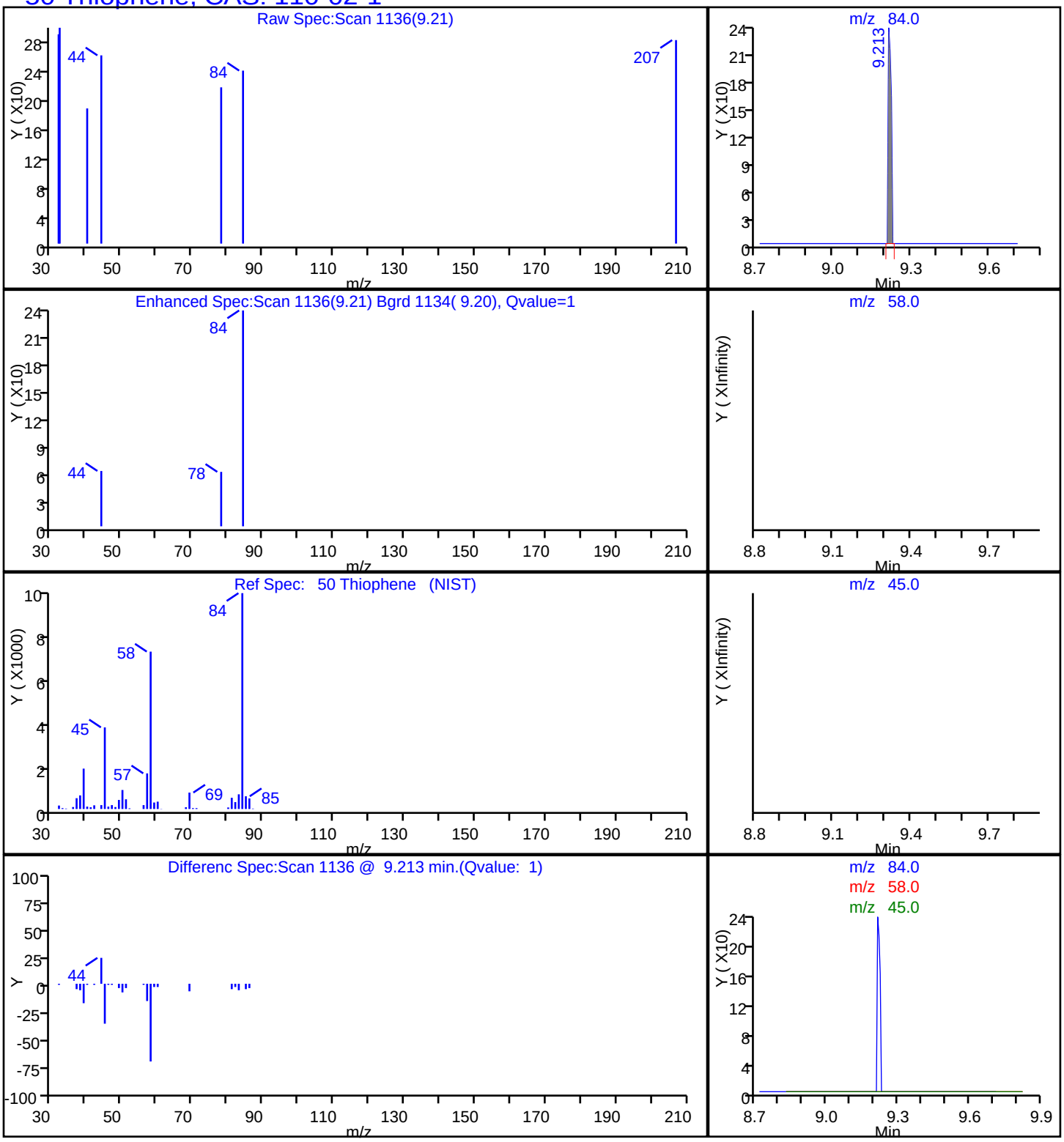
99 2,3-Dihydroindene, CAS: 496-11-7



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK03.D		
Injection Date:	09-Jan-2018 14:57:30	Instrument ID:	MR
Lims ID:	140-10383-A-3	Lab Sample ID:	140-10383-3
Client ID:	11547		
Operator ID:		ALS Bottle#:	3 Worklist Smp#: 6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

50 Thiophene, CAS: 110-02-1



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10383-1

SDG No.:

Client Sample ID: 10337 | Lab Sample ID: 140-10383-4

Matrix: Air | Lab File ID: Q10383BK04.D

Analysis Method: TO-15 | Date Collected: 01/05/2018 10:25

Sample wt/vol: 200(mL) | Date Analyzed: 01/09/2018 15:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17180 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10383-1

SDG No.:

Client Sample ID: 10337 Lab Sample ID: 140-10383-4

Matrix: Air Lab File ID: Q10383BK04.D

Analysis Method: TO-15 Date Collected: 01/05/2018 10:25

Sample wt/vol: 200(mL) Date Analyzed: 01/09/2018 15:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 17180 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	NC		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10383-1

SDG No.:

Client Sample ID: 10337 | Lab Sample ID: 140-10383-4

Matrix: Air | Lab File ID: Q10383BK04.D

Analysis Method: TO-15 | Date Collected: 01/05/2018 10:25

Sample wt/vol: 200(mL) | Date Analyzed: 01/09/2018 15:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17180 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK04.D				
Lims ID:	140-10383-A-4				
Client ID:	10337				
Sample Type:	Client				
Inject. Date:	09-Jan-2018 15:46:30	ALS Bottle#:	4	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007047-007				
Misc. Info.:	10337				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	10-Jan-2018 10:19:12	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK010				
First Level Reviewer: tajh		Date:	10-Jan-2018 10:12:35		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.724	7.740	-0.016	72	256014	4.00	
* 2 1,4-Difluorobenzene	114	9.865	9.870	-0.005	94	1441723	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.869	14.869	0.000	87	1223808	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.578	16.578	0.000	90	980256	4.37	
33 Carbon disulfide	76	5.659	5.638	0.006	99	16169	0.0585	
99 2,3-Dihydroindene	117	18.708	18.660	0.048	1	237	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

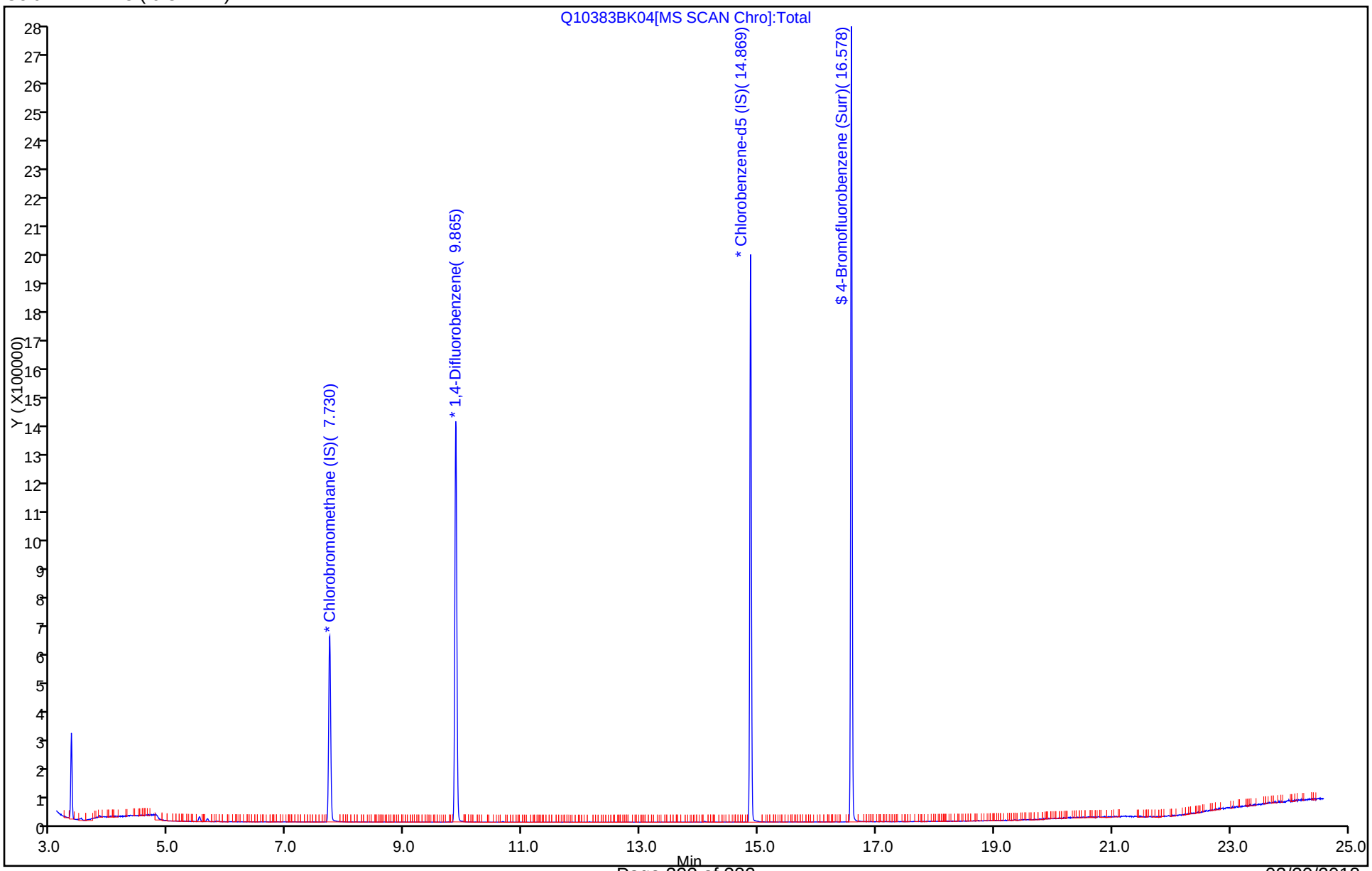
Report Date: 10-Jan-2018 10:19:22 Chrom Revision: 2.2 08-Dec-2017 11:41:26

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK04.D

Injection Date:	09-Jan-2018 15:46:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10383-A-4	Lab Sample ID:	140-10383-4	Worklist Smp#:	7
Client ID:	10337				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

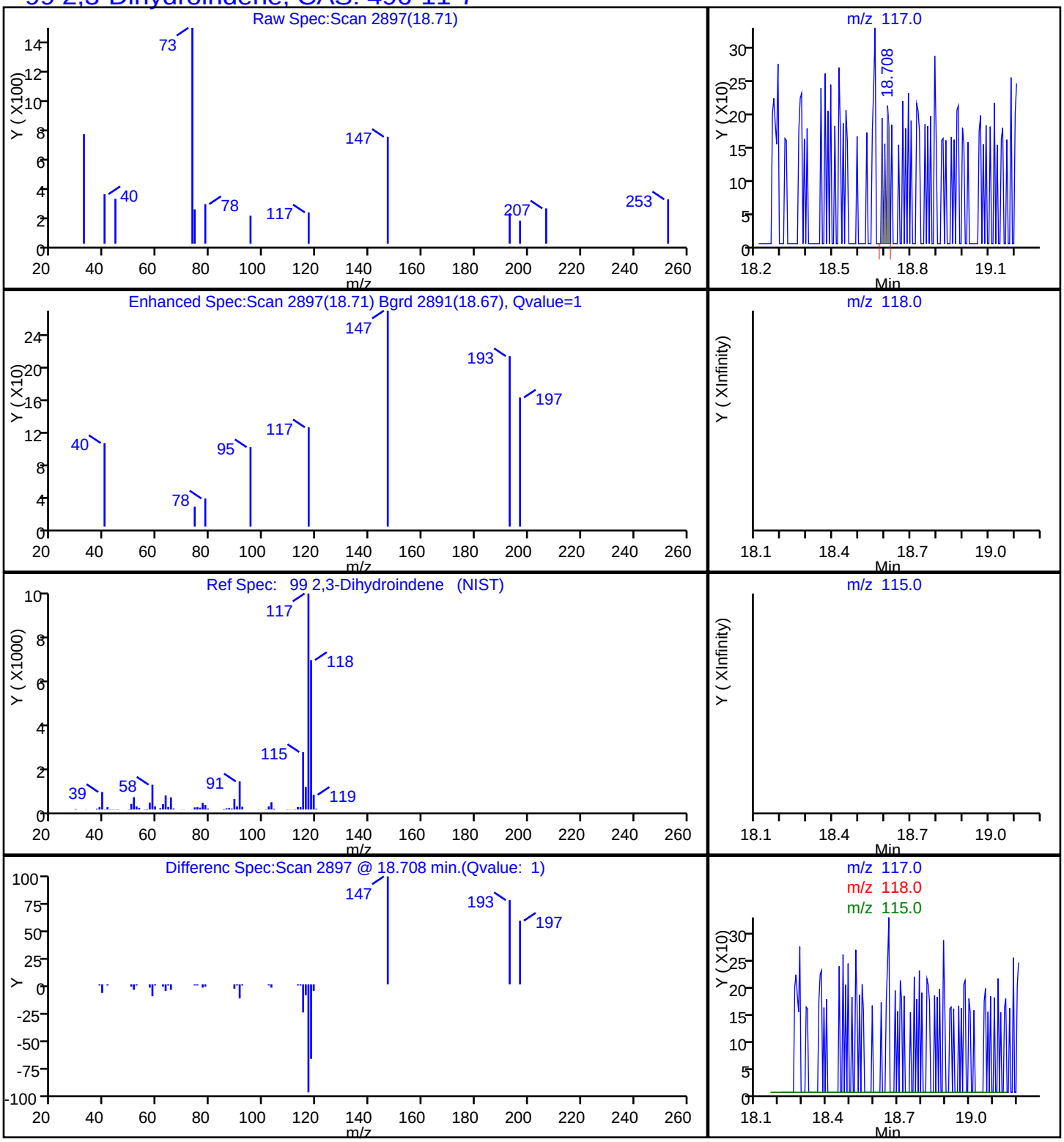
Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK04.D		
Injection Date:	09-Jan-2018 15:46:30	Instrument ID:	MR
Lims ID:	140-10383-A-4	Lab Sample ID:	140-10383-4
Client ID:	10337		
Operator ID:		ALS Bottle#:	4 Worklist Smp#: 7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

99 2,3-Dihydroindene, CAS: 496-11-7



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10383-1

SDG No.:

Client Sample ID: 11124 | Lab Sample ID: 140-10383-5

Matrix: Air | Lab File ID: Q10383BK05.D

Analysis Method: TO-15 | Date Collected: 01/05/2018 10:25

Sample wt/vol: 200(mL) | Date Analyzed: 01/09/2018 16:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17180 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10383-1

SDG No.:

Client Sample ID: 11124 Lab Sample ID: 140-10383-5

Matrix: Air Lab File ID: Q10383BK05.D

Analysis Method: TO-15 Date Collected: 01/05/2018 10:25

Sample wt/vol: 200(mL) Date Analyzed: 01/09/2018 16:33

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 17180 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	NC		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10383-1

SDG No.:

Client Sample ID: 11124 Lab Sample ID: 140-10383-5

Matrix: Air Lab File ID: Q10383BK05.D

Analysis Method: TO-15 Date Collected: 01/05/2018 10:25

Sample wt/vol: 200(mL) Date Analyzed: 01/09/2018 16:33

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 17180 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK05.D
Lims ID: 140-10383-A-5
Client ID: 11124
Sample Type: Client
Inject. Date: 09-Jan-2018 16:33:30 ALS Bottle#: 5 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007047-008
Misc. Info.: 11124
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 10-Jan-2018 10:19:12 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK010

First Level Reviewer: tajh Date: 10-Jan-2018 10:13:16

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.730	7.740	-0.010	81	267964	4.00	
* 2 1,4-Difluorobenzene	114	9.871	9.870	0.000	94	1535777	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.869	14.869	0.000	87	1297199	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.579	16.578	0.001	90	1029678	4.33	
99 2,3-Dihydroindene	117	18.660	18.660	0.000	1	79	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

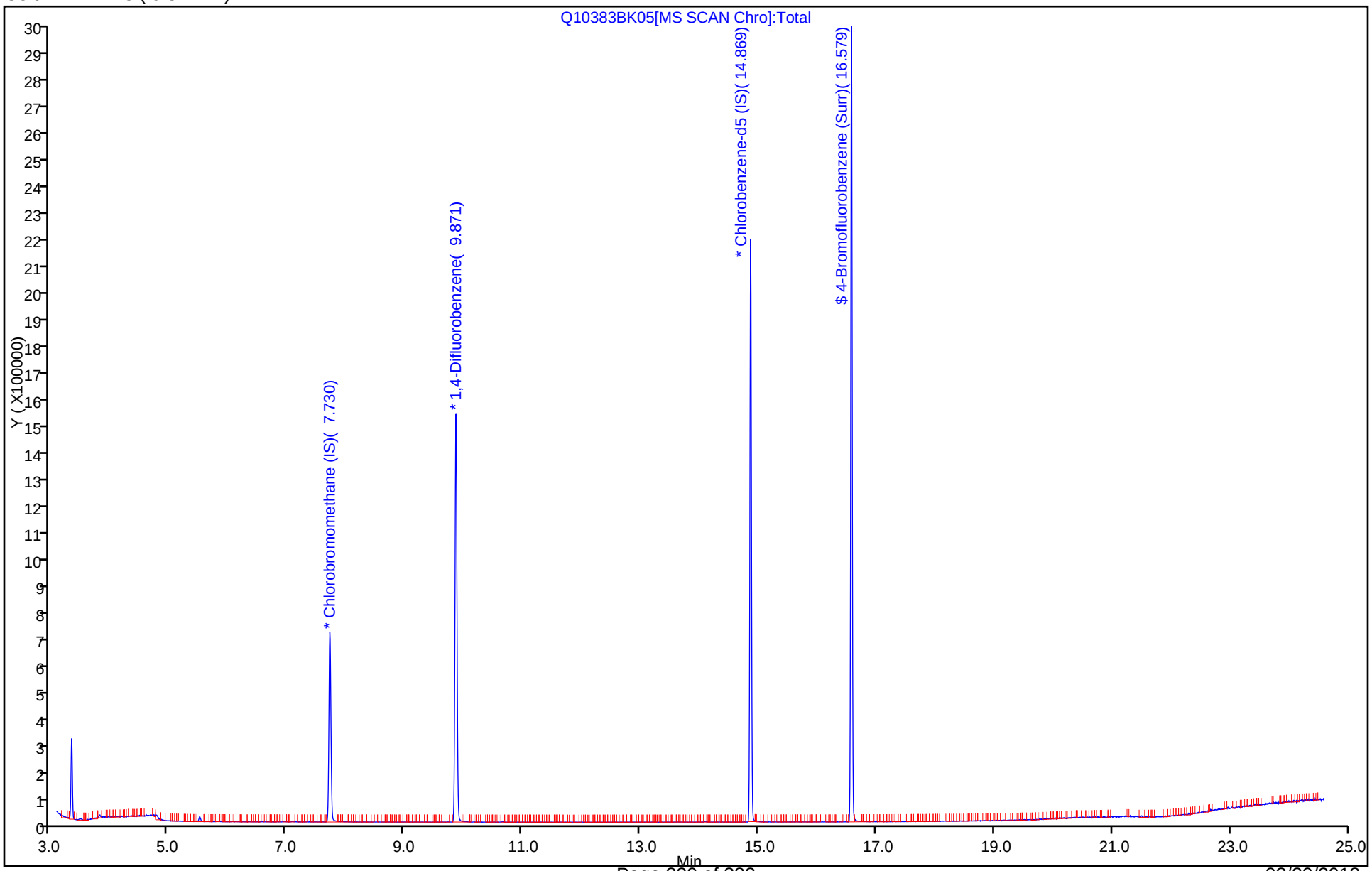
Report Date: 10-Jan-2018 10:19:24 Chrom Revision: 2.2 08-Dec-2017 11:41:26

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK05.D

Injection Date:	09-Jan-2018 16:33:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10383-A-5	Lab Sample ID:	140-10383-5	Worklist Smp#:	8
Client ID:	11124				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

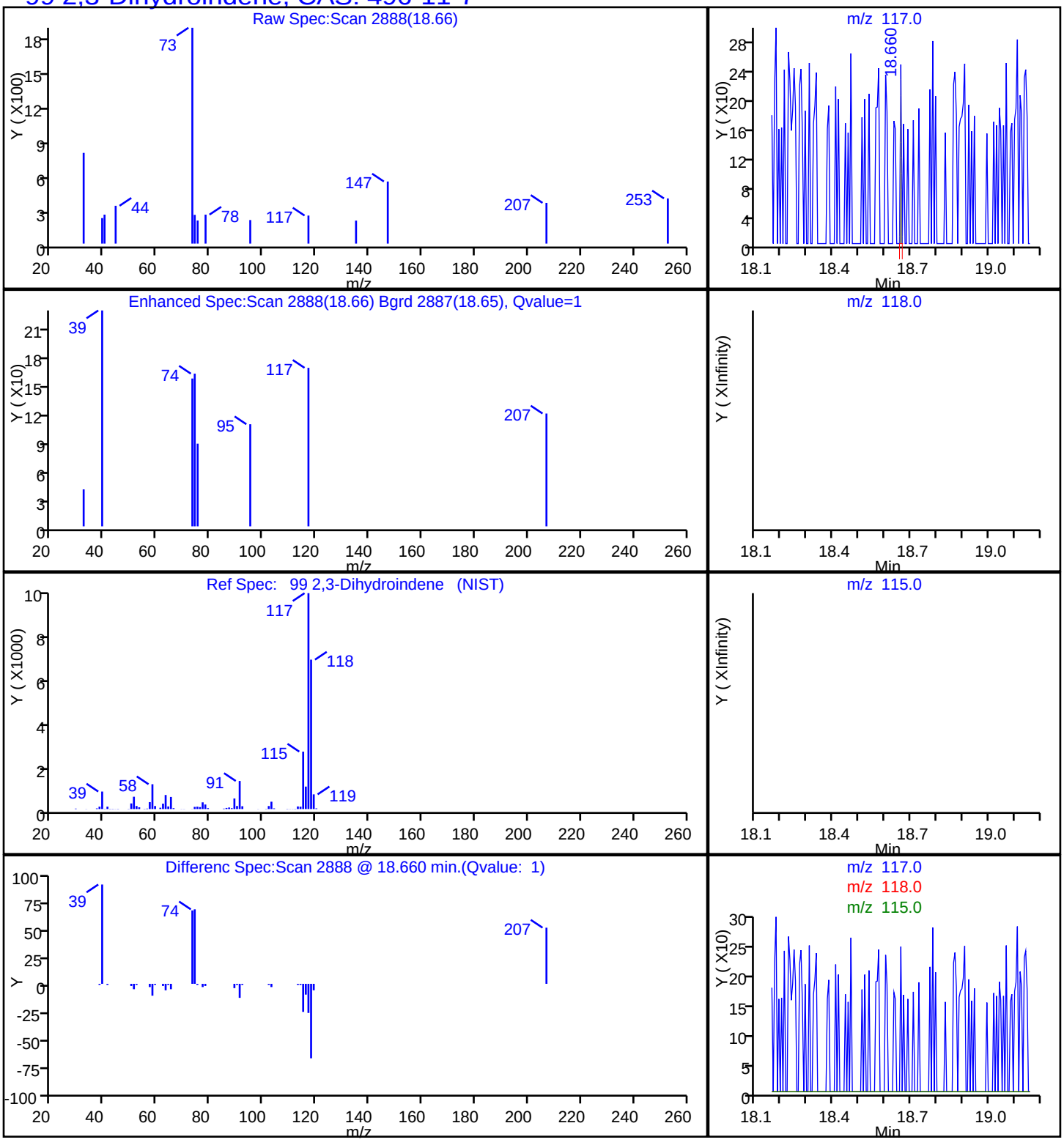
Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK05.D
Injection Date: 09-Jan-2018 16:33:30 Instrument ID: MR
Lims ID: 140-10383-A-5 Lab Sample ID: 140-10383-5
Client ID: 11124
Operator ID: ALS Bottle#: 5 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

99 2,3-Dihydroindene, CAS: 496-11-7



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10383-1

SDG No.:

Client Sample ID: 11702 | Lab Sample ID: 140-10383-6

Matrix: Air | Lab File ID: Q10383BK06.D

Analysis Method: TO-15 | Date Collected: 01/05/2018 10:25

Sample wt/vol: 200(mL) | Date Analyzed: 01/09/2018 17:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17180 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	NC		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10383-1

SDG No.:

Client Sample ID: 11702 Lab Sample ID: 140-10383-6

Matrix: Air Lab File ID: Q10383BK06.D

Analysis Method: TO-15 Date Collected: 01/05/2018 10:25

Sample wt/vol: 200(mL) Date Analyzed: 01/09/2018 17:21

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 17180 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	NC		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10383-1

SDG No.:

Client Sample ID: 11702 Lab Sample ID: 140-10383-6

Matrix: Air Lab File ID: Q10383BK06.D

Analysis Method: TO-15 Date Collected: 01/05/2018 10:25

Sample wt/vol: 200(mL) Date Analyzed: 01/09/2018 17:21

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 17180 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK06.D
Lims ID: 140-10383-A-6
Client ID: 11702
Sample Type: Client
Inject. Date: 09-Jan-2018 17:21:30 ALS Bottle#: 6 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007047-009
Misc. Info.: 11702
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 10-Jan-2018 10:19:12 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK010

First Level Reviewer: tajh Date: 10-Jan-2018 10:13:56

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
*	1 Chlorobromomethane (IS)	128	7.724	7.740	-0.016	70	270769	4.00	
*	2 1,4-Difluorobenzene	114	9.865	9.870	-0.005	94	1547015	4.00	
*	3 Chlorobenzene-d5 (IS)	117	14.869	14.869	0.000	87	1323864	4.00	
$	4 4-Bromofluorobenzene (Surr	95	16.579	16.578	0.001	90	1048260	4.32	
	35 2-Methylpentane	43	6.263	6.326	-0.081	84	1288	NC	
	99 2,3-Dihydroindene	117	18.644	18.660	-0.016	1	379	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

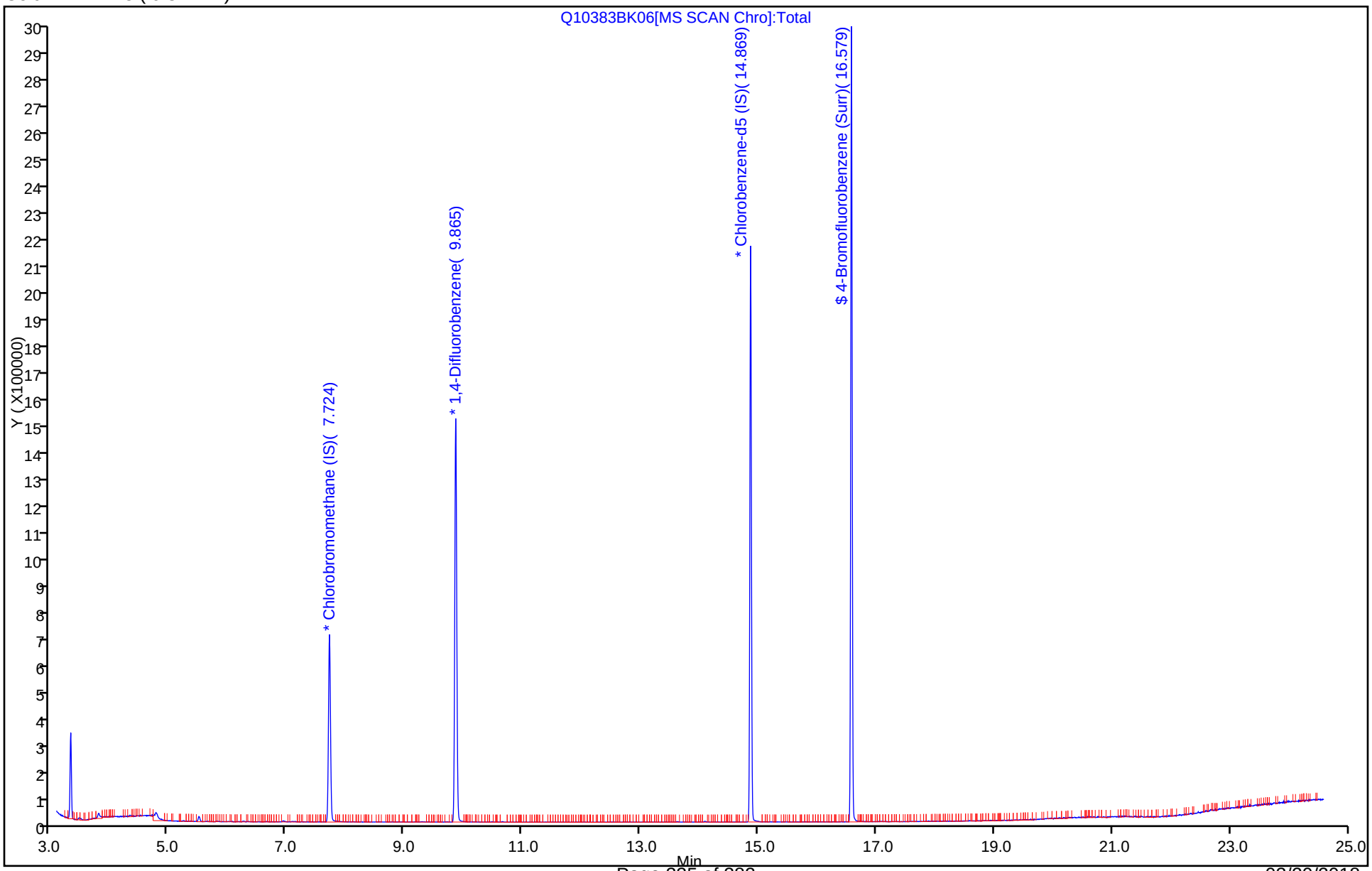
Report Date: 10-Jan-2018 10:19:26 Chrom Revision: 2.2 08-Dec-2017 11:41:26

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK06.D

Injection Date:	09-Jan-2018 17:21:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10383-A-6	Lab Sample ID:	140-10383-6	Worklist Smp#:	9
Client ID:	11702				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

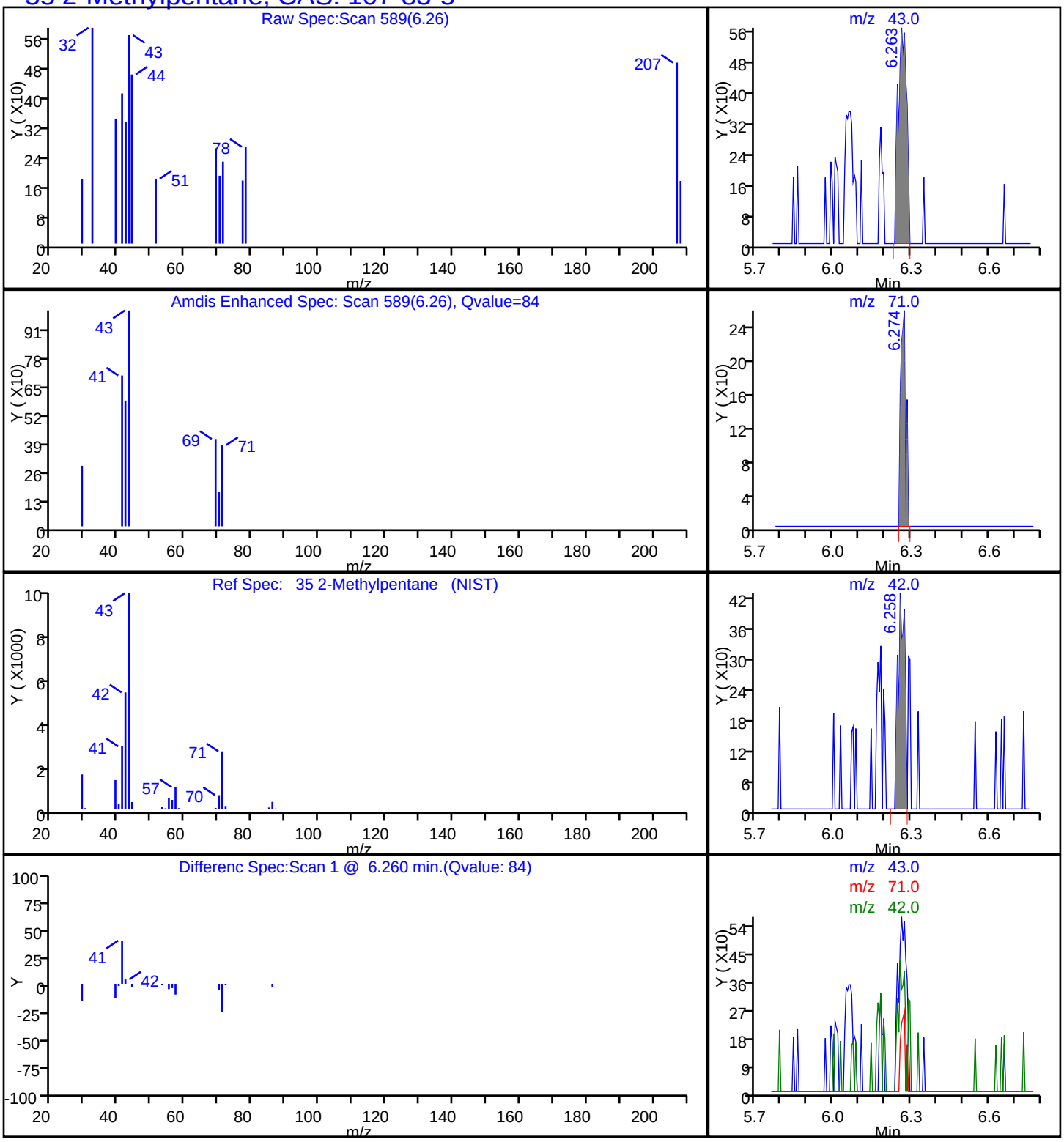
Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK06.D		
Injection Date:	09-Jan-2018 17:21:30	Instrument ID:	MR
Lims ID:	140-10383-A-6	Lab Sample ID:	140-10383-6
Client ID:	11702		
Operator ID:		ALS Bottle#:	6 Worklist Smp#: 9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

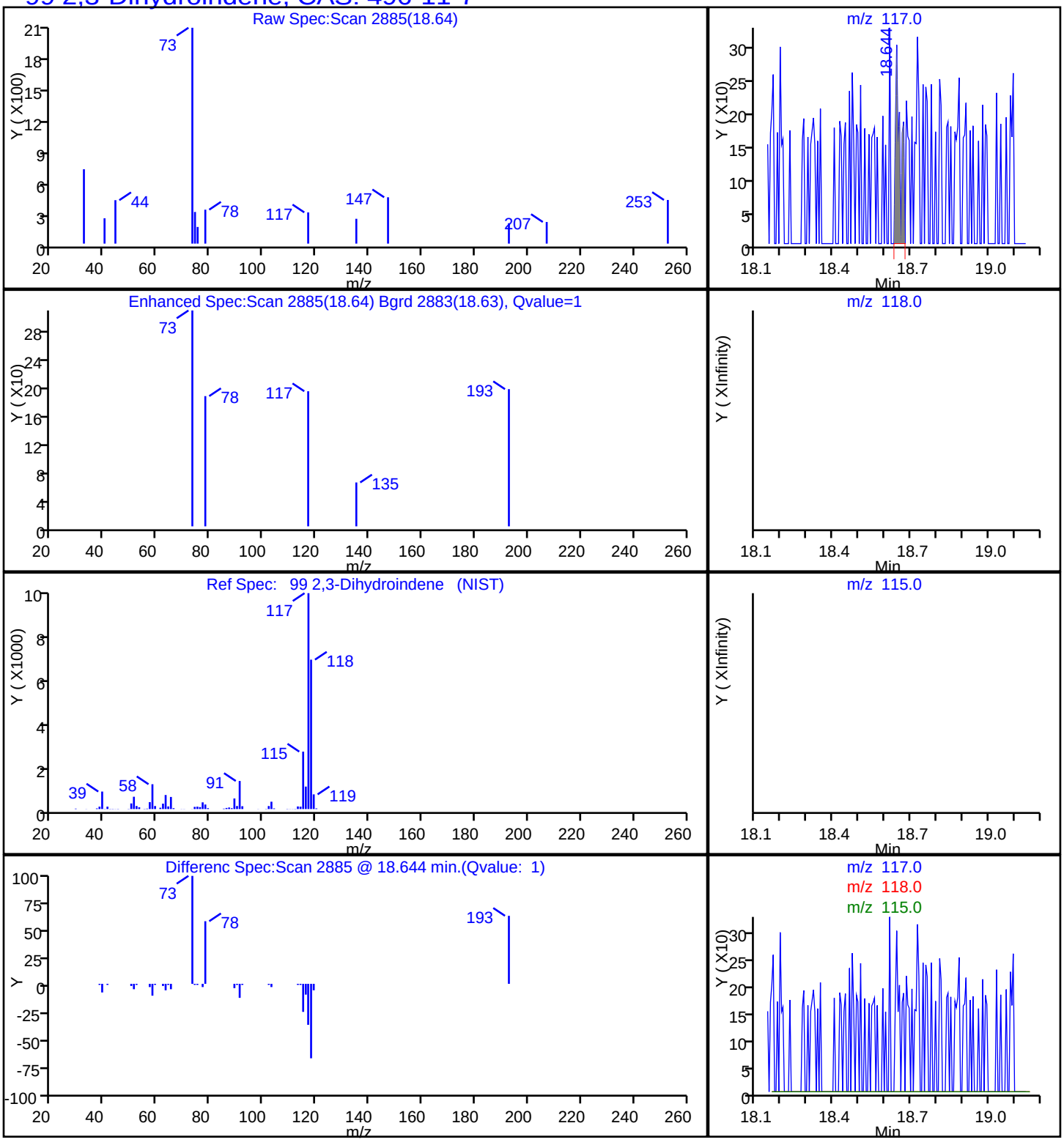
35 2-Methylpentane, CAS: 107-83-5



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK06.D
Injection Date: 09-Jan-2018 17:21:30 Instrument ID: MR
Lims ID: 140-10383-A-6 Lab Sample ID: 140-10383-6
Client ID: 11702
Operator ID: ALS Bottle#: 6 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

99 2,3-Dihydroindene, CAS: 496-11-7



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10383-1

SDG No.:

Client Sample ID: 10738 | Lab Sample ID: 140-10383-8

Matrix: Air | Lab File ID: Q10383BK08.D

Analysis Method: TO-15 | Date Collected: 01/05/2018 10:25

Sample wt/vol: 200(mL) | Date Analyzed: 01/09/2018 18:56

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17180 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10383-1

SDG No.:

Client Sample ID: 10738 | Lab Sample ID: 140-10383-8

Matrix: Air | Lab File ID: Q10383BK08.D

Analysis Method: TO-15 | Date Collected: 01/05/2018 10:25

Sample wt/vol: 200(mL) | Date Analyzed: 01/09/2018 18:56

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17180 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	NC		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10383-1

SDG No.:

Client Sample ID: 10738 Lab Sample ID: 140-10383-8

Matrix: Air Lab File ID: Q10383BK08.D

Analysis Method: TO-15 Date Collected: 01/05/2018 10:25

Sample wt/vol: 200(mL) Date Analyzed: 01/09/2018 18:56

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 17180 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK08.D				
Lims ID:	140-10383-A-8				
Client ID:	10738				
Sample Type:	Client				
Inject. Date:	09-Jan-2018 18:56:30	ALS Bottle#:	8	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007047-011				
Misc. Info.:	10738				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	10-Jan-2018 10:19:12	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK010				
First Level Reviewer: tajh		Date:	10-Jan-2018 10:14:58		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.724	7.740	-0.016	70	264085	4.00	
* 2 1,4-Difluorobenzene	114	9.870	9.870	0.000	94	1503576	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.869	14.869	0.000	87	1253563	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.578	16.578	0.000	91	1010589	4.40	
33 Carbon disulfide	76	5.648	5.638	-0.005	98	28602	0.1003	
99 2,3-Dihydroindene	117	18.676	18.660	0.016	1	242	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

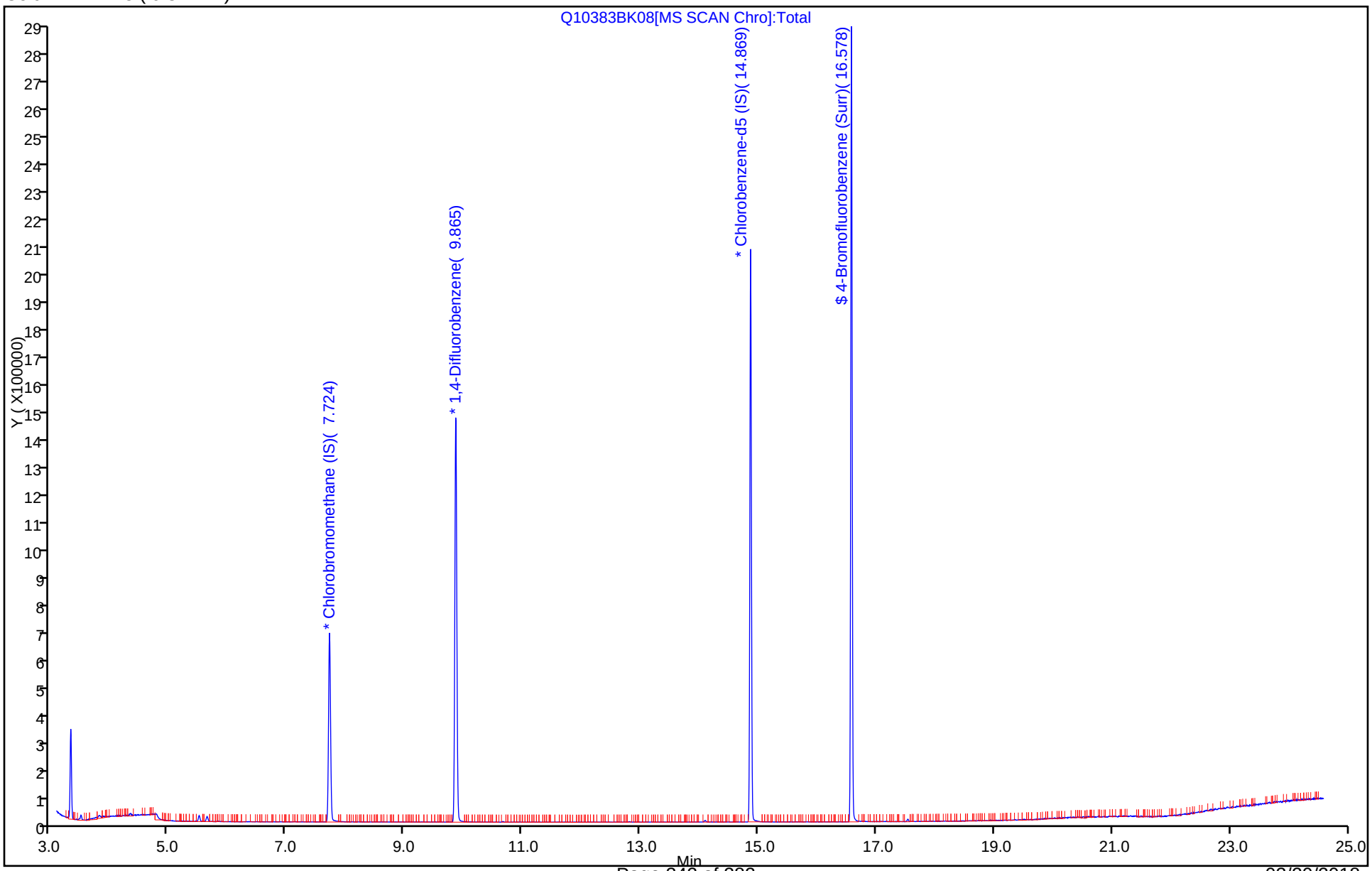
Report Date: 10-Jan-2018 10:19:29 Chrom Revision: 2.2 08-Dec-2017 11:41:26

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK08.D

Injection Date:	09-Jan-2018 18:56:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10383-A-8	Lab Sample ID:	140-10383-8	Worklist Smp#:	11
Client ID:	10738				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

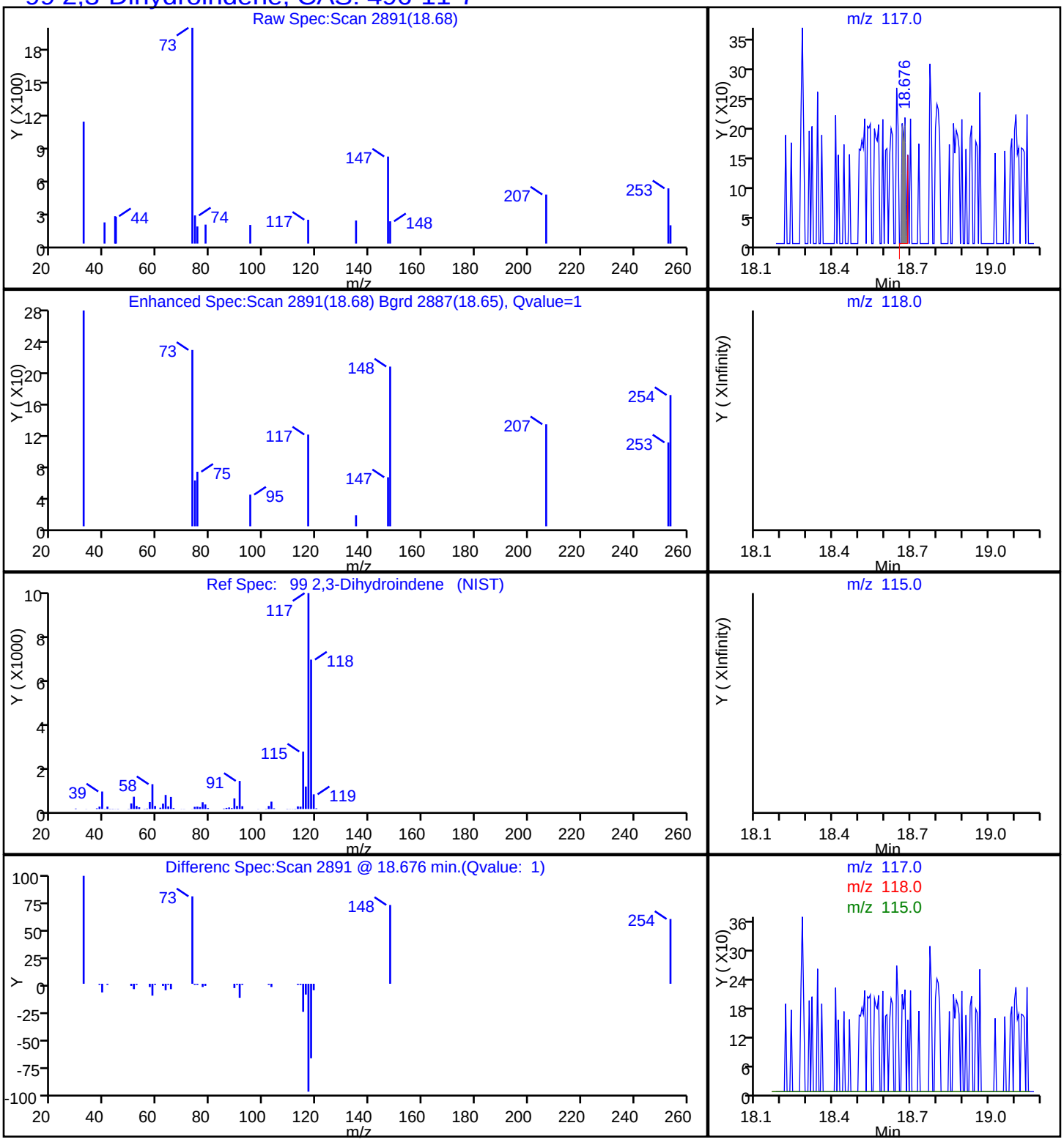
Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK08.D		
Injection Date:	09-Jan-2018 18:56:30	Instrument ID:	MR
Lims ID:	140-10383-A-8	Lab Sample ID:	140-10383-8
Client ID:	10738		
Operator ID:		ALS Bottle#:	8 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

99 2,3-Dihydroindene, CAS: 496-11-7



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10383-1

SDG No.:

Client Sample ID: 11606 | Lab Sample ID: 140-10383-13

Matrix: Air | Lab File ID: Q10383BK13.D

Analysis Method: TO-15 | Date Collected: 01/05/2018 10:25

Sample wt/vol: 200(mL) | Date Analyzed: 01/09/2018 22:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17180 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10383-1

SDG No.:

Client Sample ID: 11606 | Lab Sample ID: 140-10383-13

Matrix: Air | Lab File ID: Q10383BK13.D

Analysis Method: TO-15 | Date Collected: 01/05/2018 10:25

Sample wt/vol: 200(mL) | Date Analyzed: 01/09/2018 22:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17180 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	NC		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10383-1

SDG No.:

Client Sample ID: 11606 Lab Sample ID: 140-10383-13

Matrix: Air Lab File ID: Q10383BK13.D

Analysis Method: TO-15 Date Collected: 01/05/2018 10:25

Sample wt/vol: 200(mL) Date Analyzed: 01/09/2018 22:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 17180 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	NC		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK13.D
Lims ID: 140-10383-A-13
Client ID: 11606
Sample Type: Client
Inject. Date: 09-Jan-2018 22:57:30 ALS Bottle#: 13 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007047-016
Misc. Info.: 11606
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 10-Jan-2018 10:19:12 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK010

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
*	1 Chlorobromomethane (IS)	128	7.730	7.740	-0.010	70	273929	4.00	
*	2 1,4-Difluorobenzene	114	9.865	9.870	-0.005	94	1563831	4.00	
*	3 Chlorobenzene-d5 (IS)	117	14.869	14.869	0.000	87	1333492	4.00	
$	4 4-Bromofluorobenzene (Surr	95	16.579	16.578	0.001	91	1064298	4.36	
	33 Carbon disulfide	76	5.648	5.638	-0.005	98	27086	0.0915	
	50 Thiophene	84	9.218	9.321	-0.108	1	120	NC	
	99 2,3-Dihydroindene	117	18.676	18.660	0.016	1	115	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

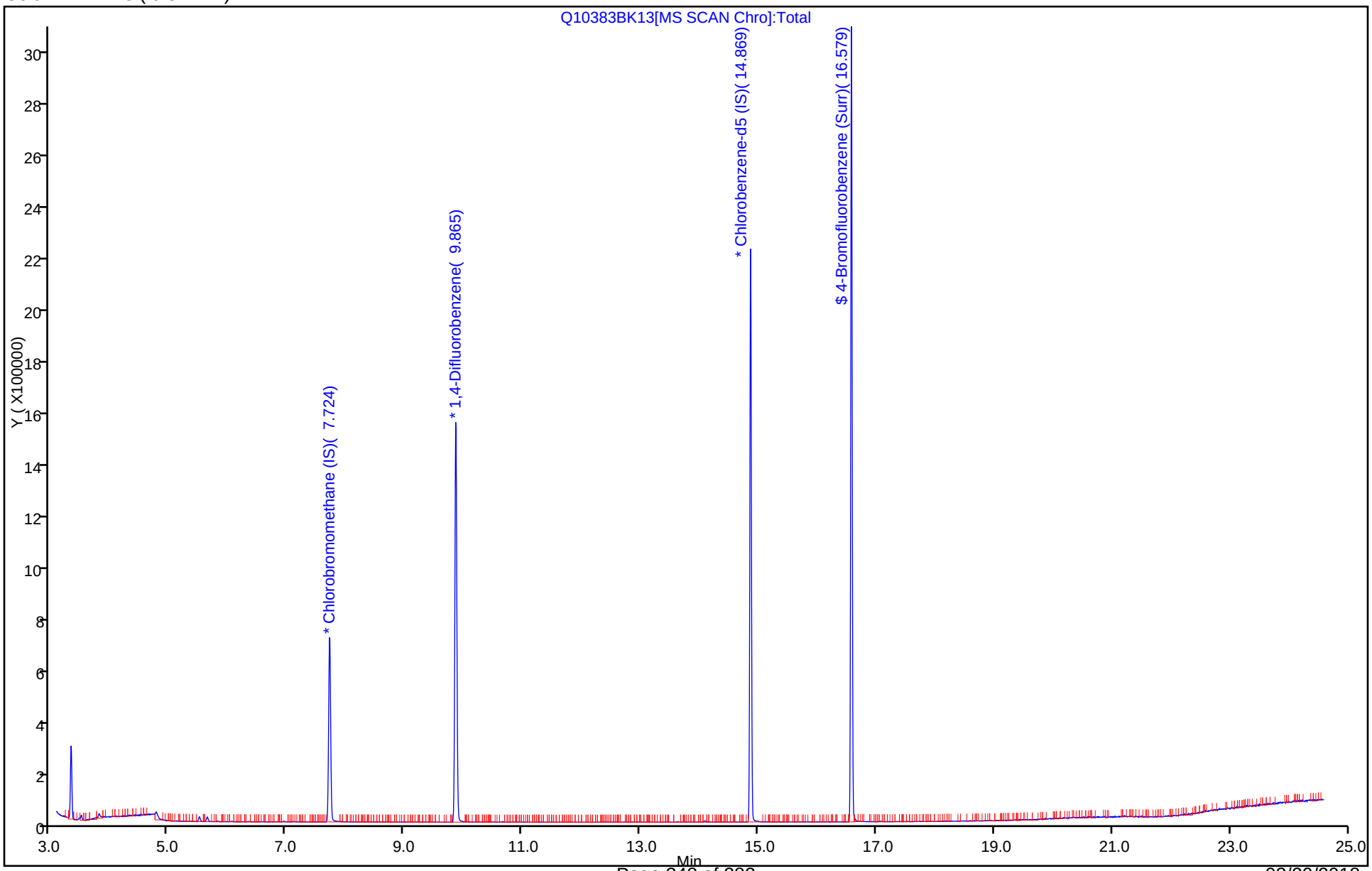
Report Date: 10-Jan-2018 10:19:36 Chrom Revision: 2.2 08-Dec-2017 11:41:26

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK13.D

Injection Date:	09-Jan-2018 22:57:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10383-A-13	Lab Sample ID:	140-10383-13	Worklist Smp#:	16
Client ID:	11606				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

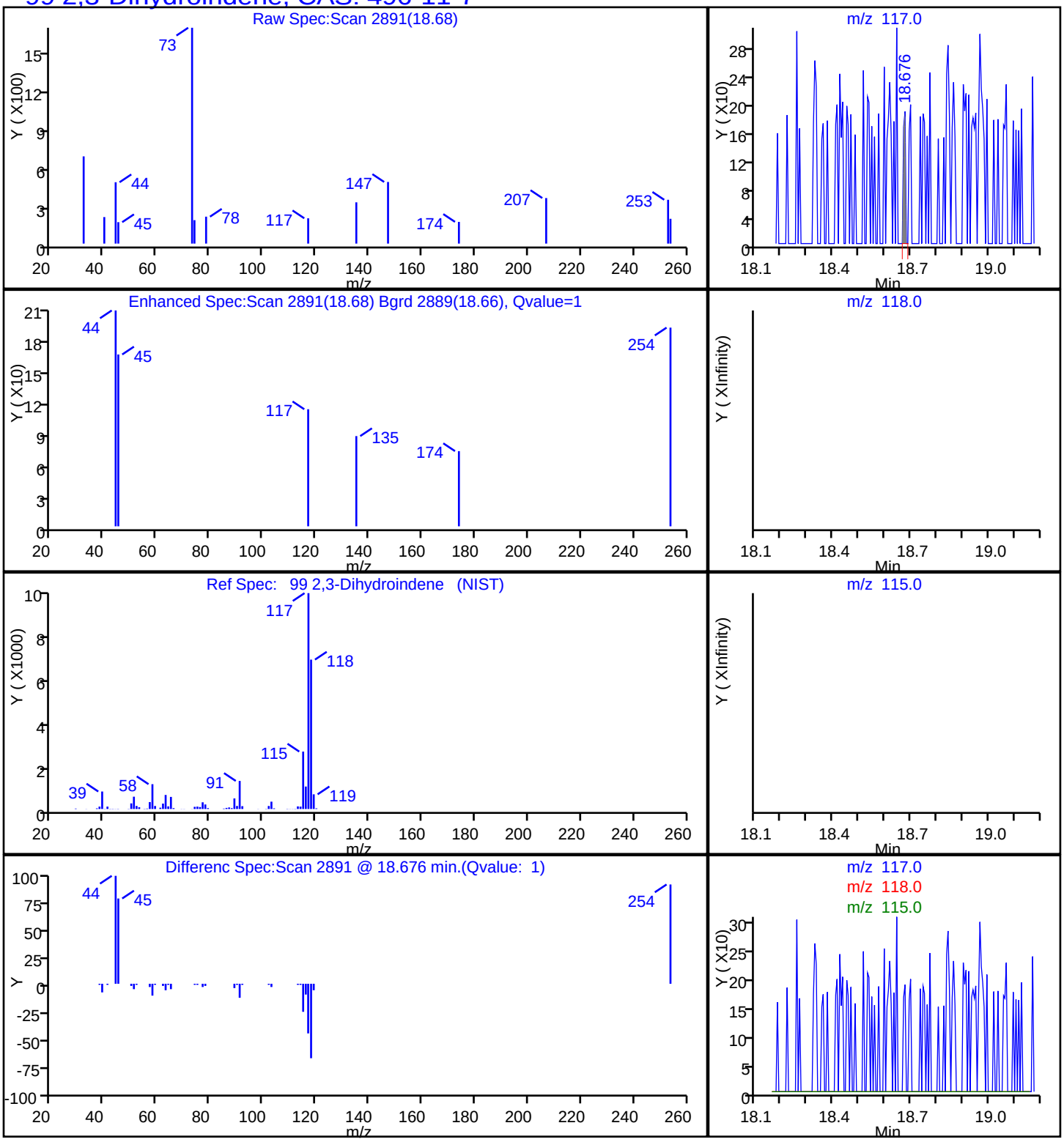
Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

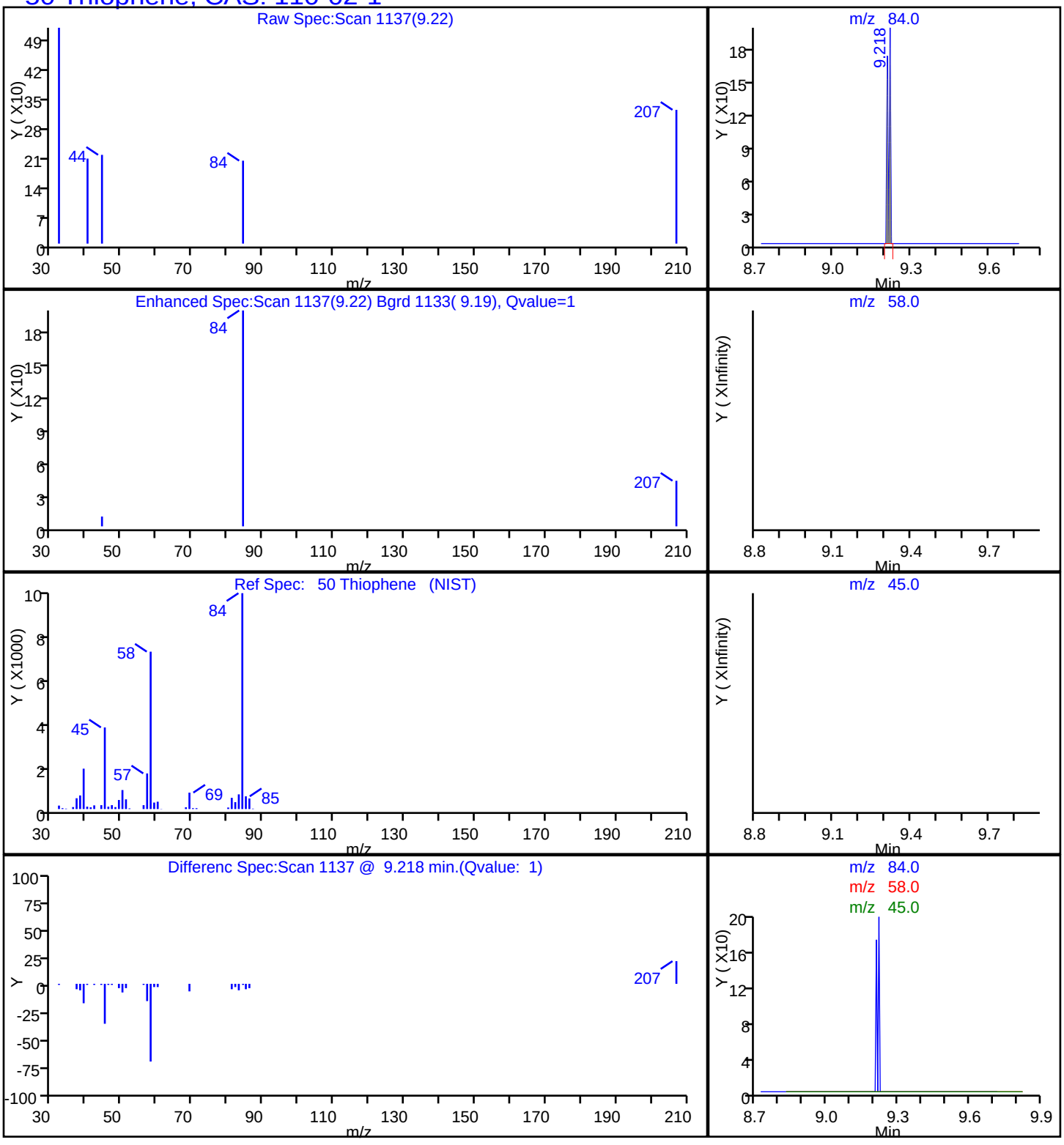
Data File:	\\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK13.D		
Injection Date:	09-Jan-2018 22:57:30	Instrument ID:	MR
Lims ID:	140-10383-A-13	Lab Sample ID:	140-10383-13
Client ID:	11606		
Operator ID:		ALS Bottle#:	13 Worklist Smp#: 16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

99 2,3-Dihydroindene, CAS: 496-11-7



Data File: \\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK13.D
Injection Date: 09-Jan-2018 22:57:30 Instrument ID: MR
Lims ID: 140-10383-A-13 Lab Sample ID: 140-10383-13
Client ID: 11606
Operator ID: ALS Bottle#: 13 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

50 Thiophene, CAS: 110-02-1



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10383-1

SDG No.:

Client Sample ID: 11669 | Lab Sample ID: 140-10383-14

Matrix: Air | Lab File ID: Q10383BK14.D

Analysis Method: TO-15 | Date Collected: 01/05/2018 10:25

Sample wt/vol: 200(mL) | Date Analyzed: 01/09/2018 23:45

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17180 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10383-1

SDG No.:

Client Sample ID: 11669 | Lab Sample ID: 140-10383-14

Matrix: Air | Lab File ID: Q10383BK14.D

Analysis Method: TO-15 | Date Collected: 01/05/2018 10:25

Sample wt/vol: 200(mL) | Date Analyzed: 01/09/2018 23:45

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17180 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	NC		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10383-1

SDG No.:

Client Sample ID: 11669 | Lab Sample ID: 140-10383-14

Matrix: Air | Lab File ID: Q10383BK14.D

Analysis Method: TO-15 | Date Collected: 01/05/2018 10:25

Sample wt/vol: 200(mL) | Date Analyzed: 01/09/2018 23:45

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17180 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	NC		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK14.D				
Lims ID:	140-10383-A-14				
Client ID:	11669				
Sample Type:	Client				
Inject. Date:	09-Jan-2018 23:45:30	ALS Bottle#:	14	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007047-017				
Misc. Info.:	11669				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	10-Jan-2018 10:19:12	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK010				
First Level Reviewer: tajh		Date:	10-Jan-2018 10:18:20		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.724	7.740	-0.016	70	278428	4.00	
* 2 1,4-Difluorobenzene	114	9.865	9.870	-0.005	94	1586485	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.869	14.869	0.000	87	1344526	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.579	16.578	0.001	91	1074293	4.36	
33 Carbon disulfide	76	5.643	5.638	-0.010	98	34863	0.1159	
50 Thiophene	84	9.207	9.321	-0.119	1	135	NC	
99 2,3-Dihydroindene	117	18.644	18.660	-0.016	1	61	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

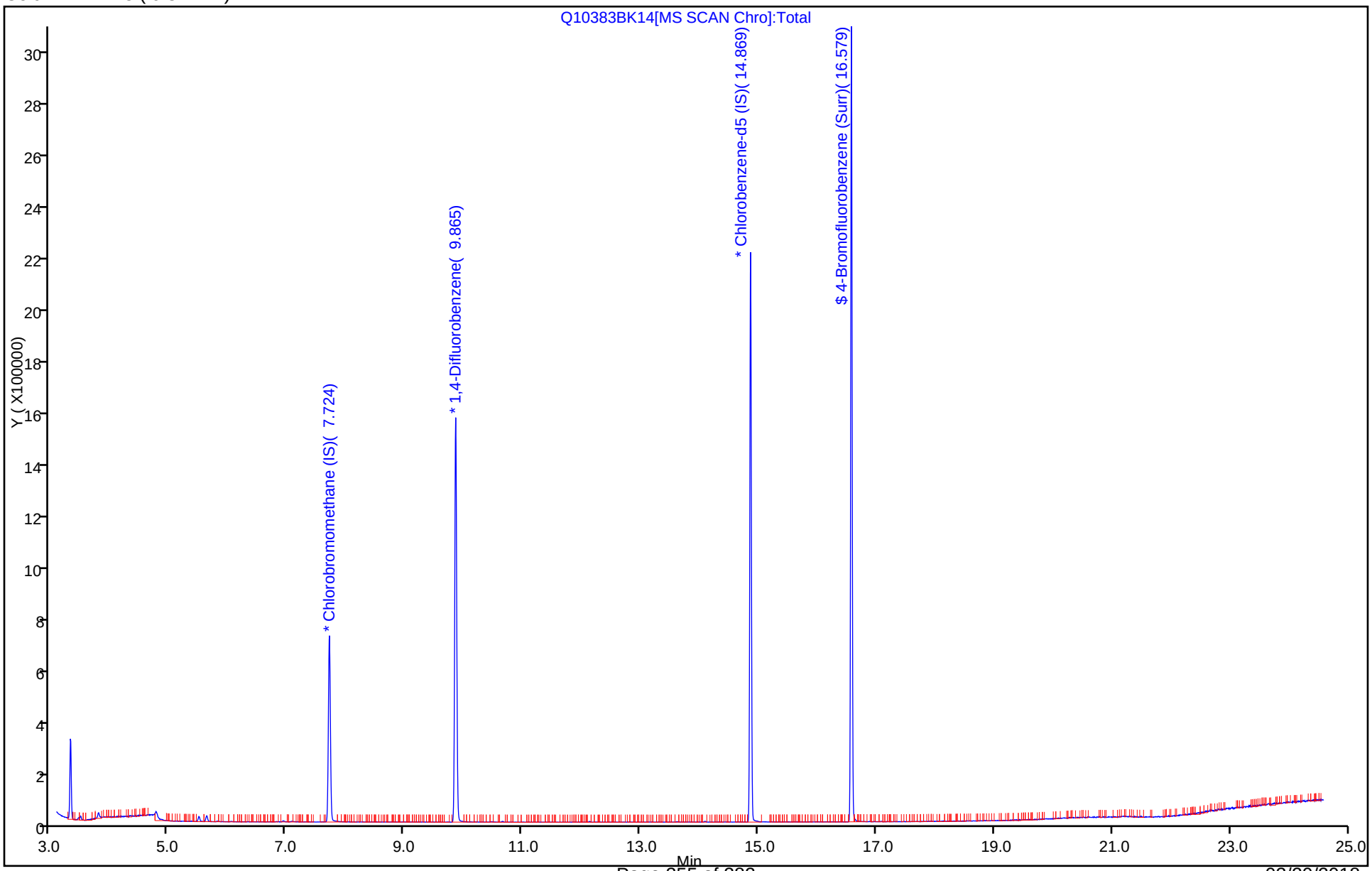
Report Date: 10-Jan-2018 10:19:38 Chrom Revision: 2.2 08-Dec-2017 11:41:26

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK14.D

Injection Date:	09-Jan-2018 23:45:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10383-A-14	Lab Sample ID:	140-10383-14	Worklist Smp#:	17
Client ID:	11669				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

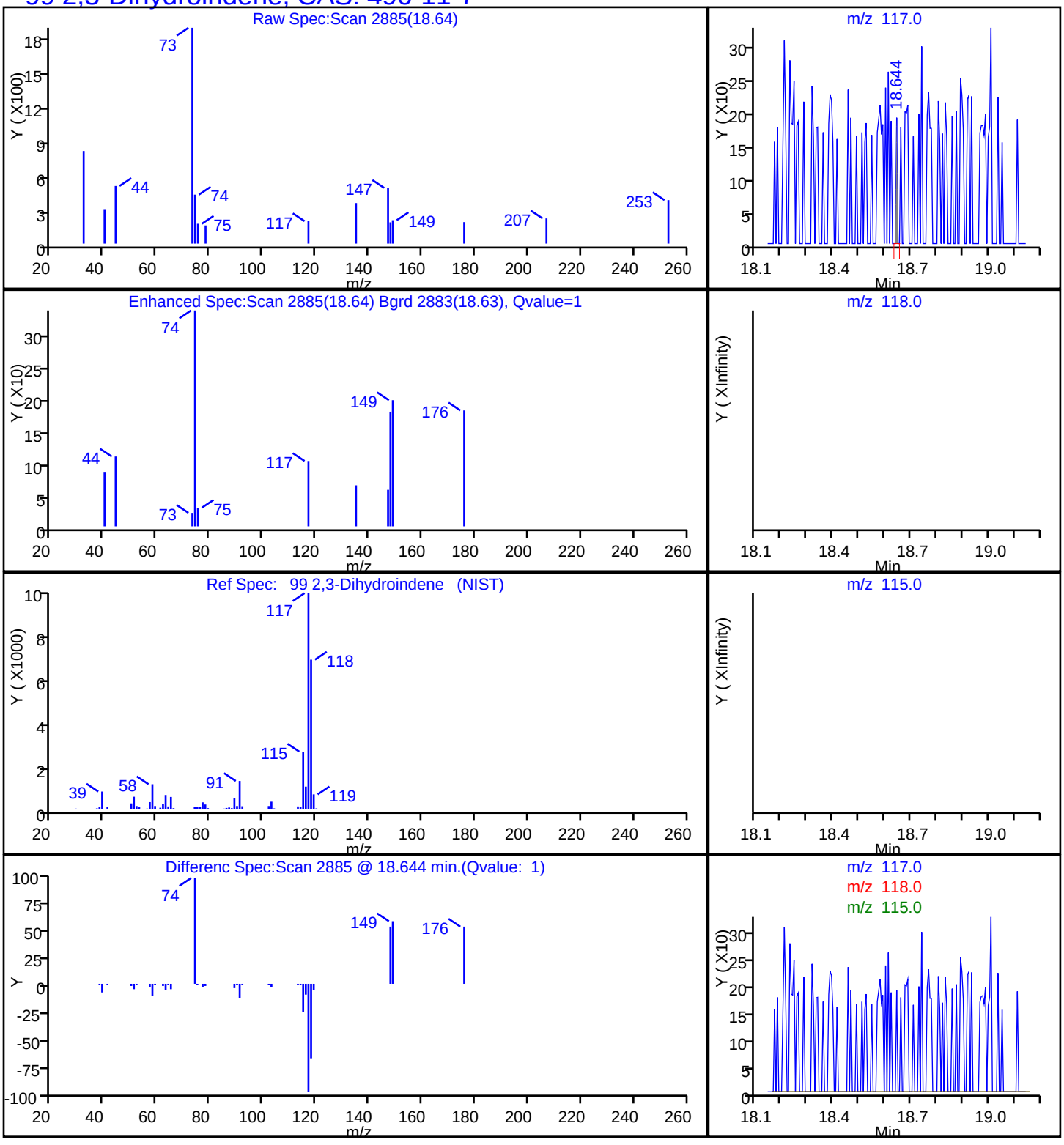
Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK14.D		
Injection Date:	09-Jan-2018 23:45:30	Instrument ID:	MR
Lims ID:	140-10383-A-14	Lab Sample ID:	140-10383-14
Client ID:	11669		
Operator ID:		ALS Bottle#:	14 Worklist Smp#: 17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

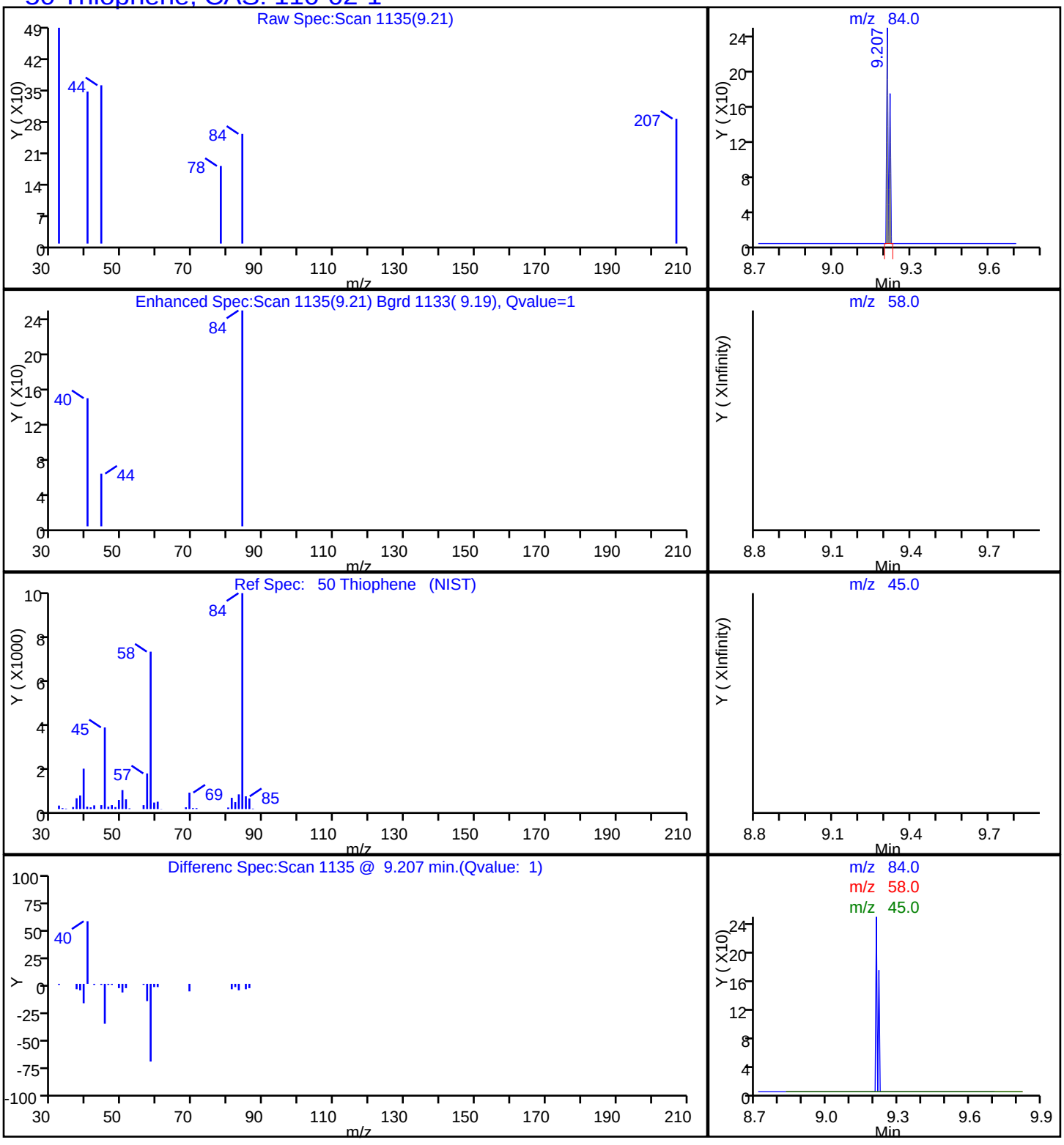
99 2,3-Dihydroindene, CAS: 496-11-7



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180102-7047.b\Q10383BK14.D		
Injection Date:	09-Jan-2018 23:45:30	Instrument ID:	MR
Lims ID:	140-10383-A-14	Lab Sample ID:	140-10383-14
Client ID:	11669		
Operator ID:		ALS Bottle#:	14 Worklist Smp#: 17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

50 Thiophene, CAS: 110-02-1



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10426-1

SDG No.:

Client Sample ID: 11285 | Lab Sample ID: 140-10426-6

Matrix: Air | Lab File ID: A15LOT10426.D

Analysis Method: TO-15 | Date Collected: 01/12/2018 14:40

Sample wt/vol: 200(mL) | Date Analyzed: 01/16/2018 00:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17354 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND	*	0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND	*	0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND	*	0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND	*	0.20	
106-46-7	1,4-Dichlorobenzene	ND	*	0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND	*	2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND	*	2.5	
107-83-5	2-Methylpentane	NC		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10426-1

SDG No.:

Client Sample ID: 11285 | Lab Sample ID: 140-10426-6

Matrix: Air | Lab File ID: A15LOT10426.D

Analysis Method: TO-15 | Date Collected: 01/12/2018 14:40

Sample wt/vol: 200(mL) | Date Analyzed: 01/16/2018 00:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17354 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND	*	2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	NC		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10426-1

SDG No.:

Client Sample ID: 11285 | Lab Sample ID: 140-10426-6

Matrix: Air | Lab File ID: A15LOT10426.D

Analysis Method: TO-15 | Date Collected: 01/12/2018 14:40

Sample wt/vol: 200(mL) | Date Analyzed: 01/16/2018 00:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17354 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND	*	0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND	*	0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND	*	0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7102.b\A15LOT10426.D				
Lims ID:	140-10426-A-6				
Client ID:	11285				
Sample Type:	Client				
Inject. Date:	16-Jan-2018 00:50:30	ALS Bottle#:	9	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0007102-021				
Misc. Info.:	11285				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20180110-7102.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	16-Jan-2018 08:46:56	Calib Date:	25-Oct-2017 20:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK006				
First Level Reviewer: tajh		Date:	16-Jan-2018 08:41:31		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.730	7.779	-0.049	68	319543	4.00	
* 2 1,4-Difluorobenzene	114	9.865	9.918	-0.053	94	1858198	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.864	14.903	-0.039	87	1624096	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.573	16.610	-0.037	91	1290479	4.34	
35 2-Methylpentane	43	6.290	6.295	-0.054	1	180	NC	
45 1,1,1-Trichloroethane	97	8.722	8.769	-0.047	95	12512	0.0398	
99 2,3-Dihydroindene	117	18.574	18.611	-0.086	1	405	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

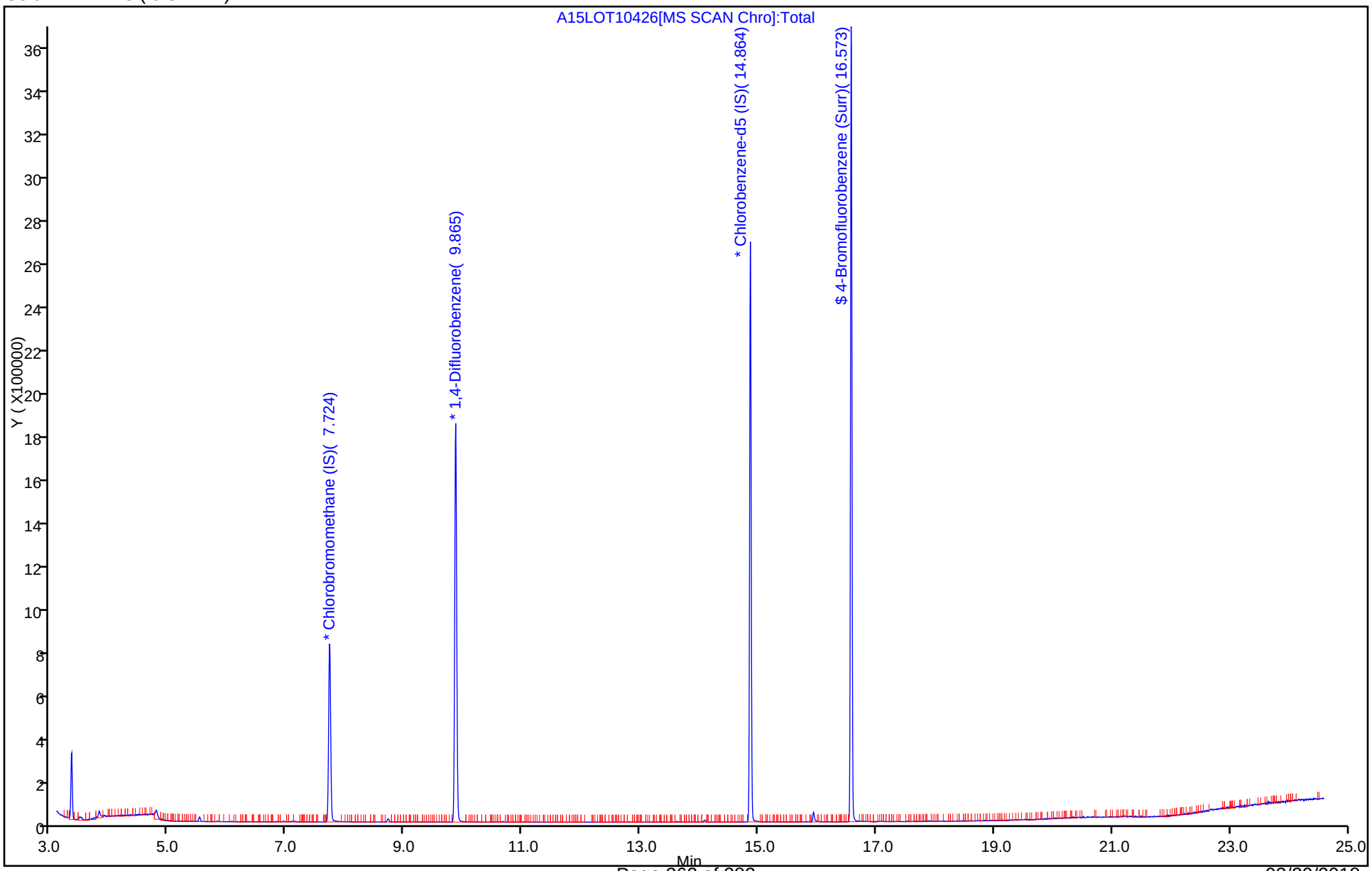
Report Date: 16-Jan-2018 08:47:22 Chrom Revision: 2.2 12-Jan-2018 08:20:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7102.b\A15LOT10426.D

Injection Date:	16-Jan-2018 00:50:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10426-A-6	Lab Sample ID:	140-10426-6	Worklist Smp#:	21
Client ID:	11285				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

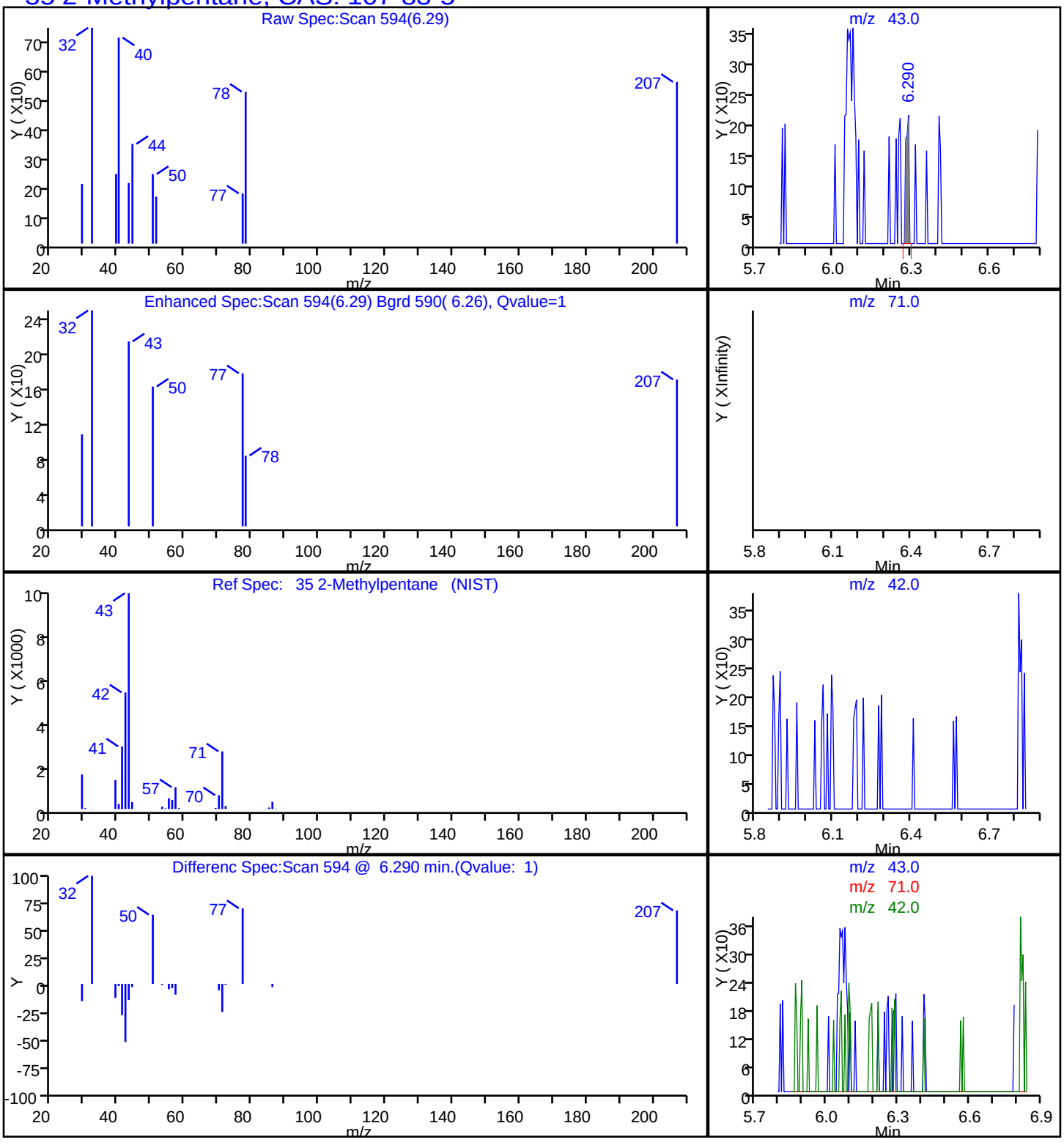
Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7102.b\A15LOT10426.D		
Injection Date:	16-Jan-2018 00:50:30	Instrument ID:	MR
Lims ID:	140-10426-A-6	Lab Sample ID:	140-10426-6
Client ID:	11285		
Operator ID:		ALS Bottle#:	9 Worklist Smp#: 21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

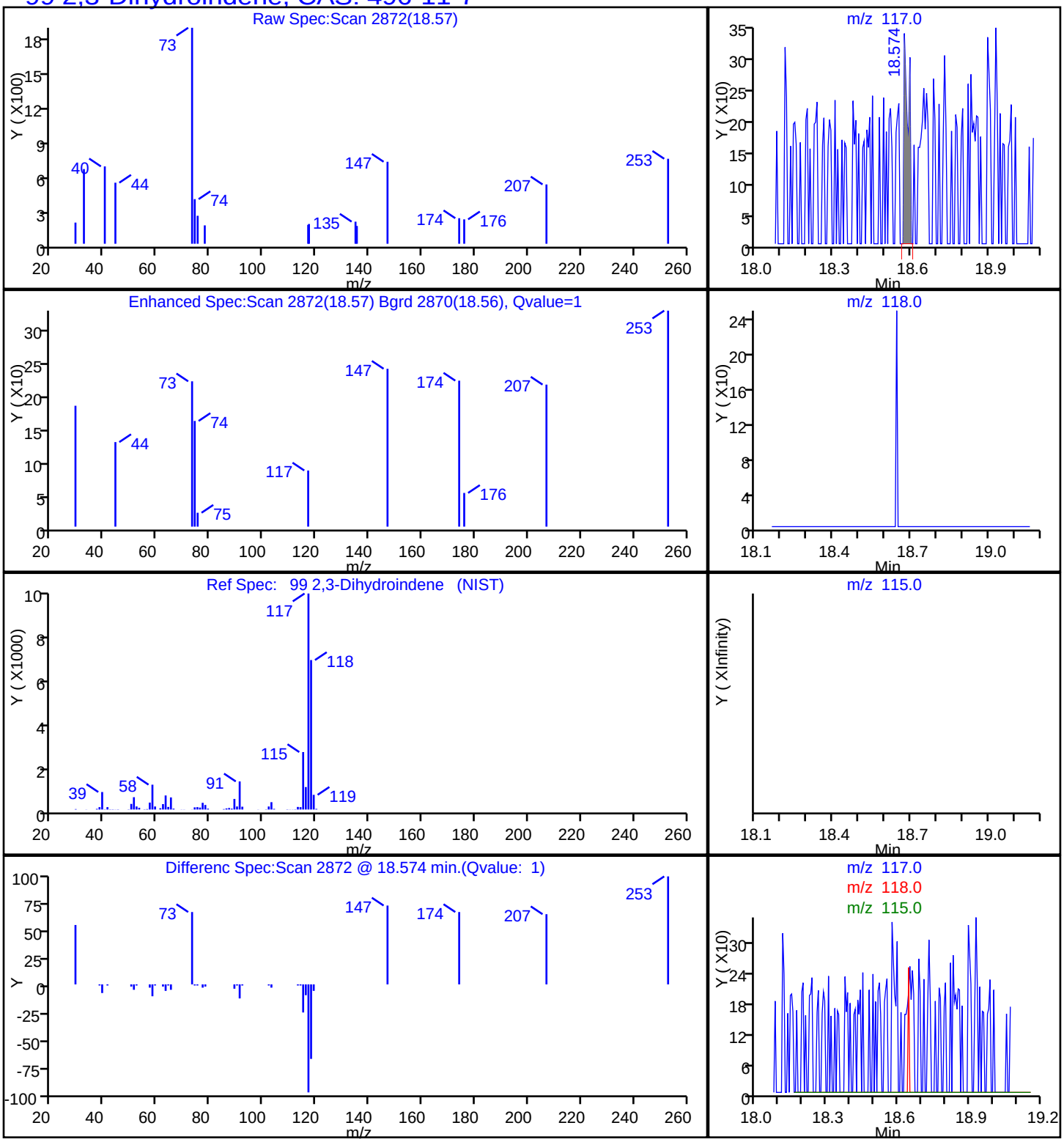
35 2-Methylpentane, CAS: 107-83-5



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7102.b\A15LOT10426.D		
Injection Date:	16-Jan-2018 00:50:30	Instrument ID:	MR
Lims ID:	140-10426-A-6	Lab Sample ID:	140-10426-6
Client ID:	11285		
Operator ID:		ALS Bottle#:	9 Worklist Smp#: 21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

99 2,3-Dihydroindene, CAS: 496-11-7



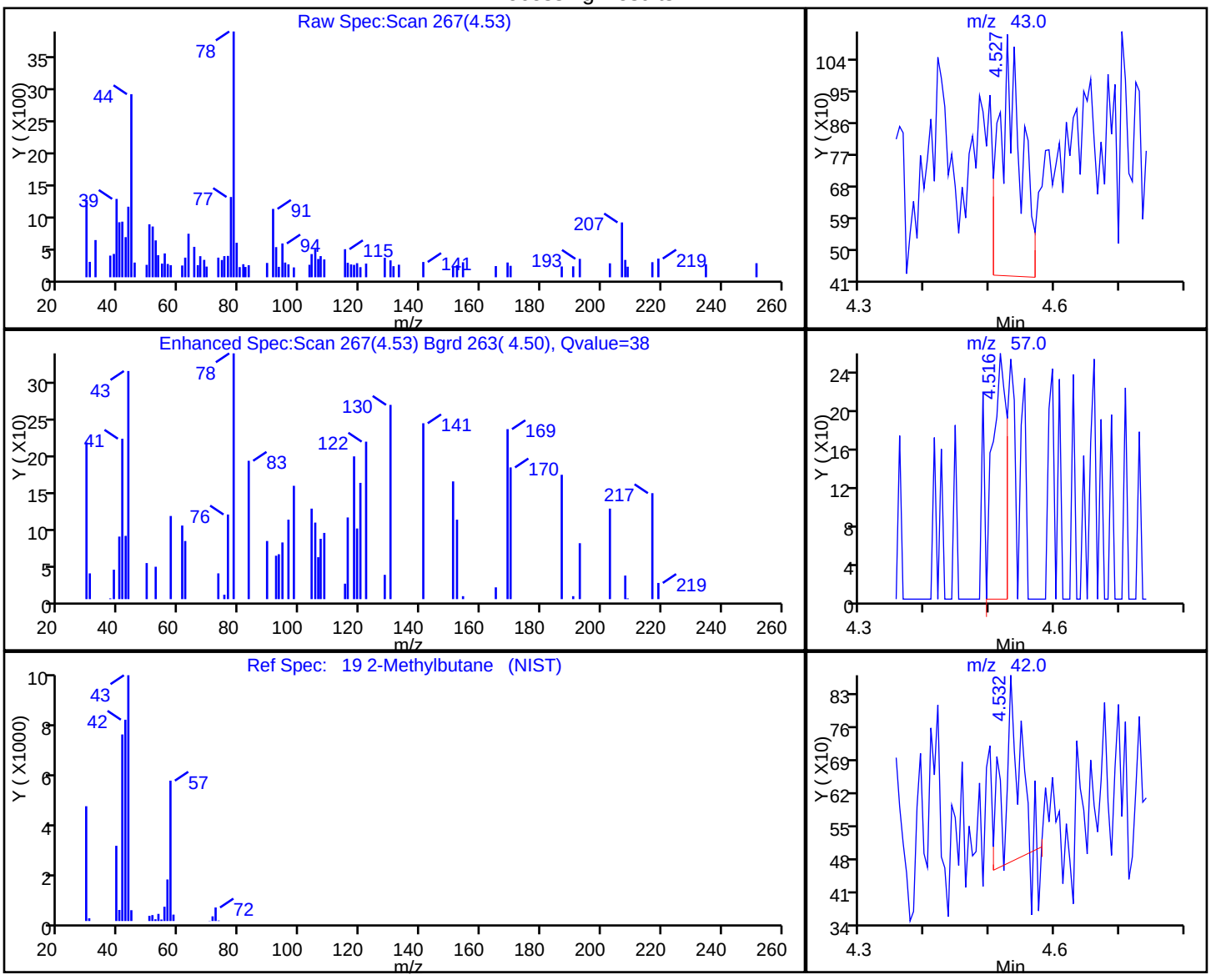
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7102.b\A15LOT10426.D				
Injection Date:	16-Jan-2018 00:50:30	Instrument ID:	MR		
Lims ID:	140-10426-A-6	Lab Sample ID:	140-10426-6		
Client ID:	11285				
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.53	43.00	1541	0.022614
4.52	57.00	380	
4.53	42.00	584	

Reviewer: tajh, 16-Jan-2018 08:41:31

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

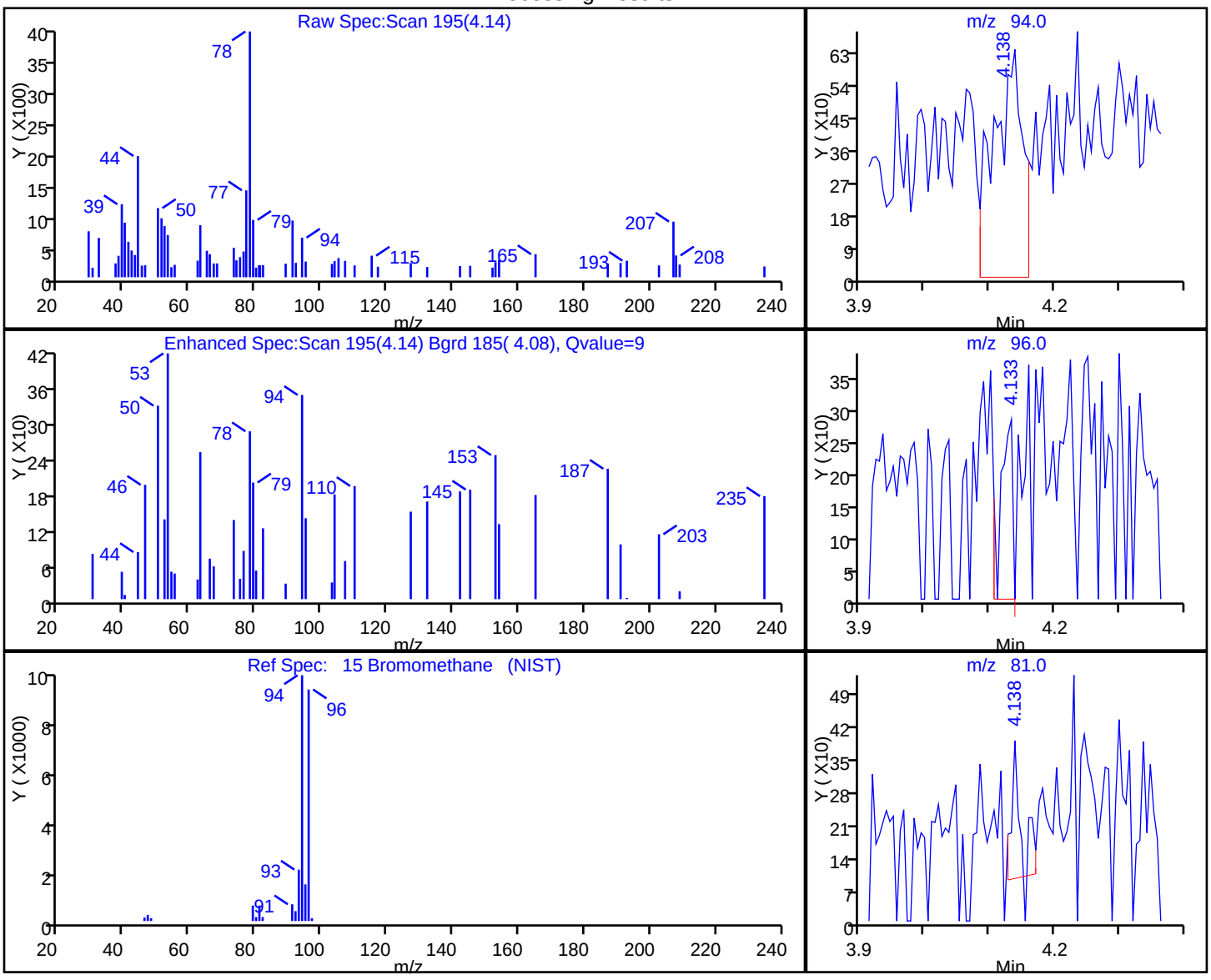
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7102.b\A15LOT10426.D				
Injection Date:	16-Jan-2018 00:50:30	Instrument ID:	MR		
Lims ID:	140-10426-A-6	Lab Sample ID:	140-10426-6		
Client ID:	11285				
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
4.14	94.00	1982	0.021331
4.13	96.00	356	
4.14	81.00	288	

Reviewer: tajh, 16-Jan-2018 08:41:31

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

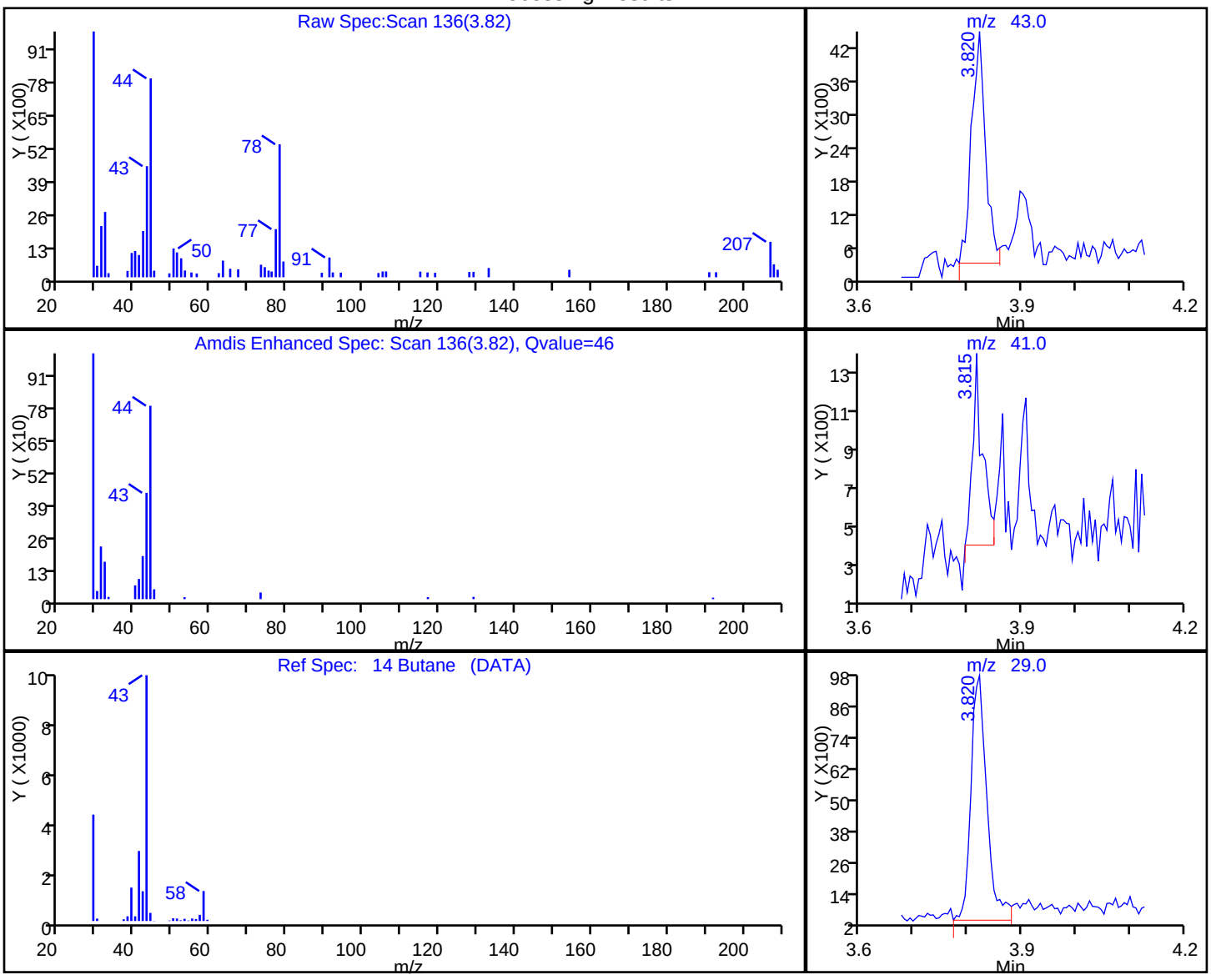
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7102.b\A15LOT10426.D				
Injection Date:	16-Jan-2018 00:50:30	Instrument ID:	MR		
Lims ID:	140-10426-A-6	Lab Sample ID:	140-10426-6		
Client ID:	11285				
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.82	43.00	7477	0.074917
3.81	41.00	1208	
3.82	29.00	19612	

Reviewer: tajh, 16-Jan-2018 08:41:31

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10441-1

SDG No.:

Client Sample ID: 11765 | Lab Sample ID: 140-10441-9

Matrix: Air | Lab File ID: A15LOT10441.D

Analysis Method: TO-15 | Date Collected: 01/13/2018 15:10

Sample wt/vol: 200(mL) | Date Analyzed: 01/16/2018 01:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17354 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND	*	0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND	*	0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND	*	0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND	*	0.20	
106-46-7	1,4-Dichlorobenzene	ND	*	0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND	*	2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND	*	2.5	
107-83-5	2-Methylpentane	NC		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
67-64-1	Acetone	ND		5.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10441-1

SDG No.:

Client Sample ID: 11765 Lab Sample ID: 140-10441-9

Matrix: Air Lab File ID: A15LOT10441.D

Analysis Method: TO-15 Date Collected: 01/13/2018 15:10

Sample wt/vol: 200(mL) Date Analyzed: 01/16/2018 01:38

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 17354 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND	*	2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	NC		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-10441-1

SDG No.:

Client Sample ID: 11765 | Lab Sample ID: 140-10441-9

Matrix: Air | Lab File ID: A15LOT10441.D

Analysis Method: TO-15 | Date Collected: 01/13/2018 15:10

Sample wt/vol: 200(mL) | Date Analyzed: 01/16/2018 01:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

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

Analysis Batch No.: 17354 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND	*	0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND	*	0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND	*	0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	NC		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7102.b\A15LOT10441.D
Lims ID: 140-10441-A-9
Client ID: 11765
Sample Type: Client
Inject. Date: 16-Jan-2018 01:38:30 ALS Bottle#: 10 Worklist Smp#: 22
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007102-022
Misc. Info.: 11765
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20180110-7102.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 16-Jan-2018 08:46:56 Calib Date: 25-Oct-2017 20:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20171025-6453.b\RJ25IC10.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK006

First Level Reviewer: tajh Date: 16-Jan-2018 08:43:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.724	7.779	-0.055	74	323353	4.00	
* 2 1,4-Difluorobenzene	114	9.865	9.918	-0.053	94	1844938	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.864	14.903	-0.039	86	1593623	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.573	16.610	-0.037	91	1273244	4.36	
23 Acetone	58	4.796	4.807	-0.011	99	22848	0.6411	
24 Isopropyl alcohol	45	4.877	4.906	-0.029	87	5917	0.0429	
35 2-Methylpentane	43	6.112	6.295	-0.232	1	126	NC	
50 Thiophene	84	9.196	9.271	-0.130	1	105	NC	
99 2,3-Dihydroindene	117	18.617	18.611	-0.043	1	183	NC	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

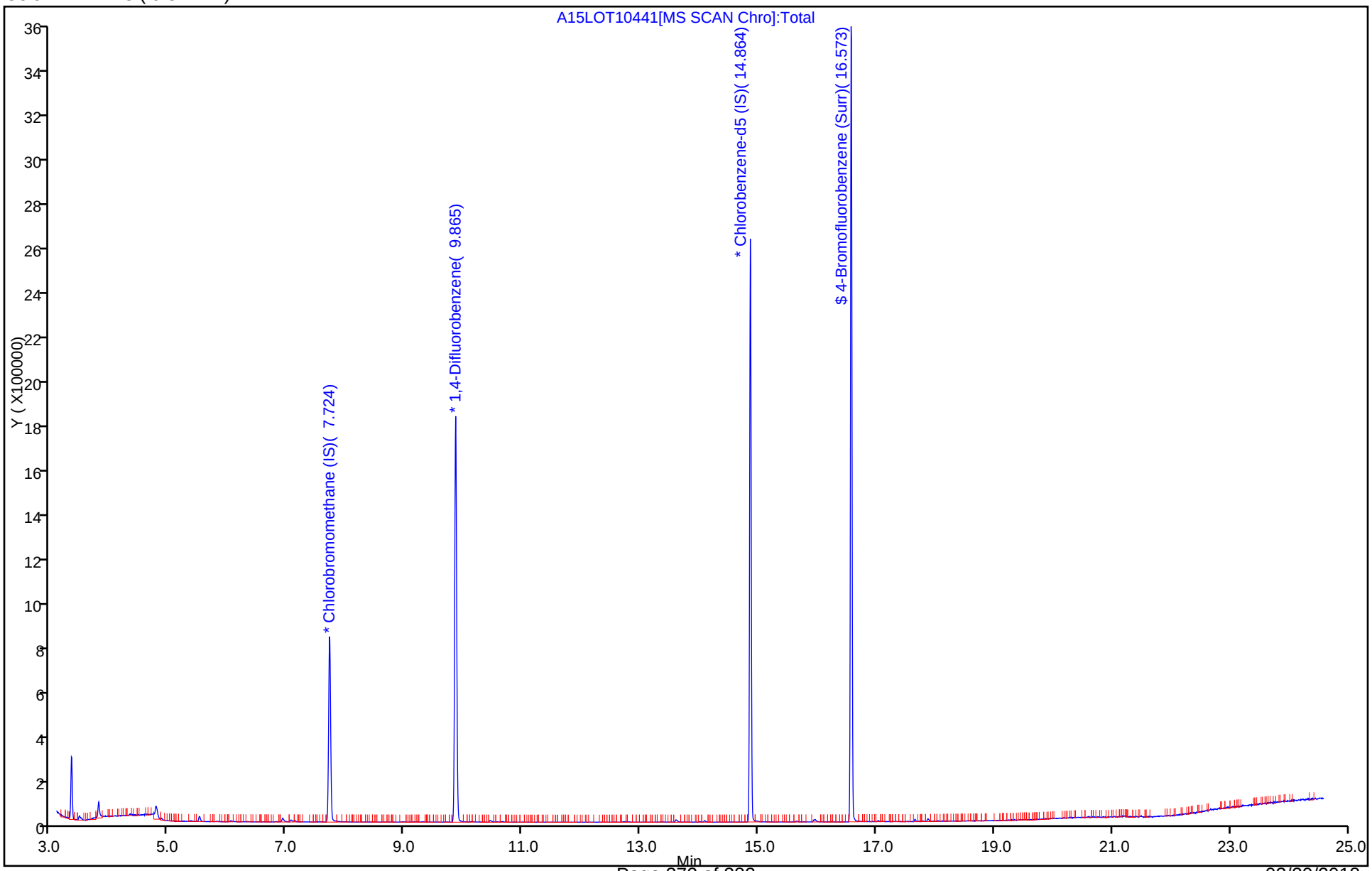
Report Date: 16-Jan-2018 08:47:24 Chrom Revision: 2.2 12-Jan-2018 08:20:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7102.b\A15LOT10441.D

Injection Date:	16-Jan-2018 01:38:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-10441-A-9	Lab Sample ID:	140-10441-9	Worklist Smp#:	22
Client ID:	11765				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

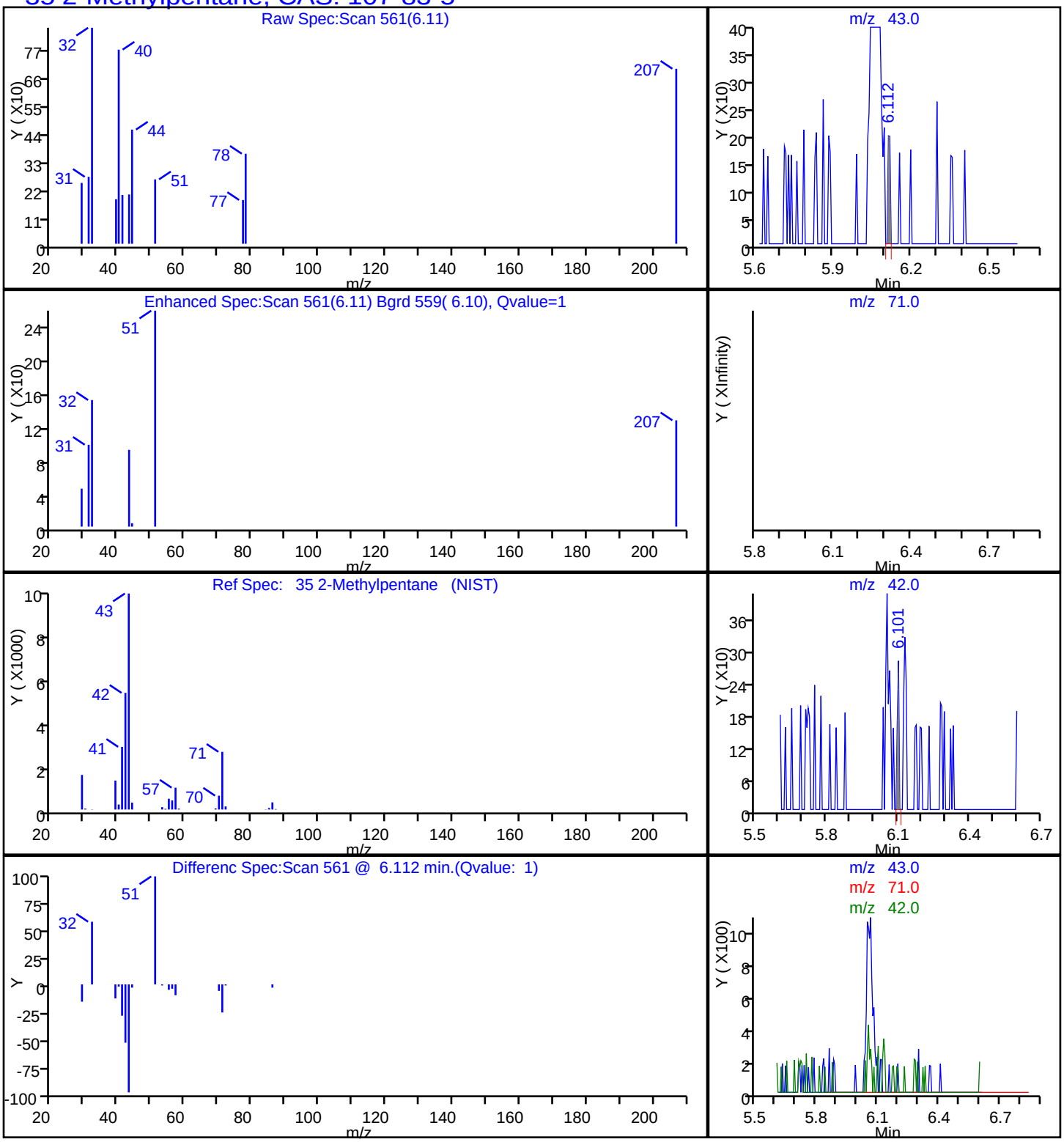
Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7102.b\A15LOT10441.D		
Injection Date:	16-Jan-2018 01:38:30	Instrument ID:	MR
Lims ID:	140-10441-A-9	Lab Sample ID:	140-10441-9
Client ID:	11765		
Operator ID:		ALS Bottle#:	10 Worklist Smp#: 22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

35 2-Methylpentane, CAS: 107-83-5

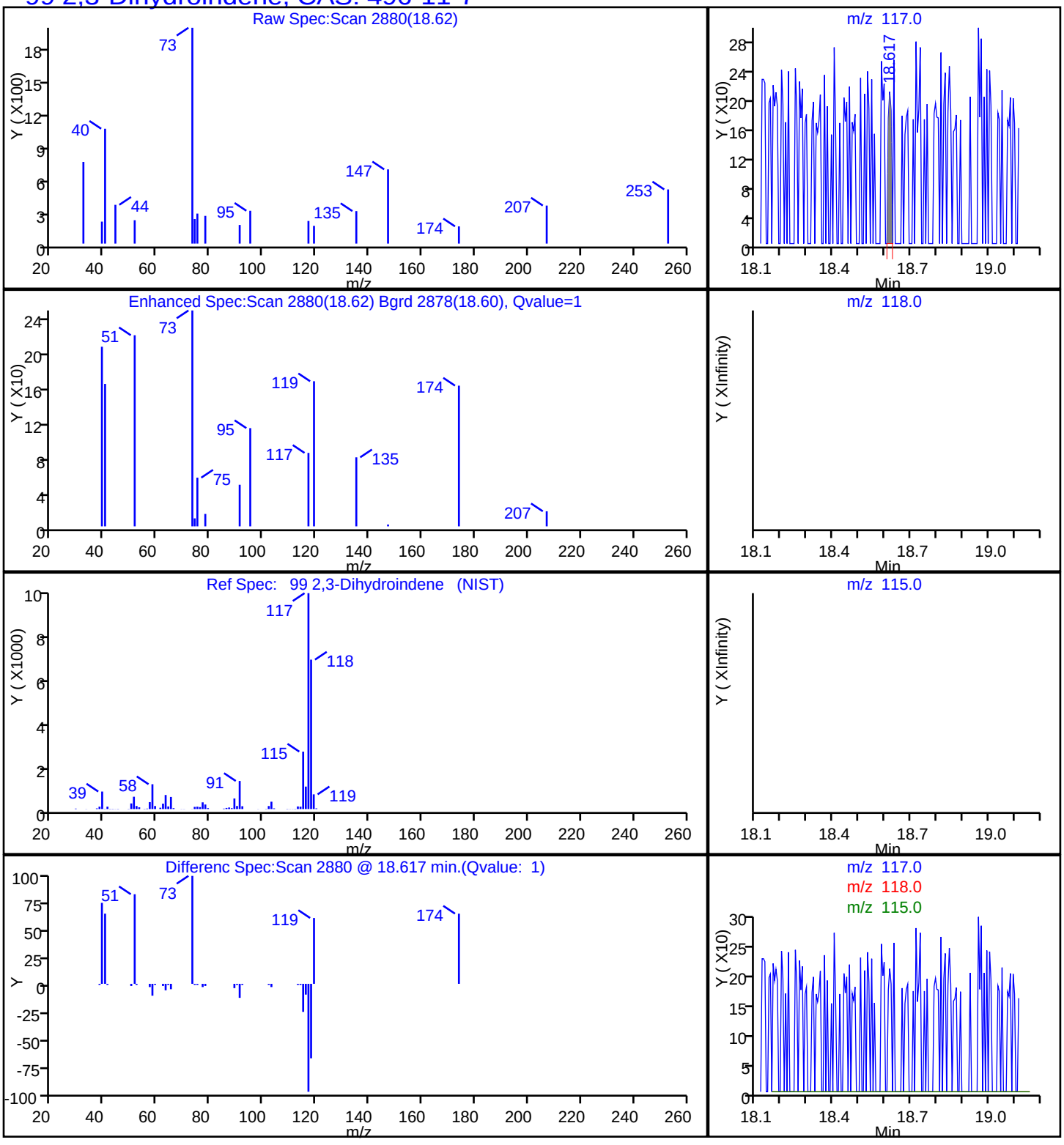


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180110-7102.b\A15LOT10441.D

Injection Date:	16-Jan-2018 01:38:30	Instrument ID:	MR		
Lims ID:	140-10441-A-9	Lab Sample ID:	140-10441-9		
Client ID:	11765				
Operator ID:		ALS Bottle#:	10	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

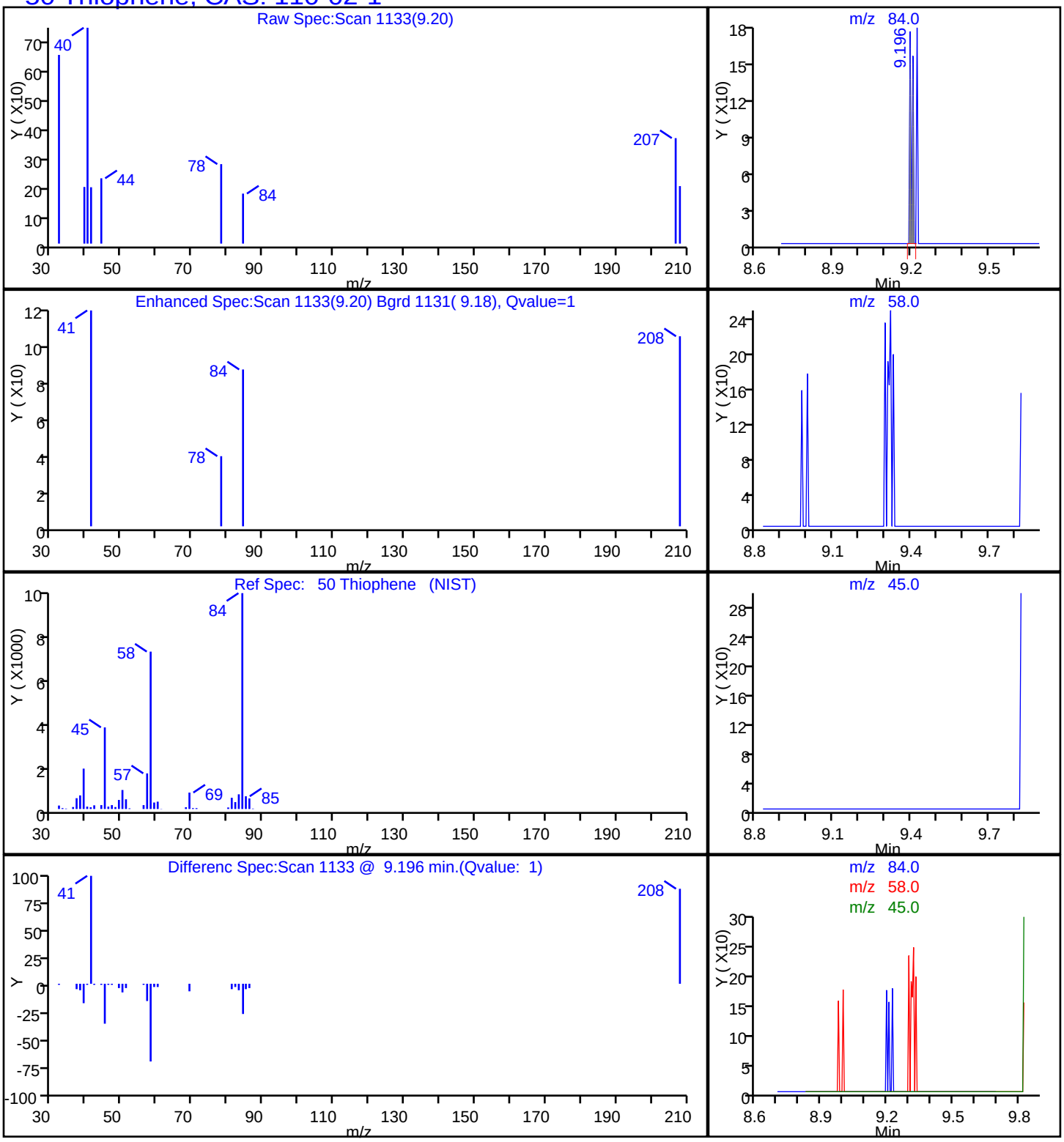
99 2,3-Dihydroindene, CAS: 496-11-7



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7102.b\A15LOT10441.D				
Injection Date:	16-Jan-2018 01:38:30	Instrument ID:	MR		
Lims ID:	140-10441-A-9	Lab Sample ID:	140-10441-9		
Client ID:	11765				
Operator ID:		ALS Bottle#:	10	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

50 Thiophene, CAS: 110-02-1



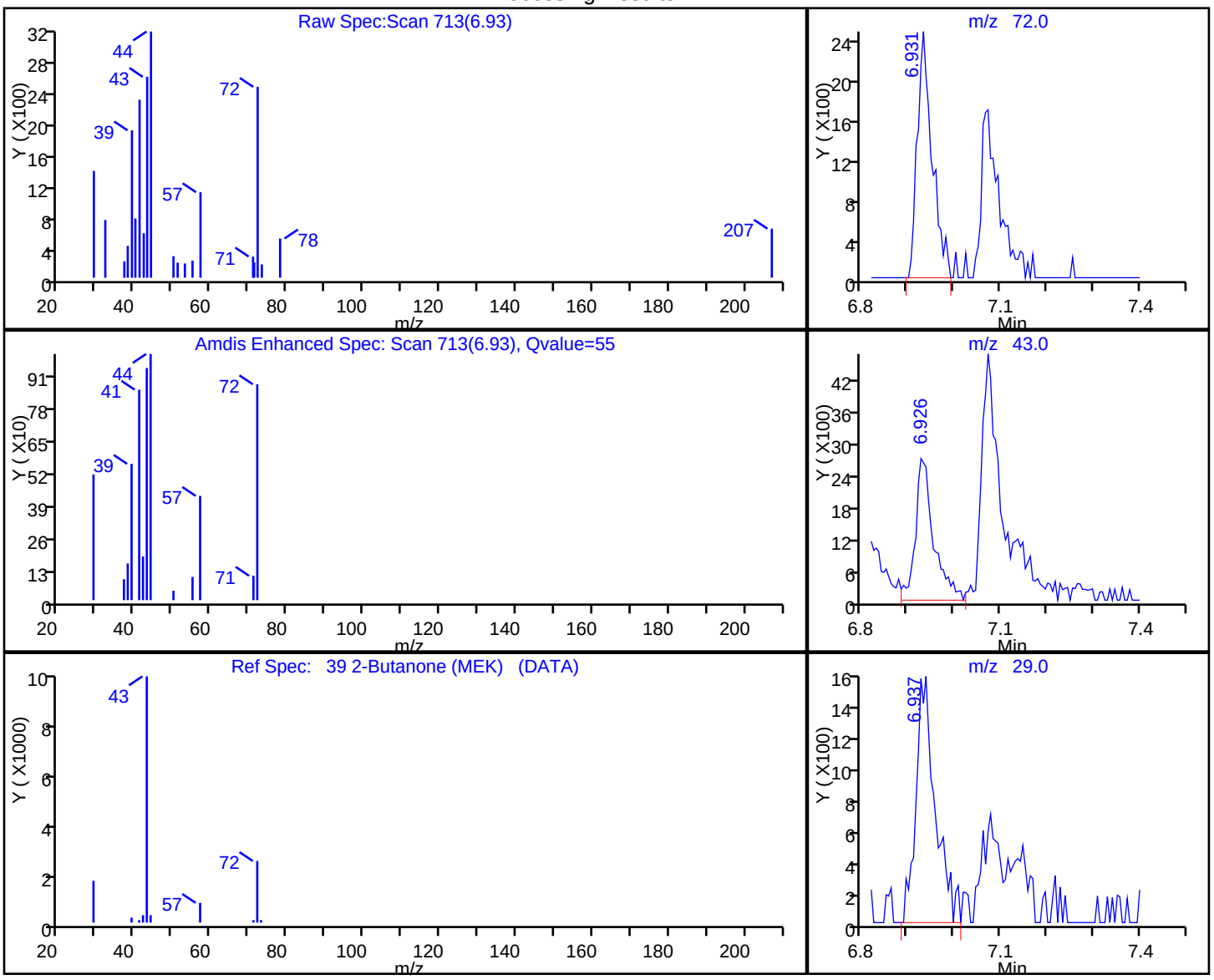
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7102.b\A15LOT10441.D		
Injection Date:	16-Jan-2018 01:38:30	Instrument ID:	MR
Lims ID:	140-10441-A-9	Lab Sample ID:	140-10441-9
Client ID:	11765		
Operator ID:		ALS Bottle#:	10 Worklist Smp#: 22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

39 2-Butanone (MEK), CAS: 78-93-3

Processing Results



RT	Mass	Response	Amount
6.93	72.00	5445	0.094615
6.93	43.00	7344	
6.94	29.00	4467	

Reviewer: tajh, 16-Jan-2018 08:43:48

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

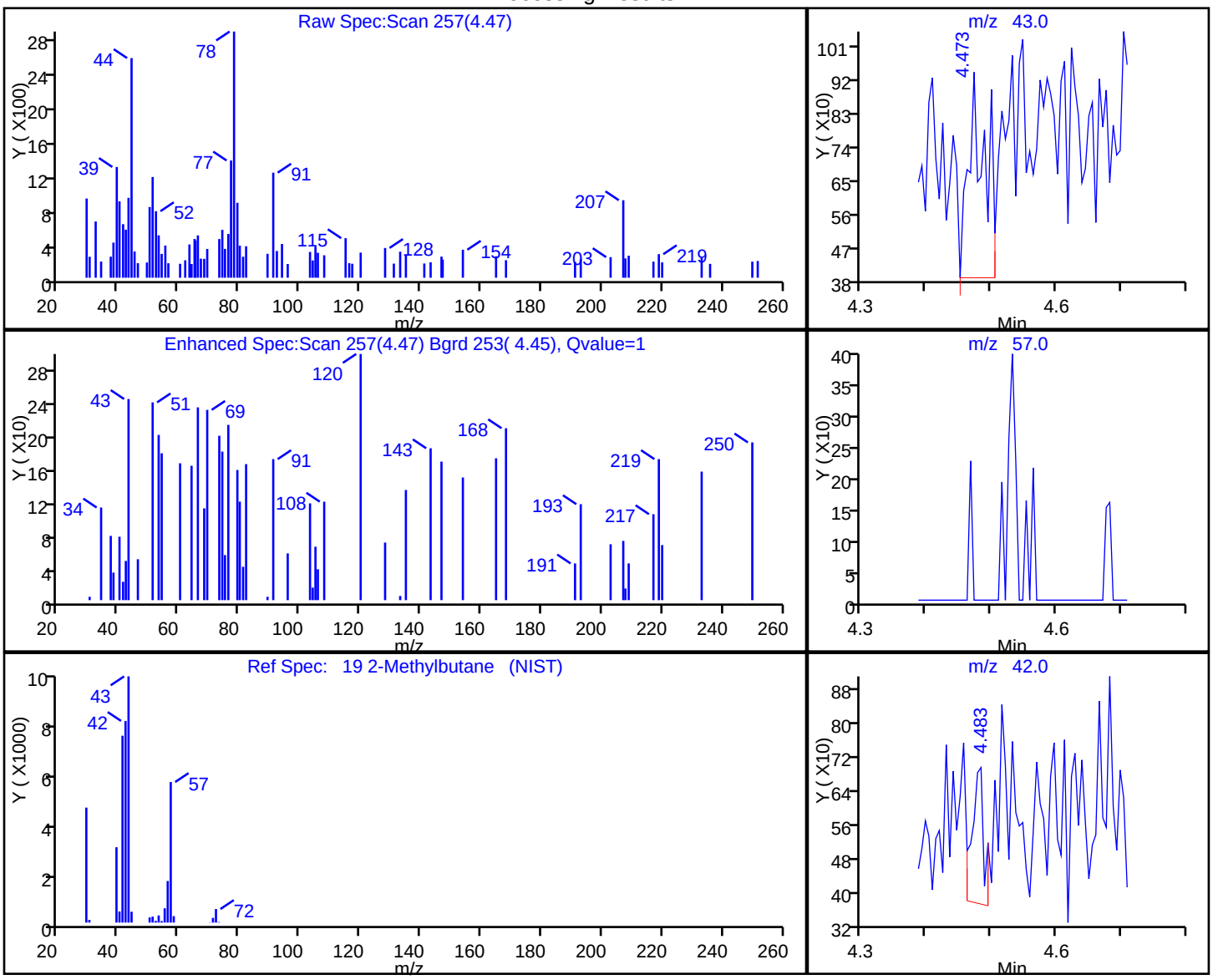
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7102.b\A15LOT10441.D				
Injection Date:	16-Jan-2018 01:38:30	Instrument ID:	MR		
Lims ID:	140-10441-A-9	Lab Sample ID:	140-10441-9		
Client ID:	11765				
Operator ID:		ALS Bottle#:	10	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.47	43.00	988	0.014328
4.48	42.00	414	
4.55	57.00	0	

Reviewer: tajh, 16-Jan-2018 08:43:48

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

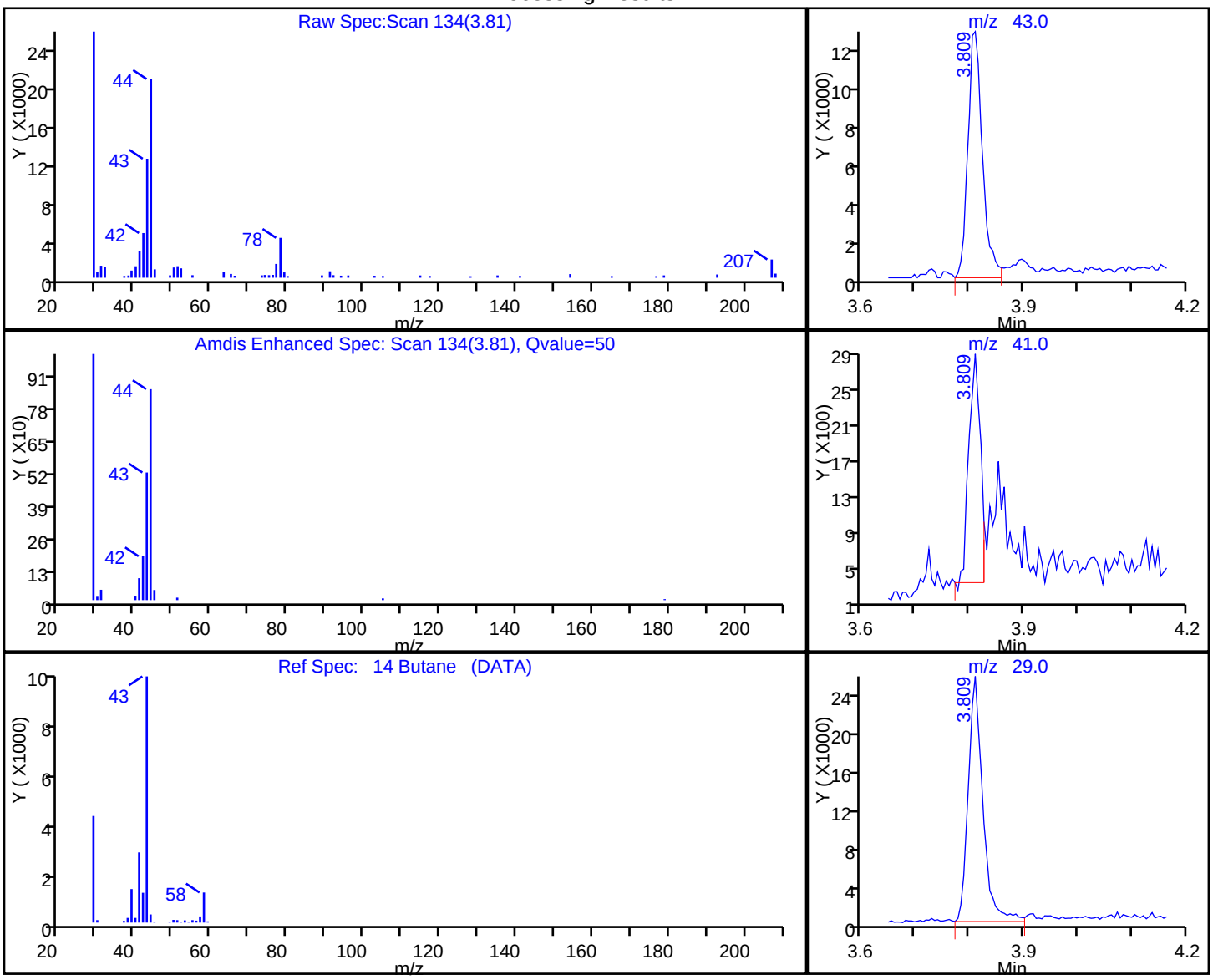
User Disabled Compound Report

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20180110-7102.b\A15LOT10441.D		
Injection Date:	16-Jan-2018 01:38:30	Instrument ID:	MR
Lims ID:	140-10441-A-9	Lab Sample ID:	140-10441-9
Client ID:	11765		
Operator ID:		ALS Bottle#:	10 Worklist Smp#: 22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.81	43.00	23378	0.231480
3.81	41.00	3694	
3.81	29.00	48182	

Reviewer: tajh, 16-Jan-2018 08:43:48

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Shipping and Receiving Documents

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information
Company: Tetra Tech
Address: 51 Franklin St
City/State/Zip Annapolis/MD/21401
Phone: 410-990-4607
FAX:
Project Name: LMC MRC
Site/location: MRAS / BLDG-A & -C
PO # 117-0512140

Project Manager: Peter Rich
Phone: 410-990-4607
Site Contact:
TAL Contact:

Analysis Turnaround Time
Standard (Specify)
Rush (Specify)

Sampled By: JM Wilks

1 of 1 COCs

140-10921 Chain of Custody

180325
BALTIMORE

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
BLDG-A ~~EFFLUENT~~ INFLUENT	3/8/18	1331	1333	29.5	0	~~09899~~ 10614	10337	✓											
BLDG-A MIDGAC		1335	1337	29	1	10901	11606	✓											
BLDG-A EFFLUENT		1340	1343	27.5	1	09899	10738	✓											
BLDG-C EFFLUENT		1440	1442	29	1	10911	11285	✓											
BLDG-C MIDGAC		1444	1446	31	3	10104	11765	✓											
BLDG-C INFLUENT		1450	1452	29	2	11594	10780	✓											

Sampled by :

Temperature (Fahrenheit)

	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)

	Interior	Ambient	
Start			
Stop			

Received @ ambient, 1 box
Fedex Co, Custody seal intact
trK#7717 6058 6646
KW 3/10/18

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by: JMWilks	Date/Time: 3-8-18 / 1630	Received by: [signature]
Relinquished by: [signature]	Date/Time: 3/9/18 0	Received by: [signature] 3/10/18 0910

6 cans
6 KR

03/20/2018

Loc: 140
10921

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	/			☐ **Containers, Broken**
2. Were ambient air containers received intact?			/	☑ Checked in lab
3. The coolers/containers custody seal if present, is it intact?	/			☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			/	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	/			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	/			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	/			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	/			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	/			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?	/			☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	/			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	/			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	/			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	/			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	/			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			/	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			/	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:_____			/	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			/	☐ If no, lab will adjust
20. For rad samples was sample activity info. Provided?			/	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:	
Lot Number:	
Exp Date:	
Analyst:	
Date:	
Time:	

Project #: 1400292l PM Instructions: _____

Sample Receiving Associate: _____ Date: 3/10/18

QA026R30.doc, 080916

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 3/10/2018

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
AFB	140-10921-a-1	10337	10383	B	1	+1.3	1540	
AFB	140-10921-a-2	11606	10383	B	1	+0.6	1541	
AFB	140-10921-a-3	10738	10383	B	1	0	1542	
AFB	140-10921-a-4	11285	10426	B	1	0	1543	
AFB	140-10921-a-5	11765	10441	B	1	+0.8	1544	
AFB	140-10921-a-6	10780	10373	B	1	0	1545	